



RESEARCH ARTICLES
YEAR 2021-22

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01	Vd.Gawai S.D	Study Of The Vishaghna Property Of Nirgundi On Pesticide Sprayed On Cauliflower	Agad Tantra	AIIRJ	JUNE 2021	2349-638X	https://www.aiirjournal.com/uploads/Articles/2021/07/5219_33.Dr.Snehal%20Diwakar%20Gawai.pdf
02	Dr. Deshmukh S.G. Dr. Nimbalkar N.R.	Ayurvedic Management Of Ankylosing Spondylitis-A Case Study	Kayachikitsa	World Journal Of Pharmaceutical And Medical Research	June 2021	2455-3301	https://www.wjpmr.com/home/article_abstract/3692
03	Dr. Badarkhe A.M. Dr. Ankita Sulkekar	An Ayurvedic Review On Management Of Tamaka Shwasa	Shalya Tantra	Aayushi International Interdisciplinary Research Journal (AIIRJ)	JUNE 2021	ISSN 2349-638x	https://www.aiirjournal.com/uploads/Articles/2021/07/5196_11.Dr.%20Amol%20M.%20Badarkhe.pdf
04	Dr. Badarkhe A.M. Dr. Ankita Sulkekar	Effecacy Of Sahacharadi Taila Matra Basti In Management Of Neurogenic Bladder: A Case Study	Shalya Tantra	Aayushi International Interdisciplinary Research Journal	JUNE 2021	2349-638x	https://www.aiirjournal.com/uploads/Articles/2021/07/5195_10.Dr.%20Ankita%20Ashokrao%20Sulkekar.pdf
05	Dr. Shrotriya Y.O. Dr. Apsingekar	The Management Of Psychological Disorder W.S.R.To Ayurveda	Kriya	AIIRJ	June 2021	2349-638x	https://www.aiirjournal.com/uploads/Articles/2021/07/5213_27.Vd.%20Shweta%20Apsingekar%20&%20Vd%20.Yogita%20Shrotriya.pdf
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08	Dr.D.J.Amale Dr. Hemant Panchade	The Physiological And Pathological Concept Of Agni	Rognidan	WJPMR	July 2021	2455-3301	https://www.wjpmr.com/home/article-abstract/3667
09	Dr. Shaikh U.T.	Unusual Branching Of Left Superior Pulmonary Vein: A Case Report	Sharir Rachana	AIIRJ	July 2021	ISSN 2349 – 638x	https://www.aiirjournal.com/uploads/Articles/2021/08/5267_30.Dr.Uzma%20Tabassum.pdf
10	Dr. Lata A.Rathod	Review Of Rasashastra From The Perspective Of Adversess Drugs Reactions	Swasthvritta	IJAPC	July 2021	2350-0204	http://www.ijapc.com/upload/MNAPC-15-11-25-P-80-87.pdf
11	Dr.Deshmukh J. S. / Dr.Joshi S. S.	Ayurvedic Management Of Pelvic Pain In Gynaecology	Stree Rog	WJPPS	Aug 2021	2278 - 4357	https://storage.googleapis.com/journal-uploads/wjpps/article_issue/1627868153.pdf
12	Dr. Gadave Dr Sulkekar Dr Badarkhe	Effect Of Jalokawacharan In Hemmorohoid	Shalya Tantra	WJPER	AUG 2021	2277-7105	https://wjpr.net/abstract_show/17575
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14	Dr. Sandhya M. Yennawar	Role Of Virechana In The Management Of Raktapradar : A Case Study.	Prasutitantra & Streerog	JETIR	Sept 2021	Vol.8, Issue 9 ISSN -	https://www.jetir.org/papers/JETIR2109198.pdf



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18	Dr Gadve B N	A Clinical Case Study Of Agnikarma With Panchadhatu Shalaka In Trigger Finger (Snayugat Vata)	Shalyatantra	WJPR	Sept 2021	ISSN 2277- 7105	https://www.wjpr.net/abstract_file/17689
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20	Dr. Shaikh U.T.	Atrial Septal Defect: A Literary Review Of Congenital Heart Disease	Sharir Rachana	AIIRJ	October 2021		https://www.aiirjournal.com/uploads/Articles/2021/08/5267_30.Dr.Uzma%20Tabassum.pdf



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23	DR GADVE B N	APPLICATION OF PANCHKARMA MODALITY IN SHALYA TANTRA – A	SHALYAT ANTRA	WJPPS	Oct. 2021	ISSN 2278 – 4357	https://www.wjpps.com/Wjpps_controller/abstract_id/15396
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25	Dr. S.G. Deshmukh	AYURVEDIC MANAGEMENT OF ISCHEMIC HEART DISEASE – A CASE STUDY	Kayachikitsa	WJPR	Nov. 2021	ISSN2 277-7105	https://wjpr.net/abstract_show/18601
26	Dr. S.G. Deshmukh	Conceptual Study Of Tamaka Shwasa In Ayurveda W.S.R. To Bronchial Asthma	Kayachikitsa	WJPR	Dec-2021	ISSN2 277-7105	https://wjpr.net/abstract_show/18549
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30	Tushar Sheshrao Dhawali	A Critical Review On Drug Induced Cardiotoxicity And Its Treatment Modalities In Perspective Of Ayurveda	Rasashastra & Bhaishajya Kalpana	International Journal Of Ayurveda And Pharmaceutical Chemistry (IJAPC)	January 10th 2022 Volume 16, Issue 1 Page 143-157	ISSN 2350- 0204 Impact Factor Of Journal : 6.91 MAH/ NAN/1 0936/2 015	View Article
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35	DR BHUJBAL A A	Haemostatic Effect Of Sphatika In Raktarsha - A Pilot Study	SHALYAT ANTRA	IRJHIS	March 2022	ISSN 2582- 8568	http://irjhis.com/paper/IRJHIS2203020.pdf

Study of The Vishaghna Property of Nirgundi on Pesticide Sprayed Cauliflower

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Abstract :

Vegetables are important part of a healthy diet. Cauliflower is a vegetable which is rich in nutrients and is commonly consumed in Indian household. It is also frequently sprayed with pesticides. And even after washing with tap water, most of the residue remains on the vegetable. So there is need to wash the vegetable with solution like Nirgundi Kwatha which may reduce toxic residues.

Keywords : Cauliflower, Nirgundi Kwatha, Pesticide residues

Introduction:

Agad Tantra is the branch of Ayurveda which deals with the diagnosis, symptoms and treatment of poison and the methods of detecting them. In this new era, it also deals with the study of variety of chemicals such as pesticides, preservatives etc. and their hazardous effects on human health.

Now days, the crops are sprayed with pesticides. But its indiscriminate use leads to problems such as toxic residues in food materials. When human beings consume this toxified food materials, they become victim of their poisonous effects. So there is need of washing and cleaning the fruits and vegetables with such solution which may nullify or reduce toxic residues.

Charakacharya has mentioned Vishaghna Gana. Sindhuvaar i.e. Nirgundi is one of them. It is also mentioned as Krimihara. Cauliflower is commonly consumed in Indian household. It is generally attacked by Diamond back Moth Insect, so it is usually sprayed with Chlorpyrifos pesticide. So a study was planned to observe whether the toxic residues are nullified or reduced after the Dhavana of Cauliflower with Nirgundi Kwatha.

Aim and Objectives:

Aim:

To study the Vishaghna property of Nirgundi on Pesticide sprayed Cauliflower.

Objectives:

1. To study the Vishaghna property of Nirgundi on Pesticide sprayed Cauliflower.

2. To analyse the pesticide residues sprayed on Cauliflower before and after Dhavana with Nirgundi Kwatha.

Material and Methods:

Type of study – Observational Analytical study

Material:

The following materials selected and authenticated for the study.

Vegetable : Cauliflower

Dhavan dravya : Nirgundi Kwatha

Methodology :

Nirgundi collected and authenticated and cauliflower personally collected from one farm source.

- They were divided into 3 groups each containing 10 samples of Cauliflower
- Group A: 10 samples of Cauliflower were analysed as it i.e. without Dhavana.
- Group B: 10 samples of Cauliflower were analysed after Dhavana with Tap water.
- Group C: 10 samples of Cauliflower were analysed after Dhavana with Nirgundi Kwatha.

Preparation of Kwatha :

The preparation of Nirgundi Kwatha was done as per the procedure mentioned in Sharangdhara Samhita madhyam khanda adhyay 2.

Analytical test :

Multi residue method for pesticide analysis – Gas Chromatography-Mass Spectrometry were performed.

Observation:

Observations of Pesticide residue analysis

Sample nos	Sample A (mg/kg)	Sample B (mg/kg)	Sample C (mg/kg)
1	0.014	0.006	BLQ i.e.0.001
2	0.012	0.008	BLQ
3	0.014	0.006	BLQ
4	0.013	0.007	BLQ
5	0.013	0.008	BLQ
6	0.015	0.006	BLQ
7	0.012	0.008	BLQ
8	0.013	0.007	BLQ
9	0.014	0.007	BLQ
10	0.012	0.006	BLQ
Mean	0.0132	0.0069	BLQ

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Conclusion :

1. The study was analytical observational study
2. The mean values of cauliflower before Dhavana were found to be 0.0132
3. The mean values of cauliflower after Dhavana with Tap water were found to be 0.0069
4. The mean values of cauliflower after Dhavana with Nirgundi Kwatha were found to be BLQ. BLQ means below the level of quantification i.e. 0.001.
5. After Dhavana of pesticide sprayed Cauliflower in Nirgundi Kwatha, it was observed that the residue levels were decreased to such extent that it was not even detected.
6. So it can be stated that Nirgundi possesses Vishaghna property which reduces concentration of pesticides.

**AYURVEDIC MANAGEMENT OF ANKYLOSING SPONDYLITIS-A CASE STUDY.**Kripa M. Shah^{1*}, Shrikant G. Deshmukh² and Naresh Nimbalkar³

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ABSTRACT

Ankylosing spondylitis (AS) is a rheumatic disease with various skeletal and extra skeletal manifestations which belongs to a group of rheumatic diseases known as the spondylo arthropathies (SpA), which show a strong association with the genetic marker HLA-B27. Ankylosing spondylitis (AS) is a chronic, systemic, inflammatory disease which affects primarily sacro- iliac joints and spine. Inflammatory back pain and stiffness are prominent early in the disease, whereas chronic, aggressive disease may produce pain and marked axial immobility or deformity. From the Ayurvedic perspective, the disease can fall under Asthi majjagata vata, which may be effectively managed when intervention is started in its early stages. No satisfactory treatment is available in modern medicine for this disorder. Various Panchakarma procedures and Ayurvedic drugs have been proved useful for these manifestations. We present a case of AS, which was treated for two months with a combination of Panchakarma procedures and Ayurvedic drugs. Ayurvedic treatments, in this case, were directed toward alleviating symptoms and to reduce severe disability. The patient was considered suffering from Asthimajja gata vata.

KEYWORDS: Ankylosing spondylitis, Asthimajja Gata Vata, HLA B27.**INTRODUCTION**

Greatest number of vyadhi in ayurveda is vatavyadhi, so almost all vyadhi contains the main vata dosha. Pitta & Kapha has inert property without the vata dosha, so all vyadhi nidan some parts have vata dosha. In asthi-majjagata vata forms asthi-majja kshay. Dhatukshayatmak samprapti is done with nirupstambhit vata in Asthi majjagata vata.^[1] Ankylosing Spondylitis is classified along with the Seronegative Spondyloarthritis disease. Ankylosing Spondylitis is a chronic, systemic, inflammatory disease that affects primarily the sacroiliac joints and spine. Certain peripheral joints and tendons can also be affected, and extra-articular manifestations may be present. It typically affects young adults and male-to-female ratio is closer to 3:1. The median age of onset is 23 years. The aetiology of Ankylosing Spondylitis remains unclear.^[2] Around 0.25% population in India is estimated to be affected by these diseases. Early diagnosis is the key to successful management. The pathogenesis of Ankylosing Spondylitis remains unclear to date. It is assumed to be immune mediated. There is an obvious cytokine role, because patients show improvement with anti tumour necrosis factor α (anti TNF α) agents.^[3] Non-steroidal anti- inflammatory drugs (NSAID), corticosteroids and various disease modifying antirheumatic drugs (DMARDs) are used to treat/manage AS. However, these treatments are of limited benefit. Corticosteroids are associated with numerous side effects, especially when given systemically over long

periods of time. No effective disease modifying treatment has been established for AS.^[4] Various panchakama procedures and internal Ayurvedic medicines have been proved beneficial in the management of AS.^[5]

CASE STUDY

A 18-year-old Indian, unmarried, nonsmoking, nonalcoholic male patient consulted in Out-Patient Department for a complaint of gradually progressive lower back pain along with stiffening and deformity of the spine and hip from 7 months. The pain was insidious in onset which aggravates during night, early mornings and after exposure to cold or in cold seasons. Morning stiffness lasts for few hours and gradually improves with activity.

Clinical findings

The patient had several episodes of lower back pain, followed by spinal stiffness in the morning. The patient also had pain in Right leg while having difficulty in walking. Neck movements were restricted, and both upper limbs had a movement range up to 45°. On examination, the patient was found to be anxious with disturbed sleep, had a moderate appetite, Vishmagni (unstable digestive functions), Krura Kosta (bowel hard to purgare) with normal micturition. The tongue was clean, the voice was clear, and skin roughness was prominent. Patient had Vatapitta prakriti with Madhyam

(medium) Sara (purest body tissue), Madhyam Samhanana (medium body built), Sama Pramana (normal body proportion), Madhyam Satmya (homologation), Madhyam Satva (mental strength), Avara Vyayamshakti (least capability to carry on physical activities), Madhyam Aharshakti and Jaranshakti (medium food intake and digestive power). Asthivaha Srotodusti (pathology in bone) and Majjavaha srotodusti (pathology in bone marrow) were more prominent.

Past history

There is no any past history of HTN, DM, TB, Peptic ulcer or any endocrinedisorder.

Investigation

MRI Lumbo sacral scan screening shows

- Mild anterior listhesis of L5 over S1 vertebra with bilateral spondylosis.
- Partial disc desiccation, mild bulge a4_5 & L5-S1 levels causing Effacement over thecal sac.

Screening MRI cervical dorso spinal reveals partial disc desiccation at C5-6 level.

Screening MRI PBH reveals- Hyper intense signal Intensity in bilateral sacro-iliac joint suggest bilateral acute sacro-illitis more on right side.





Lab investigation

HLA-B27 associated with ankylosing spondylosis shows positive.

Treatment

The patient was first explained the need of Shodhan therapy. Pathyapathyais followed completely. The details of Treatment protocol are as follows.

Shodhan

- 1) Avagahan swedan (Dashmoola + Nirgundi kwath).
- 2) Vaitaran Basti – Anuvasan Basti – Brhat saindhavadi tail

Niruh Basti – Vaitaran Basti.

For 14 days

Shamana

- 1) Simhnaad guggulu 2 tab BD.
 - 2) Rasnasapthak kashaya 20ml BD.
 - 3) Shad dharan choorna 3gm BD with luke warm water.
 - 4) Ashwagandha +Guduchi +Rasna + Shatavari + Shunthi – kadha 1spoon each BD
 - 5) Musta Ghana vati 2 tab BD.
 - 6) Mansadi kwath 40ml BD.
- Advise Physiotherapy.

- Lumbar Traction 25kg OD.
This treatment is given for 15 days.

OBSERVATION

In the treatment period, the patient had not taken anything except these medicines. Assessment criteria were based on the cardinal symptoms as.

Observation	Before treatment	After Treatment
Kati shoola	+++	+
Prustha shoola	+++	+
Sakashtha chakraman	++	+
Dakshin paad shoola	++	+

DISCUSSION

Consequently treatment was planned first to remove the Ama (undigested matter) by improving digestion with Deepana and digesting the Ama with Pachana ones. Basti is mentioned in vitiation of all the Vata, Pitta, Kapha, and Rakta Dosh.^[6] It is specially indicated for Vatika disorders.^[7]

Simhanada guggulu augments the Agni and is indicated in Amavata. Rasna is indicated in Kati graha, shoola and Prustha shoola. Rashna Saptak is Vata Shamana (pacifying) in action and also acts as Analgesic. Guduchi and mixture helps in Ama Pachana due to presence of Tikta Rasa and act as Rasayana.

CONCLUSION

The Ayurvedic diagnosis of 'Asthi-majja gata vata' is made for 'Ankylosing spondylitis' in present case. Various Ayurvedic panchakarma procedures and internal medicines have provided promising results especially in reducing the pain, decreasing the severity of deformities and also improving quality of life within short time and without causing any adverse effects in present case.

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An Ayurvedic Review on Management of Tamaka Shwasa**Dr. Amol M. Badarkhe**[BAMS; MD, MPH, PhD Scholar] Assistant professor,
Kayachikitsa department; CSMSS Ayurved Mahavidyalaya, Kanchanwadi, Aurangabad.**Dr. Ankita A. Sulkekar**[BAMS; MS] Assistant professor,
Shalyatantra department; CSMSS Ayurved Mahavidyalaya, Kanchanwadi, Aurangabad.**Abstract –**

Respiration is the evident feature of life which is carried out by Prana vayu. This sole sign of life is affected in this disease Tamaka Shwasa, causing an impediment to the Respiratory function. Shwasa word indicates both physiological and pathological state of respiration. Ayurvedic texts have mentioned Tamaka Shwasa under the various types of Shwasa roga. Disease Tamaka Shwasa can be correlated with the disease Bronchial Asthma on the basis of its features & etiopathogenesis. Tamaka Shwasa is considered as Yapya (palliable) because this type of Shwasa roga is not only difficult to treat but also has a repetitive nature. Bronchial Asthma calls the attention of Medical world due to significant burden in terms of health care costs as well as lost productivity and reduced participation in family life. The Science of Life – Ayurveda is the best way to effectively & safely manage the condition without inducing any drug dependency where various Shodhana procedures and use of internal medication not only detoxifies the body but also provides nutrition & increases the elasticity of lung tissue & develops natural immunity of the body thus decreasing episodic recurrence of the disease and providing long term relief to the patient.

Keywords: Tamaka Shwasa, Bronchial Asthma, Shwasa roga.

Introduction -

Tamaka Shwasa is one of the five types of disease Shwasa. The signs, symptoms and etiopathogenesis of Bronchial Asthma explained in modern science have a lot of similarities with the disease entity Tamaka Shwasa. The main features of Bronchial Asthma are breathlessness, chest tightness, wheezing and cough. Bronchial Asthma is a major global health problem, which can affect the population irrespective of age, sex, economic status, etc. It is very common at all ages but predominantly in early life. The prevalence of Bronchial Asthma is increasing alarmingly now a days due to excessive pollution, overcrowding, occupational conditions, stress and poor hygiene etc. Both Ayurveda and modern medical Science agree regarding the Nidana of the disease as host factors (Nija Hetus-Dosha dushti and Ama) and Environmental factors (Agantuj Hetus – Raja, Dhuma, Pragvata, etc). It can be easily correlated with allergic condition. Nidana Parivarjan hence plays a key role in the management strategy in both sciences.

The current management of Tamaka Shwasa (Bronchial Asthma) by modern medicine is only providing short term symptomatic relief but does not provide any long term relief to the patient. On the other hand prolonged use of these drugs are not safe, as it has many adverse effect with systemic manifestation and as the chronicity increases drug dose dependency increases & dilates the lung tissue to such an extent that at last it leads to respiratory failure. In present scenario Ayurveda is the best way to effectively & safely manage the condition without inducing any drug dependency where use of various shodhana procedures and use of internal medication not only detoxifies the body but also provides nutrition & increases the elasticity of lung tissue & develops natural immunity of the body. Thus decreasing episodic recurrence of the disease and providing long term relief to the patient.

Ayurvedic Aspect of Tamaka Shwasa-

Tamaka Shwasa comprises of two words i.e. Tamaka and Shwasa. The word 'Tamaka' is derived from the Dhatu "Tamglanou" which means Sadness (Panini). According to Vachaspatyam the word Shwasa is derived from the root word 'Shwas' Dhatu by applying Ghanj Pratyaya. It implies for both

Vayu Vyapara & Roga Bheda. It represents both physiological as well as pathological respiration and used for expression of word.

The disease is called Tamaka as attack of the disease precipitate during night and during the state of attack dyspnoea becomes so severe that patient feels entering into the darkness. Main causative factors responsible for Tamaka Shwasa are Dhuma (smoke), Raja (dust), Ativyayama (excessive exercise/work), Sheeta sthananivasa (residing in cold areas), Guru bhojana (heavy diet) and Sheeta bhojana (cold food/drinks). These factors lead to the vitiation of Vata which in turn vitiates Kapha leading to vitiation of Rasa and impeding the function of Pranavata. According to our Ayurvedic literature vata is captured by the Aavrana of kapha in this disease. Acharya Charaka has mentioned that Tamaka Shwasa is kapha-vataja vikar and site of its origin is pitta sthana. In Sushruta Samhita, Madhava Nidana and Yogratnakar it is mentioned that Tamaka Shwasa is Kapha predominant disorder. When going through the lakshnas of Tamaka Shwasa in our Ayurvedic literature our Acharayas has told Gurghurkam (audible wheezing), Pinasa (coryza), Shirogaurava (heaviness in head region), kricchat bhashitum (difficulty in speaking) etc. all the Lakshnas showing Kapha predominancy. Tamaka Shwasa in general is described as yapy (palliable) disease. However in individual with recent origin of disease, person of pravara or both said to be sadhya.

Maharshi Charaka has mentioned two-allied stages of Tamaka Shwasa known as two types or further complication of disease proper i.e. Pratamaka and Santamaka. Sushruta and Vagbhata have only mentioned the name as Pratamaka, which includes clinical manifestation of Santamaka. Patients suffering from Tamaka Shwasa when gets afflicted with fever and fainting, the condition is called as Pratamaka Shwasa. It is suggestive of involvement of Pittadosha in Pratamaka Shwasa. It is aggravated by Udavarta, dust, indigestion, humidity (Kleda), suppression of natural urges, Tamoguna, darkness and gets alleviated instantaneously by cooling regimens. When the patients of Pratamaka Shwasa feels submerged in darkness, the condition is called as Santamaka Shwasa. While describing the management Acharya Charaka has clearly

mentioned the importance of Nidana parivarjana along with Shodhana and Shamana chikitsa as mentioned below.

Management Of Tamaka Shwasa-

NIDANA PARIVARJANAM: Chikitsa is defined As Nidanparivarjana avoidance of causative factors.

Ayurveda basically being emphatic about Swasth rakshanam give priority to prophylactic management. This is very much applicable in the case of Tamaka Shwasa. The aagantuk hetu have to be avoided in the first place. Being a yapy roga avoidance of triggering factors and providing quality of life with minimum medication is the aim of Asthma management. Charaka says, the primary importance in Shwasa Chikitsa is the avoidance of causative factors. Both Ayurveda and Modern scientist agree to this fact.

The management of Tamaka Shwasa has two aspects:

1. Management of Vegavastha of Tamaka Shwasa; i.e. acute exacerbations, and
2. Chronic management of the Avegavastha, where the frequency, duration and intensity of the attacks are minimized / totally cured to give a quality life to the patient.

1. VEGAVASTHA:

In Vegavastha Charaka, Sushruta, Vagbhata, all the Acharyas have emphasized on the Shodhana therapy in the starting of Chikitsa and after that use of Shamana yogas. Patient who is in Vegavastha should be first anointed with salted oil and then subjected to sudation either by methods of steam (Nadi Sweda), hot bed sudation (Prastara) or mixed sudation. This is a specific condition where Sneha with Lavana is indicated. In Snehadhaya Charaka has mentioned properties of Salavana Sneha. It supervenes within short period of time because both of them are having Sukshma property hence having greater penetration power. It is also having Doshasanghata Vicchedakara property. Taila is having Ushna property, and thus alleviates Vata, and does not increase Kapha, therefore it is better for Abhyanga. In Shwasa Grathita Kapha (Mucous plug) is present; and Salavana Sneha is useful in Vilayana of this Grathitha Kapha, thereby removing

the Sanga (Obstruction of airway). Once the Kapha is removed from airways, it flows back to its base in Amashaya from where it is expelled out by Vamana. After a classical Vamana therapy, the left out Dosha has to be eliminated by fumigation therapy or Dhupana.

2. AVEGAVASTHA:

In Avegavastha due consideration should be given to avoid pathogenesis which further leads to exacerbations. However, Acharya Charaka has divided the patients of Shwasa into two categories.

1. Those who are strong and with predominance of Kapha.
2. Those who are weak and with predominance of Vata and who are un-unctuous.

The choice of management of Shwasa in Alpbala patient is Tarpana and Shamana. Shodhana therapy should be administered only if extremely essential, if the patient is having good Dehabala and Satwabala, and when all other measures fail. In the last shloka of Shwasa chikitsa, Acharya Charaka says Brimhana is considered the best option compared to shamana and karshana when treating Tamaka Shwasa patient.

In the Shamana Chikitsa the used drugs should be Vatakaphaghna, Ushna and Vatanulomana. Also he said that, any remedy which aggravates vata and pacify kapha or which pacify vata and aggravates kapha or which pacifies both vatakapha or which pacifies only vata should be used for the management of Tamaka Shwasa.

Sushruta has described different medicated ghrita-kalpana for Shamana Chikitsa. Acharya Sushruta has advised to do both Vamana, Virechana in Shwasa management while Acharya Charaka has described first Vamana in Shwasa may be as an emergency and after that Virechana with Vata-shleshmahara dravya especially for Tamaka Shwasa in between the two attacks or avegavastha. Virechana is best for Srotoshodhan and Pitta Shamaka Chikitsa and the Pitta sthana Samudbhava of Shwasa Roga can be explained in the terms of the importance of Ama in the Samprapti, which is produced in Adho-Amashaya, may be duodenum- the main site of digestion, which is explained as the Pitta Sthana by Chakrapani-datta. Hence, the specific management of Tamaka Shwasa according

to Charaka is Virechana. Keeping in mind the Samprapti of Tamaka Shwasa, the ultimate aim of treatment should be to clear out the Pranavaha Srotasa, pacify Vata and remove the blockage due to Kapha.

According to Vagbhata following is main principle of treatment:

1. Balvana -kaphadhika - Karshana chikitsa
2. Durbala- bala- Brimhana
3. Vriddha - Shamana Chikitsa

The author of Yogaratnakar has mentioned that except Snehavasti, all other methods of Shodhana Chikitsa should be adopted in Tamaka Swasa. (Yoga Ratnakar. Swa.chi.1)

Shamana Yoga

For the management of Shwasa, Acharya Charaka has given 10 drugs under Shwasahara Mahakashaya: Kachur, Pushkarmoola, Amlavetas, Choti-ela, Hingu, Agar, Tulsi, Bhumyalaki, Chanda (Chorpushpi) and Jeevanti and 10 drugs in Kasahara Mahakashay: Pippali, Kasamarda, Kantakari, Brihati, Agastya, Karkatshringi, Tulsi, Vasa, Vanshlochana, Dalchini, Talispatra Acharya Sushruta has described various kind of drugs under Vidarigandhadi varga, Sursadi gana and Dashmul gana for the management of Shwasa roga.

Different forms of commonly used preparations, given in different Ayurvedic samhitas, for the management of Tamaka Shwasa can be summarised as follows:

Churna: Sitopaladi Churna, Talisadi Churna, Muktadya Churna, Sauvarchaladi churna, Shatyadi Churna, Krishnadi Churna, Paushkaradi Churna, Shunthyadi Churna etc.

Kwatha: Dashmuladi Kwatha, Bharangyadi Kwatha, Vasadi Kwatha, Sheerishadi Kwatha, Amritadi Kwatha etc.

Vati: Vyoshadi Vati, Marichyadi Vati, Khadiradi Vati, Lavangadi Vati etc.

Awaleha & Leha: Kantakari avaleha, Chyavanprasha, Vasa haritakya leha, Chitraka – haritaki avaleha, Haridradi leha etc.

Ghrita: Manahshiladi Ghrita, Vasa Ghrita, Shatpala Ghrita, Tejovatyadi Ghrita, Dashmuladi Ghrita.

Kshara: Arka Kshara, Apamarga Kshara, Ashvagandha Kshara etc.

Aasava-Arishta: Kanakasava, Pathadyasava, Somasava etc.

Bhasma-Rasa: Abhraka bhasma, Shringa bhasma, Shwasa kuthar rasa, Shwasa-kasa-chintamadi rasa, Laxmivilas rasa etc.

Yavagu & Yusha: Dashmuladi Yavagu, Hingvadi Yavagu, Pushkaradi Yavagu, Rasnadi Yusha, Kasmarda Yusha.

Dhumpana & Nasya: Chandana dhumpana, Guggulu dhumpana, Haridradi dhumpana, Lashunadi nasya.

**PATHYA –APATHYA in Tamaka Shwasa -
PATHYA:**

Annavarga: Mudaga, Yava, Kullatha, Purana Shashtik, Rakta shalidhanya, Wheat.

Shakavarga: Paraval, Jivanti, Chaulai

Phalavarga: Bimbiphala, Jamberiphala, Nimbu, Draksha, Amalaki, Amlavetas, Bilva, Amlarasa, Pakva- kushmanda.

Dugdhavarga: Ajadugdha, Ghrita, Puranghrita.

Mamsavarga: Jangala maans rasa, maans of tittar, lava, deer, shooka, rabbit. Peya: Ushna jal, madhu, arishta, go mutra, sauviraka.

Vihara: Diwaswapna, Pranayama, Ushnajala Snana, Avagha- swedana, Abhyanga, medicated dhoompana.

APATHYA:

Annavarga: Rukshanna, Guru and vishtambhi Aahara, nishpava, masha, kaphavata vardhak aahara. Phalavarga: kela, Apakvakushmanda.

Dugdhavarga: Dadhi, Unboiled milk. Maansavarga: Matsya, Anuo maans. Peya: Sheetjal, Dushita jal Shakavarga: Kadwa Shaka, Surasava

Vihara: Exposure to cold, dust, pollution, atibharkarshan, vyayama, excess indulgence in sexual activities, tension and suppression of natural urges.

Conclusion-

Prevalence of Bronchial Asthma is increasing alarmingly due to excessive pollution, overcrowding, occupational conditions, stress and poor hygiene etc. These etiological factors acts as aggravating factors in developing acute attacks of asthma mostly in atopic individuals. Therefore, Nidana parivarjana has got a significant role to play in the management of the disease Tamaka Shwasa. Also, various principles of Ayurveda and many a

formulations can be used according to Roga & Rogi bala, during Vegavastha & Avegavastha and as per palatability of the patient for free flow of prana vayu so that srothorodha is removed and free flow of prana vayu may occur thereby curing the attack of disease Tamaka Shwasa.

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Efficacy of Sahacharadi Taila Matra Basti in Management of Neurogenic Bladder: A Case Study

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Abstract-

Brain, spinal cord and peripheral nerves control the process of micturition by exerting control over muscles and sphincters of urinary bladder. Neurogenic bladder is a type of dysfunction caused by damage to this control mechanism due to myelopathies, injuries, diseases of the brain, diabetes, alcoholism, vitamin B12 deficiency, post operative complications etc. The symptoms range from detrusor under-activity to over-activity, which includes but not limited to dribbling stream and inability to fully empty the bladder. As per Ayurveda, Apana vayu dushti (~dysfunction in the Apana vata i.e. located in lower abdomen parts and governs their function) is responsible in retention of urine and it can be correlated as Basti kundala explained under the thirteen types of Mutra ghata (~urine obstruction). A 45 years old female patient presented with chief complaints of increased frequency of urination, uncontrolled urine associated with dribbling of urine at the end of micturition, no satisfaction after urination she feel fullness of bladder after micturation. She also complained of abdominal distension throughout the day. She was treated with Tila taila anuwasan and Dashmula kwatha niruha Yoga basti (~rectal enema), administered for 8 days, after that sahacharadi taila matra basti (~rectal enema) after which the symptoms were reduced.

Key Word- Basti Kundal, Apanavayu, mutra ghata

Introduction-

Neurogenic bladder is a term applied to urinary bladder malfunction due to neurological damage to the nerves that governs the urinary tract emanating from internal or external trauma, disease or injury. Normal micturition involves proper function of both the bladder and urethra. A detrusor of normal compliance and a physiologically competent urethral sphincter are both necessary to maintain urinary continence. Normal micturition involves passive, low pressure filling of the bladder during the urine storage phase while voiding requires coordination of detrusor contraction with internal and external urinary sphincter relaxation. The spinal cord controls micturition reflex by the sympathetic and parasympathetic nervous system; brain controls normal micturition with urinary continence by holding urine through pontine storage center and facilitate urination by pontine micturition center. There are two types of neurogenic bladder viz. spastic (hyper reflexive) and flaccid (hypotonic). In

case of lower motor neuron lesion or any sacral injury or spinal shock, signals do not reach up to brain due to disruption of sensory fiber, hence urine occurs drop by drop known as overflow incontinence. While in upper motor neuron lesion detrusor hyperreflexia occurs which results into urge incontinence. In Ayurveda, a similar condition, Basti kundala is described under thirteen types of Mutra ghata. This condition is characterized by retention of urine in the bladder, leading to its distension. When Apana vata is associated with Pitta dosha, it causes burning sensation and distress on passing urine with yellow discoloration and when associated with Kapha dosha, it causes bladder distension with turbid urine. In contemporary science, for most types of neurogenic bladder, treatment essentially involves use of indwelling catheters, which certainly increases the risk of urinary tract infections, ascending pyelonephritis and bladder injuries. Those cases requiring surgery are further exposed to risk of recurrence and trauma. Even those on medication are subjected to side effects, which are unavoidable. Moreover, a definitive treatment is not guaranteed by any mode of management. A better management

protocol can be introduced through Ayurveda in terms of lower risk of complications due to treatment and advantage of targeting the root pathology through Ayurvedic principles of management. A general line of treatment mentioned in all types of Mutra vikara (urinary disorders) is Basti and Uttar basti.

Case report-

A 45 years old female patient presented with chief complaints of frequent urination (15-20 times in 24 hours) associated with dribbling at the end of micturition, fullness of bladder after micturition, with feeling of abdominal distension since four months. Patient was apparently asymptomatic till one year back when she developed slow onset of low backache. she was diagnosed to be a case of neurogenic bladder and was on allopathic treatment for his symptoms with partial relief and recurrences. After four months, she further developed increased frequency of urination along with turbid urine and smell in urine. Her hysterectomy operative done before 18 yrs back. she comes with above symptoms.

Personal history-

Appetite and thirst were normal. She was presented with constipated bowels, turbid micturition, smell of urine and disturbed sleep. The patient found to be Vata kapha prakriti with Krura koshtha, Madhyambala and Madhyama satva.

Per abdomen examination-

On palpation, mild tenderness was present in hypogastrium, left and right lumbar regions. Cardiovascular, Respiratory, Central nervous systems were found normal. Patient was well oriented to person, place and time. Gait was antalgic (pain avoiding gait), painful range of movement of legs was presented and mild kyphosis was present. Blood sugar [fasting (90 mg/dl), PP (106 mg/dl)], blood urea (36 mg/dl), serum creatinine (0.8 mg/dl) were in limits. Albumin (traces), pus cells (2-4 HPF), epithelial cells (++) were found. Mild changes of cystitis noted, pre void urine volume 164cc and post void urine volume 110 cc in USG report.

Treatment protocol-

The patient was admitted in the shalyatantra IPD and treatment was planned considering involved

Dosha and Dushya. Yog basti started to patient for 8 days. Niruha basti- Dashmula kwath was administered for 3 days, anuwasan basti - Tila taila was administered for 5 days. prior to basti for balancing Agni (~digestive fire) to counter Ama (~undigested food) presented in the body Hingwaashtak churna one teaspoon first bite of food is given in BD and also given Amapachak vati 250 one tablet in TDS. After that Matra basti (50 ml) with sahacharadi taila was planned for one month through anal route. The retention time of oil was found to be 4-5 hrs during the 1st week, which was gradually increased up to 20 hrs. Patient was advised to avoid Vata dosha vitiating diet like cold water and meals, rotten food, curd, cold drinks etc. and lifestyle like vigorous exercise and exertional work.

Drugs	Dose	Time	Duration	Purpose
1).Hingwashtak churna	2gm(one tea spoon)	Twice in a day first bite of food	7 days	For good digestion and Deepan-Pachan
2).Amapachak vati	500gm	Thrice a day one tablet after meal	7 days	Deepan-Pachan
3).Yog Basti A) Anuwasan basti- Tila taila B) Niruha Basti- Dashmula Kwath	50ml 50ml	At morning Before breakfast After breakfast	Alternate days anuwasan (5) and niruha(3) basti for 8days	Shodhan and vata alleviation
4).Matra basti- Sahacharadi taila (followed by yog basti)	50ml	After breakfast	1 month	Vata alleviation and neurological disorders.

PLAN OF MATRA BASTI-

Time	Dose(ml)	Retention time(hrs)	Complications	Frequency of micturition in 24hrs
1 st wee	50ml	Around 4-5hrs	No	15-20 times

k				
2 nd week	50ml	Around 10	No	12-14 times
3 rd week	50ml	Around 15	No	10-12 times
4 th week	50ml	Around 18	No	8-9 times

Outcome-

Frequency of micturition was decreased to 8-9 times from 15-20 times in 24 hrs along with relief in abdominal distension with a feeling of lightness. Improvement was also found in uroflowmetry.

Uroflowmetry-

Parameters	Before treatment	After 15 days of treatment	After treatment
Voided volume (ml)	164	190	210
Max flow rate(ml/s)	10	12	14
Average flow rate(ml/s)	4	6	9
Flow rate(sec)	30	26	20
Time to max flow(sec)	10	6	3
Hesitancy (sec)	10	6	2
Residual urine(ml)	110	70	20

Discussion-

Patient presented with chief complaints of increased frequency of urination and turbid urine for past four months. Her past history mentions low backache, which was associated with lumbar radiculopathy. cystitis pathology was ruled out in ultrasound abdomen. A diagnosis of neurogenic bladder was made in the light of history and investigations. Patient has hysterectomy done before 18 years, which leads to vitiation of Vata dosha. Also patient's age (45 years), is more prone to Vata vikaras. Vata dosha controls the nervous phenomenon of the body. Apana vayu governs the working of kidneys, colon, rectum, hence facilitate

the elimination of waste products like stool, urine etc. from body. Vitiating Vata results in Mutra vaha sroto dushti which presents as Atipravritti of Mutra (increased frequency of micturition). For all the urinary problems Basti and Uttara basti is the better treatment. It is stated that in vitiated Vata diseases or Vata dosha dominant diseases Basti is the best treatment. Basti also does disintegration and integration of Purisha (stool), Mutra (urine), Pitta (bile salts) and useful entities in body. Thus, Basti was planned in the current case. The choice of Matra basti was made because of its qualities like; it can be given at any time, can be recommended for daily use in emaciated patients with over exertion, over work, weight lifting, riding, travelling, indulgence in women, in debilitated persons as well as in those afflicted with Vata vikara (diseases of Vata). It is Balya, Brimhana, Vatarogahara, simple to administer and helps in easy evacuation of Mala and Dosha. Sahachara taila was used for Basti as it is indicated in Mutra ghata and said to be as 'Sarvavatavikarajit'. Matra basti was administered for one month because of the convenience of the patient. After completion of treatment patient was advised to take Chandraprabha vati (250 mg) twice a day as Rasayana and Shamana drug for fifteen days to rejuvenate the urinary system and was advised not to take Vataprakopaka diet and not to follow Vataprakopaka lifestyle. Patient was advised to re-visit hospital after 15 days for follow up. No further relapsing of symptoms was noticed. No complications were noticed or reported with usg post void residue is 20cc, cystitis decrease, no smell in urine.

Conclusion-

Neurogenic bladder is caused by the damage of the nerves governing the functions of urinary bladder. Vitiating Vata dosha (Apana vayu) is the main culprit in this disorder, which results in Mutravaha srotodushiti (dysfunctioning of urinary system) and thus Atipravritti (increased frequency of micturition). The adopted therapy i.e.Sahacharadi taila matra basti in the current case provided marked decrease in the frequency of micturition and relief in abdominal distension, which was not controlled by other oral medications like Chandraprabha vati and Gokshuradi guggulu. Basti is stated as best treatment for vitiation of Vata. In this particular case, the

treatment protocol adopted proved to be beneficial for the patient. No side effects were noticed during the period of treatment. The efficacy may be studied in larger samples to draw efficacy of Ayurveda treatment modalities. Also there is a need to promote role of Ayurvedic Panchakarma therapies in neurogenic bladder and make them more aware of its benefits over contemporary approaches.

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The Management of Psychological Disorders W.S.R to Ayurveda.**Vd. Shweta Apsingekar¹, Vd .Yogita Shrotriya²**

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Abstract:

In Today's era of competitive life are under influence of Rajas .Excessive travelling, over consumption of tea or coffee, preoccupied mind have depressing effect on mind leading to Psychological Disorder. Unhappy state of mind impacts our day today activities. Both body and mind are the locations of disorders as well as pleasures. The treatment (Chikitsa) of this Manas (Psychological) disorder is necessary for being healthy. Ayurveda recommends preventive medicine, correct behavior, balanced diet and non suppression of natural urges, Yoga Therapy following daily and seasonal regimens (Dincharya, Ritucharya). In this context detail description of Ayurvedic Management of Manas (Psychological) disorder are described.

KEYWORDS: Mana, Sadvritta, Sattvavajay Chikitsa, Achar Rasayan, Daivyapashraya Chikitsa

Introduction

Ayurveda is traditional science. The purpose of this science is to preserve the health of the healthy and cure the disease of the unhealthy. ¹ Both body and mind are the locations of disorders as well as pleasures. The balanced use (of the factors mentioned in previous verse) is the cause of pleasures.² Manas Roga or psychological disorder are associated with emotion, trauma, negative attitude, stress, personal loss, or some drug addiction . Manas Roga are caused due to disturbance in Sattva and when there is predominance of Raja and Tama Manas Doshas.

Their predominance and manifestations leads to disorders like *Kama* (lust), *Krodh* (anger), *Lobh* (greed), *Moha* (Delusion), *Irsha* (Jealousy), *Mana* (Pride), *Shoka* (Grief), *Chinta* (depression) , *Bhaya* (Fear), *Mastsarya*, *Vishad* (Sadness), *Dainya* (Affliction), *Unmad* (Psychosis), *Aptantrak* (Hysteria), *Apsasmar* (Epilepsy), *Attatvaabhinivesh* (obsession), *Chittovega* (Anxiety), *Murccha* (Fainting), *Anavasthit Chittatva* (Unstable Mind), *Tandra* (Stupor), *Nidradhikya* (Insomnia), *Klama* (Neuroasthnia), *Gadodvega* (Hypochondriasis) Psychological disorder occurs . As Stated in *Bhagwatgita* whenever and wherever the mind wonders due to its flickering and unsteady natures

we must bring it back under control of self chapter ³ mind can be controlled by constant practice and detachment .⁴

The mind which is happy responsible for Happiness .⁵ Positive health can be achieved by following keys: Brahmacharya (celebrity), Jnana (knowledge), Dana (charity), Maitri (friendship), Karunya (compassion), Harsha (happiness), Upeksha (detachment) and Prashama (peace). One who assiduously follows these prescriptions is devoid of all diseases, lives for a hundred years and does not suffer from untimely death. ⁶ If it is proven that mind and intellect are like the soul, these cannot be sole cause of birth. Those who accept the theory of mind and intellect of parents as sole factor of birth .⁷

The people who follow the path of Dharma (eternal duty), they are devoid of fear, attachment, hatred, greed, confusion, vanity and all their mental defects are vanished, they have great knowledge. Their mind and intellect are functioning forever, such ancient and most ancient sages with their divine sight after careful observation has enunciated the theory of rebirth. Everyone should think over this and there should be no doubt. Some should concentrate mind on the path of eternal duty. Paths are to give service to the preachers/teachers/elders, studies, performing spiritual acts, marriage, producing children,

maintenance of servants, giving respect to the guests, giving donations, no greed for others money, penance, avoid jealousy, performing acts which do not affect physical, verbally and mind, introspection of body, sensual faculties, mind, intellect and self and meditation are included. Similar acts recommended by virtuous persons which are conducive for doing well in life, and attainment of heaven after death, means of livelihood should be done. By doing such acts one gains fame and attains heaven after death. Thus, the third basic desire is explained. 9

Three types of Vikalpa (Atiyoga, Ayoga and Mithyayoga) and three actions (speech, mind and body) come under category of deeds done of Prajnaparadha (intellectual defects). 10

Aims And Objectives:

- 1) To study Ayurvedic Approach of psychological Disorders.
- 2) To study *Chikitsa* mention in *Ayurvedic Granthas* for psychological disorders.

Materials And Methods:

In *Ayurveda*, there are various literatures available in Samhita's about a Management of *Manas Vikar* (psychological disorder) Ayurveda describes various principles and modalities for maintaining health like *Dinacharya*, *Ritucharya*, *Ratricharya*, *Rasayana therapy*, *Proper Aahara – Vihara*, *Vyayama*, *Sadvritta*, *Achara Rasayana* etc. with the help of implementation of all this modalities Sharira Bala, Manasa Bala and *Vyadhikshamatva* also increases.

Review of Chikitsa:

Definition of Mana (Mind): Sometimes one understands a thing and sometimes one does not. This proves the existence of the mind as a separate sense organ. That is why, when there is no contact of the mind with sense organs and their objects, no understanding of things can occur. It is only when the required mental contact is there that one can understand things. 11

Types of Diseses (Vyadhi): There are three types of diseases – Nija (endogenous), Agantuja (exogenous) and Manasa (psychological). Nijayadhi (endogenous diseases) are caused by vitiation of body Doshas (Vata, Pitta and Kapha).

Agantuja (exogenous diseases) are caused Bhuta (invisible organisms), poisonous substances, wind, fire and trauma. Manasa (psychological diseases) are caused by conflict between not getting the desired things and getting non desired things. 12

Definition of Chikitsa- Sharira Dosha are pacified by remedial measures of divine and rational qualities while the Manas dosha can be treated with knowledge of self (Jnana), scientific knowledge (Vijnana), restraint/temperance (Dhairya), memory (Smriti) and salvation/concentration (Samadhi). 13

Types of Chikitsa: There are three kinds of treatment modalities-

Daivavyapashraya (divine or spiritual therapy), Yuktivyapashraya (therapy based on reasoning) and Satwavajaya (psychotherapy). Daivavyapashraya includes mantra chanting, medicine, wearing gems, auspicious offerings, oblations, gifts, offerings to sacred fire, following spiritual rules, atonement, fasting, chanting of auspicious hymns, obeisance to gods, visit to holy places, etc. Yuktivyapashraya includes proper dietetic regimen, medicine planning. Sattvavajaya is withdrawal of mind from harmful objects.

Mind is the link between Atman (soul), Indriya and Sharira (senses and body). It is responsible for the Pravritti (indulgence) and Nivritti (non-indulgence) in health promoting and health-degrading activities (Shubha or Ashubha Karmas) because thinking is the object of Manas. Samayoga (proper association) of these leads to fruitful results and Atiyoga (excessive correlation), Hinayoga (deficient/no correlation) and Mithyayoga (perverted correlation) leads to dreadful consequences. The Sattvavajaya treatments (restraining senses from harmful objects by controlling mind) form important component for psychiatric and psycho-somatic disorders. 14

1) **Sattvavajaya Chikitsa:** *Sattvavajaya* is withdrawal of mind from harmful objects. ¹⁵*Sattvavajaya Chikitsa* literally means controlling the mind, in such a way that it is not acted upon by various stressors making it prone to *Prajnaparadha*. Acharya Charaka defines *Sattvavajaya* as withdrawal of mind from unwholesome objects. It includes

- *Mano nigraha*: regulating mind/subjugating mind from unwholesome interactions
- *Dhee-dhairyaatmadi Vijnanam*: It is providing a deeper level of understanding which helps ultimately in better control of mind. *Charaka* also explains the utility of replacing negative emotions with that of positive emotions that is beneficial to psyche. Thus *Satvavajaya* encompasses various aspects that deal with mind – its physiology, morphology, morbidity and also management of Psychological as well as Psychosomatic diseases.¹⁵

a) **Consumption of Sattvik Ahar** Since Vedic era, food has been given the prime importance. Three categories of *Ahara* are described in *Bhagvad Gita* are *Sattvika*, *Rajasika* & *Tamasika*. *Sattvika* persons prefers food which increases life span, nourishes *Sattva*, keeps body healthy, increases happiness and prosperity, which are pleasing and full of nutrients, unctuous in nature, providing stability and conducive for the heart and soul .

- Those persons who take foods which are very pungent, sour, salty, very hot, very sharp in taste, excessively dry, which causes burning sensation, and foods which causes sadness, depression and various diseases are *Rajasika* persons and thus such foods can be categorized as *Rajasika* .
- Food that is not freshly cooked, unhygienic food or food which is devoid of nutrients, foul smelling, stale, mixed with pollutants, dust etc. and left over food comes under the *Tamasika* food and which is appreciated and practiced by *Tamasika* persons .¹⁶

Habit of taking *Ahara* which is *non-Satvika* i.e. *Rajasika* or *Tamasika* (continuously for a long time) causes some sort of mental disturbances and later on causes serious mental illnesses like *Unmada* and *Apasmara*.

Satvika Ahara not only consists of food with proper nutrition but also it indicates the rules of taking food should be followed. For eg. *Ashtaaharavidhi Visheshayatana (Charaka)*,¹⁷ *Dwadashashan Pravicharana (Susruta)*¹⁸. In the treatment aspect also, specific food along with health-conducive routines/regimens plays an

important role along with medicines. Somatic or psychic food plays an important role as a preventive factor, causative factor and as a curative factor. Proper diet helps a healthy person to stay healthy/improve it and prevent illness. *Ayurveda* owns clear and scientific concepts in this regard. The influence of digestive system on the emotional aspects of human beings is another domain of related study in modern research. Gut is considered as the second brain due to the intrinsic neuronal networks. The age old medical system, *Ayurveda* elaborated the same concepts eons before.

Pathya Ahara in Mental Illness: The foods with the qualities like color, smell, taste and touch can be pleasing to the sense organs and conducive to the health if taken in accordance to the rules is the very life of living beings. If proper, it kindles the digestive fire, promotes mental as well as physical strength, complexion, and strength of tissue elements and is pleasing to the senses, otherwise they are harmful. Consumption of *Madhura*(sweet) food produces Happiness of Mind ,*Harsh* .after food intake individual should do the things which made him happy like hearing songs do the things which are good in *Shabda*(to hear),*Sparsh*(to touch),*Rupa*(to visualize),*Rasa*(inTaste),*Gandh*(in smell).¹⁹

b) **Pathya Viharas in Mental Illness**

- **Dinacharya** :²⁰ *Ayurveda* promotes a lifestyle that’s in harmony with nature.
 - It is advisable to wake up during *Brahma Muhurta* (preferably between 4.00 a.m. to 5.30 a.m.).
 - Drinking water early in the morning according to one’s capacity cleanses the body by enhancing the elimination of toxic wastes.
 - One should attend the nature’s calls.
 - The soft brushes made out of twigs of *Khadira*, *Karanja*, and *Apamarga* etc. Tongue should be cleaned by a long flexible strip of metal or plant twig. It not only cleanses the tongue but also stimulates appetite and digestion. Mouth should also be cleaned properly.
 - Eyes should be cleaned with fresh water to prevent eye diseases and promote vision. Also wash eyes with *Triphala Phanta* every day for clarity of vision and prevention of eye diseases.
 - Chewing of betel leaves with small pieces of *Areca nut (kramuka)* and fragrant substances like cardamom, cloves, refreshes the mouth and enhance digestion.

- It is necessary to massage whole body with oil every day. Oil massage ensures softness and unctuousness of skin, free movement of joints and muscles, peripheral circulation and elimination of metabolic wastes.
- Regular exercise is essential for perfect health. It builds up stamina and resistance against disease, clears the channels of body (*Srotas*) and increases the blood circulation. It enhances efficiency of body organs, promotes appetite, digestion and prevents obesity.
- Bathing improves enthusiasm, strength, sexual vigour, appetite, span of life and removes sweat and other impurities from the body. After bath one should wear clean clothes and smear the body with perfume.
- **Ritucharya**²¹: In *Ayurvedic* classics, there has been a thorough consideration for seasons, besides the dietetic regimens for days and nights. Whole year is divided into six seasons and detailed regimen for these seasons is prescribed.
- In spring season (*Vasant*), bitter, hot and astringent diet is advised while salty, sour and sweet food should be avoided. Wheat, barley, honey syrup, fruits like mango, jack fruit-etc. and meat of forest animals are advised.
- In summer season (*Grishma*) due to hot climate, aggravation of *Pitta* occurs. Hence *Pitta* pacifying cold, liquid, sweet and oily diet is advised. Excessive hot, spicy, sour salty diet should be avoided. Intake of rice, milk, ghee, sugar, grapes, coconut water etc is advised.
- In rainy season (*Varsha*) aggravation of *Vata* occurs, hence *Vata Shamaka* sweet, sour and salty food and drinks are preferred. The food should be hot, dry, fatty and easily digestible. Preserved rice, wheat, barley and mutton soups are advised.
- In pre winter and winter season (*Shishir & Hemant*) *Vatadosha* aggravates due to cold, dry, chilly atmosphere hence *Vataghna*, *Pittavardhaka* diet is recommended. Hot, sweet, sour and salty food, milk, sugarcane, rice, oils and fats are advised
- In autumn season(*Sharad*) aggravation of *Pitta Dosha* occurs. Therefore, it is ideal to

take ghee processed with bitter drugs; purgation, bloodletting, coolant, and light diet are advice. Diets dominant in Bitter, sweet, pungent diets are good.

Table 1: Showing Pathya Ahar –Vihar in Manas Vikara

Ahar			Vihar
Sattvik	Rajasika	Tamasik	
<ul style="list-style-type: none"> • Food having Ashtaaharavidhi Visheshayatana (Charaka), • Dwadashashan Pravicharana (Susruta). • Dwadashashan Pravicharana (Susruta). • Food which is freshly Cooked, Having vegetables, Fruits, Milk, • Ghee, tasty which creates happy mind should consume 	very pungent, sour, salty, very hot, very sharp in taste, excessively dry, which causes burning sensation, and foods which causes sadness, depression and various disease do not consume	Not freshly cooked, unhygienic food or food which is devoid of nutrients, foul smelling, stale, mixed with pollutants, dust etc. and left over food do not consume	<ul style="list-style-type: none"> • Follow the <i>Ayurvedic</i> regimen of <i>Dincharya</i> • Follow the <i>Ayurvedic</i> Regimen of <i>Ritucharya</i> • I o the things which are good in <i>Shabda</i>(to hear), <i>Sparsh</i>(to touch), <i>Rupa</i>(to visualize), <i>Rasa</i> (in Taste), <i>Gandh</i>(in smell).

2) **Daivayapashraya Chikitsa**: It includes Chanting of Mantras and performances of Homes (Yadnya/Hawan) are integral part of Daivayapashraya Chikitsa It gets revives normal functioning of Sattva and removes obstacles of Rajas.²²

3) **Acharya Rasayana** : An individual who is truthful, free from anger, abstaining from wine and women, non violent, relaxed, calm, soft spoken, engaged in meditation and cleanliness, perseverance, observing charity, penance, worshiping gods, cow, Brahman’s, gurus, preceptors and elders, loving and compassionate, is vigilant and sleeps in balanced way, consumes routinely ghee extracted from milk, considering the measure of place and time with

propriety, un-conceited, well behaved, simple, with his senses well concentrated to spirituality, keeping company of elders, positivist, self restrained and devoted to holy books should be regarded as using the rasayana for ever. Those, who, endowed with all the auspicious qualities, consumes rasayana, gets all the aforesaid benefits of Rasayana treatment.²³

- Sadvritta' -Sadvritta' means good code of conduct. It is indicated in preservation of health and prevention of diseases. It fulfils two objectives – maintenance of positive health and control over sense organs.
- One should worship God, cows, Brahmins, preceptors, elderly persons, highly accomplished persons and teachers
- One should honor fire with oblation, should put on auspicious herbs
- One should bathe twice a day, and one should clean his excretory passages and feet frequently
- Cutting of hair, shaving & nail cutting should be done thrice a fortnight
- One should always wear untorn clothes, should be cheerful, and use flowers and fragrance. The attire should be gentle and style of hair should be as commonly in practice
- One should apply oil to head, ear, nose, and feet daily and should resort to (healthy) smoking
- One should take an initiative during discourses and remain pleasant faced.
- One should save persons in dire situations or distress
- Should offer oblation, perform religious sacrifices, donations, pay respect to road crossings, offer bali (religious offerings or ritualistic sacrifices)
- Should offer hospitality to guests, offer Pindas (rice balls) to forefathers
- One should timely speak useful, measured, sweet & meaningful words
- Should be self controlled & virtuous
- One should be zealous to the cause but not be anxious about the result/outcome
- One should be free from anxiety, fearless, shy (from committing bad deeds), wise,

highly enthusiastic, skillful, fore bearing, religious, with positive attitude

- One should be devoted to the teachers, accomplished persons and to those who are superior in modesty, intellect, learning, clan and age.
- One should walk with an umbrella, stick, turban & foot wear, and look six feet ahead
- One should adopt auspicious conduct, should avoid places with dirty clothes, bones, thorns, impure articles, hairs, chaff, garbage, ash, and skull and one should bathe & sacrifice
- Should discontinue exercise before feeling of fatigue.
- Should behave like brother to all living beings (i.e., should be compassionate), should pacify the angry and the discontent, and console the frightened
- Should help the poor, be truthful & peaceful.
- Should be tolerant of harsh words, and should curb the practice of intolerance
- Should always concentrate on the qualities of peaceful life and should be the remover of the causes of attachment and aversion.²⁴
- **Behavioural code with preceptors**
- One should not speak ill of noble persons and preceptors.
- One should not perform spells, worship of sacred trees and superiors, and studies while remaining impure.²⁵
- **Codes for maintaining good psyche in society**
- One should always control the senses (mind & 5 sense organs) and should suppress the urges like Lobha, Irshya, Dwesh, Matsarya, Raga etc.²⁶
- One should not be impatient, or overexcited/over exhilarated.
- One should not be the person who does not support his attendants, confide in his kins, be happy alone and has unpleasant conduct, behaviour and attendance.
- One should not rely on everybody nor suspect all and should not be critical (too meticulous) at all times.²⁷
- **Code of conduct at work-place**
- One should not be submissive to his senses nor should let his fickle mind move around.

- One should not overburden his/her intellect or senses.
- One should not do things in a fit of anger or rejoicing.
- One should not be under continuous grief.
- One should not be conceited over achievements or desperate in loss.
- One should always remember his own constitution of mind (nature).
- One should have faith in the correlation of the cause and effect that is good and bad deeds and their corresponding results and should always act on it.
- One should not be despondent and assume that now nothing can be done.
- One should not lose spirit (give up courage) nor should remember his insults.²⁸

➤ **Codes of conduct for blissful well-being**

One who is desirous of well-being should not offer oblation to the fire with cow ghee, whole rice grains, Tila (Sesame indicum Linn.), Kusha grass (Desmostachya bipinnata Staff.) and mustard seeds while in impure condition. One should touch water, reciting mantra- Agnirme Na Apagachhet Sharirad, Vayurme pranam Aadadahatu, Vishnurme Balam Aadadahatu, Indro Me Viryam Shiva Mam Pravishantva Apa Apohishthetyapah Sprushet. After touching the lips and feet, one should daub water on all the orifices of the head (two nasal, one buccal, two auditory, and two ocular orifices), the seats of his soul (mentally), heart and head.²⁹

- Persons those who have not been able to free themselves from Rajas and Tamas (psychological Doshas), for them advice given by the learned sages in religious literatures is that they cannot attain salvation.³⁰

➤ **Aushdhi Chikitsa**

- Dravyas those increases the Medha is known as 'Medhya'. Although this function is related with Mana, and due to Nadisansthan is the Visistha Adisthana of presence of Mana; this Medhya Karma is related with Nadisansthan. Nadisansthan are connected with Brain that's why the Medhya Dravya also known as brain tonic.
- The Medhya Karma is considered as Prabhava Jayna because some Medhya Dravya are Shita

Virya, Madhura Rasa and Madhur Vipaka e.g. Yashtimadhu; and some are Tikta rasa and Ushna virya e.g. Guduchi.

- These Medhya Dravya have more Medhya Karma present rather than a Samanya Dravya, so Medhya Karma is Prabhava Janya...Consumption of Mandukaparni juice, the powder of Yashtimadhu with milk, the juice of Guduchi along with its roots and flowers and the paste of Shankhapushpi – these Rasayana drugs are life promoting, disease alleviating, promoters of strength, Agni, complexion, voice and are intellect promoting. Of them Shankhapushpi is specifically intellect promoting.³² Medhya Ramayana.

These four Rasayana enhance intelligence. Yashtimadhu is Shita, pacifies Vata-Pitta and maintains normal Kapha. It controls Rajoguna and increases Sattva, resulting in boosting intelligence. Yashtimadhu also nourishes Dhatus and ultimately increases Shukra and Oja.

As explained by commentator Chakrapani, effects on Indriya, Mana and Buddhi are mediated through Oja. Mandukaparni is Sheeta and it specially pacifies Pitta. It also controls Rajoguna and increases Sattva. Shankhapushpi is slightly Ushna, specially pacifies Vata.

Shankhapushpi also controls Rajoguna and increases Sattva. Shankhapushpi nourishes Majja. Whereas Guduchi is also slightly Ushna, pacifies all three Doshas, controls Tama and increases Sattva. Keeping in mind such peculiarities, specific Rasayana is chosen for a specific person. Many researchers have been conducted on these Medhya Rasayana.³³

- **Dharaneeya Vega:** An intelligent person should control greed, grief, fear, anger, egoism, shamelessness (impudence), jealousy, excessive affliction (in anything), and desire to acquire someone else's wealth.³⁴

- **Mano Vikara** (Psychological disorders) Jealousy, grief, fear, anger, egoism and hatred, etc. and all other mentioned mental disorders result from defects in one's intellect^{35, 36}

- Excessive indulgence in Dharaneeya Vega is the result of improper Atma-Indriya-Artha Samyoga and further impairs the synchrony of Manogunas. Thus, one can understand

that Manasika Vega is a result of vitiated Rajas and Tamas that cloud the mental faculties and cause it to form unwholesome association with objects due to impairment of the intellect and the other regulating factors.

4) Practicing Yogic lifestyle –

The literal meaning of *Yoga* is ‘to join’, that is joining of Mind and Body. *Yoga* advocates that every life form is interconnected and united¹³ the eight limbed path of *Yoga* includes: *Yama* (moral codes), *Niyama* (self-discipline), *Asana* (postures), *Pranyama* (breath practices promoting life force), *pratyahara* (sensory transcendence), *Dharana* (concentration), *Dhyana* (meditation) and *Samadhi* (state of bliss).

Happiness and miseries are felt due to the contact of the soul with the sense organs, mind and the objects of senses. Both these types of sensations disappear when the mind is concentrated and contained in the soul and the super natural powers in the mind and body are attained. This state is known as *Yoga* according to sages well versed in this science.

The application of *Yoga* as a therapeutic intervention began early in the twentieth century, taking advantage of the various psycho-physiological benefits of the component practices. The physical exercises (*Asanas*) may increase patient’s physical flexibility, coordination, and strength, while the breathing practices and meditation may calm and focus the mind to develop greater awareness and diminish anxiety, and thus results in higher quality of life. Other beneficial effects include a reduction of distress, blood pressure, and improvements in resilience, mood, and metabolic regulation. It has been found in many researches that *yoga* have positive effects on mild depression and sleep problems, and it improves the symptoms of psychiatric disorders like schizophrenia and ADHD among patients using medication. Some studies even suggested that *yoga* might affect the body in ways similar to antidepressants and psychotherapy. For instance, *yoga* may influence brain chemicals known as neurotransmitters (boosting levels of feel-good agents like serotonin), lower inflammation, reduce oxidative stress and produce a healthier balance of

lipids and growth factors — just as other forms of exercise do.³⁷

(1) Entering others body, (2) thought reading (3) doing things at will, (4) Super natural vision (5) super natural audition (6) miraculous memory (7) uncommon brilliance and (8) invisibility when so desired – these are the eight supernatural powers attained by those who practice *Yoga*.

All this is achieved through the purity of the mind. (Free from Rajas and Tamas)³⁸

In order to transcend this dichotomy, Patanjali described the following eight limbs of Ashtanga *Yoga*.

The first two aspects are *Yama* and *Niyama* to create social and personal discipline in the society. The next two, *Asana* and *Pranayama* are to achieve physical and mental strength and stability.

- *Pratyahara*, *Dharana*, *Dhyana* and *Samadhi* are to achieve *Moksha* by detachment, focus, meditation and bliss. Each one of us has unique qualities and has different levels of existing skills provided by each of the limbs of *Yoga*. Therefore, some individuals may require a teacher or *Guru* to give guidance in the early stages.
- *Yama* (social restraints for relating to society) These are:
 1. Ahimsa: We should not cause pain to others by thoughts, words and actions. Show kindness and thoughtfulness to others.
 2. Satya: Truthfulness and honesty.
 3. Asteya or non-stealing: Tangible and intangible.
 4. Bramhacharya: Control over senses, appropriate sexual behavior.
 5. Aparigraha or non hoarding: Taking from nature what is needed.
- *Niyama*: (Personal restraints or conduct)
 1. Shaucha: Physical and mental cleanliness or purity.
 2. Santosha: Contentment
 3. Tapas: Self discipline.
 4. Swadhyaya: Self study
 5. Ishwara Pranidhana: Acceptance. Do karma and leave results to higher powers.
- *Asanas*: Means steady and comfortable posture. Improves health, strength, balance and flexibility. On a deeper level it is a tool

to calm the mind and move into the inner essence of being.

- Pranayama: Directing the life force produces heat (Tapa) and cleans the channels, strengthens the respiratory system, calms the mind to be able to concentrate and meditate.
- Pratyahara: This is a stage when withdrawal of senses occurs due to break in the link between senses and the mind. It facilitates the next three limbs of Yoga.
- Dharana: This is a stage of deep concentration of mind on one particular object, sound or thought and there is cultivation of inner awareness.
- Dhyana or meditation: This is the seventh step of Yoga and during this stage there is deep awareness but no focus. There may be very few thoughts or no thoughts.
- Samadhi: This is a stage of bliss where the subject and object merge as one. Person feels connected to all living beings and is at peace. Illusionary separation of “I” and “mine” is lost as mind does not distinguish between self and non-self.

All these have positive benefits to improve body-mind strength and harmony.³⁹

5) Exercise and the brain: Exercise help memory and thinking through both direct and indirect means. The benefits of exercise come directly from its ability to reduce insulin resistance, reduce inflammation, and stimulate the release of growth factors—chemicals in the brain that affect the health of brain cells, the growth of new blood vessels in the brain, and even the abundance and survival of new brain cells.

Indirectly, exercise improves mood and sleep, and reduces stress and anxiety. Problems in these areas frequently cause or contribute to cognitive impairment. Many studies have suggested that the parts of the brain that control thinking and memory (the prefrontal cortex and medial temporal cortex) have greater volume in people who exercise versus people who don't Exercise affects the brain on multiple fronts.

It increases heart rate, which pumps more oxygen to the brain. It also aids the bodily release of a plethora of hormones, all of which participate in

aiding and providing a nourishing environment for the growth of brain cells. Exercise stimulates the brain plasticity by stimulating growth of new connections between cells in a wide array of important cortical areas of the brain. From a behavioral perspective, the same antidepressant-like effects associated with “runner’s high” found in humans is associated with a drop in stress hormones.⁴⁰

Discussion:

Famous Saint Samarth Ramdas Swami said in his Granth Manache Shlok our evil desires are of no use, sinful thoughts should not come to our mind. we should always have ethics ,we should always know real truth in our mind .41If our mind get corrupted then we lose our reputation amidst people,so let say no to anger which makes us feel sorry ,let us not corrupt our mid with all sorts of desires ,let us not praise ourselves due to jealousy for others.⁴²

Let us have great patience ,let us bear the evil words spoken to us,let us always understand others.We should not bleed our mind with sorrow ,we should not been grossed with sadness &worries.so that we maintain our mental hygiene.⁴³

A wise person even if suffering from psychological disease should consider carefully what is beneficial and what is harmful for health. One should discard the harmful or unwholesome regimens and do the beneficial work regarding the Dharma (virtue), Artha (wealth) and Kama (desire). In this world happiness or sorrow cannot occur without these three. That is why one should try to indulge in doing beneficial work and discard the harmful one. One should serve the intellect. Also, try to acquire knowledge about Atman (self), Desha (place), and Kala (time), Bala (strength), Shakti (potential/capacity).

Thus, it is said that the treatment of psychological diseases is- to follow the conduct related to Dharma (virtue), Artha (wealth) and Kama (desire). To do service of persons who are having knowledge of psychological diseases and follow their instructions, to obtain the knowledge about self etc. 46

Conclusion:

The former ones (Sharira Dosha) are pacified by remedial measures of divine and rational

qualities while the latter ones (Manas Dosha) can be treated with knowledge of self (Jnana), scientific knowledge (Vijnana), restraint/temperance (Dhairya), memory (Smriti) and salvation/concentration (Samadhi).⁴⁷

Avoidance of improper activities of body, mind and speech by willful transgression of rules, control over senses remembering the previous experiences, knowledge pertaining to place, time and constitution, adherence to rules of good conduct as prescribed in Atharvaveda, propitiating unfavourable Grahas, Adopting ways to keep away from demons etc is treatment for Agantuja Vikara.⁴⁸

As said by Charakacharya Worry / grief (Shoka) leads to emaciating/ wasting (Shoshnanam), Grief (Vishad) leads to aggravation of diseases (Rogvardhananam, Unhappiness / Disgust (Daurmanasya) leads to loss of virility (Avrushyananam), Harsha gives delight (Prinananam).⁴⁹ One should be relieve all the worries and one should behave according to Sadvritta leads to Joyfull life and may achieve Dharma, Artha, Kama, Moksha and Health.

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**PUBIC SYMPHYSIS DIASTASIS DURING NORMAL VAGINAL DELIVERY – A CASE STUDY****¹*Dr. Snehal Prakashrao Pawar and ²Dr. J. S. Deshmukh**¹PG Scholar (Prasutitantra & Streerog), ²HOD & Professor of Prasutitantra & Streerog
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ABSTRACT

Pubic Symphysis Diastasis is defined as separation of the joint, without fracture. Pubic Symphysis Diastasis following childbirth via vaginal delivery is a rare but debilitating condition. It is a condition that allows excess lateral or anterior movement about the Symphysis pubis and can result in Symphysis pubis dysfunction. It is usually noticed after delivery and has been associated with forceps delivery, rapid second stage of labour or severe abduction of the thighs during delivery. Unbearable pain on moving from side-to-side and on performing any weight-bearing activity such as walking or climbing stairs precludes ambulation in the immediate postpartum period. Radiography, ultrasound and magnetic resonance imaging are the diagnostic modalities that aid confirmation of diagnosis. There is no overwhelming evidence in the medical literature to support any particular treatment. Most of the cases can be treated Conservatively. However, external and internal surgical stabilization may occasionally be required. A Case is reported here of severe separation of the Symphysis pubis during delivery, including several Previously unreported complications. A review of the literature follows, highlighting the variety in Presentation, treatment, and prognosis.

KEYWORDS: Pubic Symphysis Diastasis, Spontaneous vaginal delivery, Conservative management, Bed rest, Pelvic binder.

INTRODUCTION

The Pubic Symphysis is a non-synovial joint that connects the right and left superior pubic rami. Due to hormone related changes and physiological alterations observed during pregnancy, the gap can increase by 2-3mm and remain after delivery, such a separation is called as "Physiological Pelvic Symphysis Diastasis". Infrequently vaginal delivery might lead to joint widening of more than 10mm which is diagnostic and defined as "Pathology Pubic Symphysis Diastasis".^[1] The abnormally widened gap can cause significant pain followed by the inflammation and swelling. A Physiological widening of the Symphysis joint is based on normal endocrine changes during pregnancy; therefore, it does not depend on the mode of delivery and the Pathological Diastasis is considered complication of the vaginal delivery method of childbirth and can be prevented by Cesarean delivery.^[2] This is a rare pathology found in postpartum women with an estimated prevalence ranging from 1 in 300 to 1 in 30,000 Pregnancies.^[3]

Diastasis can also occurs as a result of Precipitate labour and instrumental delivery.^{[4][5]} These changes are reversible after complication free birth but sometimes

may result in considerable & prolonged morbidity.

Possible predisposing factors involve the no. of pregnancies, fetal macrosomia, narrow pelvic outlet or cephalo-pelvic disproportion, rapid & dense contractions, during labour, epidural route of anaesthesia, Previous trauma in the pelvic region, osteomalacia, chondromalacia & infections.^[6]

A rapid delivery is thought to play a role in rupture of the pubic ligaments, But intervention with the vacuum extraction or Forceps delivery has not had an important role in the series reported. Clinically, separation of the symphysis pubis is Heralded by pain in the region of the symphysis, With point tenderness in the region of the symphysis pubis and pain in, that area on compression of the pelvis. Pain usually occurs with walking, And an unstable or waddling gait is noted. With Wider separations, back pain in the sacroiliac Joints becomes more prevalent because of the Hinge-type movement when the pelvis widens.

Treatment modalities range from Conservative management including analgesics, pelvic binders, transcutaneous nerve stimulation and chiropractic

management to orthopaedic intervention such as external fixation or open reduction and internal fixation.

MATERIALS AND METHODOLOGY

Study type

A single case study of Pubic Symphysis Diastasis.

Study Design

A single case study of patient was taken from IPD of our Ayurved Rughnalya. Informed & written consent was taken.

CASE REPORT

A 24 years old patient G₃P₁ had a Prolonged second stage of labour with spontaneous vaginal delivery of a 3.3kg healthy female child. Immediately after labour, the patient noted severe suprapubic pain and was unable to move due to the severity of pain. Attempts by physical therapists to mobilize the patient had failed due to significant pain & discomfort. Results of a neurological examination of her legs were normal. Then patient was evaluated by an orthopaedic surgeon.

On Physical examination, there was no obvious instability with compression of both iliac wings. There was reproducible pain over the midline & in the infra umbilical region and tenderness over the pubic symphysis, with a small palpable defect.

Radiography of the pelvis were ordered to further assess the symphysis pubis & sacroiliac joints. Initial images of the pelvic were obtained on postpartum day 5 and demonstrated abnormal widening of the symphysis pubis to a maximal transverse measurement of 4cm. There was no definite sacroiliac joint widening. Radiological imaging findings and the stability of the posterior ring, so, Conservative management was recommended and patient was placed in a pelvic binder. Also recommended to take bed rest and supportive treatment was continued for 3 months.

Supportive treatment

- 1) Mahayograj Guggul 250mg 2BD warm water for 15days.
- 2) Asthiposhak Vati 250mg 2BD
- 3) Shatawari Kalpa 1tsf—1tsf with milk
- 4) shunthi siddha erand tail 5ml at night with luke

Also, sequential images at follow up were obtained. The patient improved clinically and Radiographically. On follow up visits, she reported progressive improvement of symptoms.

DISCUSSIONS

Anteriorly, the pelvic bone are jointed together by symphysis pubis. The structure consists of fibrocartilage and superior & inferior pubic ligaments. In pubic symphysis Diastasis, the separation of the right and left pubic rami. The abnormally widened gap can cause

significant pain followed by inflammation and swelling. Diagnosis may be made based on multiple imaging studies.

In the medical literature, there are no definite guidelines to support any particular treatment. Most of the cases respond to Conservative therapy in the form of bed rest, Analgesics and pelvic binders. Conservative therapy usually results in a complete recovery in acceptable time span. Physiotherapy in the form of muscle strengthening exercise also has a role.

CONCLUSION

Separation of the pubic symphysis during pregnancy and delivery is normal. However, large separation is a potential complication requiring treatment and follow up. Treatment should generally be Conservative and symptomatic.

Conservative management including rest, analgesics and a pelvic binder is a reasonable method of management. Under the guidance of expert obstetric, physiotherapist, this clinical entity shows significant improvement in pain, functional status and overall physical health.

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**EFFECT OF TRIGUNA ON HUMAN BEHAVIOUR*****¹Dr. Anil Devraj Sandri, ²Dr. Anjali Hingane, and ³Dr. Smita Dhurde**¹PG Scholar (Samhita Siddhant),²MD Samhita and Siddhant, Prof. Dept. of Samhita and Siddhant,³MD.Ph.D. Samhita Siddhant, Prof. & HOD of Dept. of Samhita and Siddhant,
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Siddhant) CSMSS Ayurveda
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Kanchanwadi, Aurangabad,
Maharashtra.**ABSTRACT**

Man is a social animal. His behavior depends on his personality. There are so many factors which are responsible for development of personality of an individual such as method of upbringing, school life, friends, family profession, job satisfaction, financial status, marital life, etc. Ayurveda theory of mental constitution helps here which is based on ratio of Triguna namely Satva, Rajasa, Tamasa. The term Guna refers to the tendency which human mind functions. Guna is Sahaja Prakruti which stays inside a person.^[1] The Prakruti is composed of three Guna Satva, Rajasa, Tamasa. On an individual level they are corresponds to various psycho-physiological state & personality types. Satva response to clarify of thoughts & purity of mind Rajasa denotes

passionate, excitable, aggressive states of mind & Tamasa denotes Indifference, confusion & depression In Shrimada Bhagavada Gita there is description about triguna and its swabhava, lakshana, karya, phala and parinama.^[2]

KEYWORDS: Satva, Rajasa, Tamasa.**INTRODUCTION**

Triguna are present in all human beings, none is free from the operation of any one of the three qualities. There are not constant, sometimes Satva predominates and at other time Rajasa and Tamasa predominates. One who know that the Satva is Shreshtha and one cannot get rid of Rajasa and Tamasa, should do Sadhana in enlightening the Satva. These three Guna is different properties influence the mental and intellectual caliber of every individual. Guna

indicates the attribute with which human mind functions. Dominance of Guna determines the Individuals personality.

In Shrimada Bhagavat Gita, Lord Krishna has explained the concept of Triguna, characters of each Guna, the relationship between food & habits in Triguna & methods of controlling the mana. Apart from Bhagavat Gita the other Acharyas also mentioned about Triguna. In Sushruta Samhita personality of a man is explained based on Triguna, Satvika, Rajasika, Tamasika Purusha lakshana.^[3]

Acharya Charaka mentioned mental faculty of three types; Satvika, Rajasika & Tamasika. The Satvika is one which free from defects as it is enclosed with auspiciousness. The Rajasa is defective because it promotes wrathful disposition. The Tamasa is the one which is similarly defective because it suffers from ignorance.^[4]

In Ashtanga Hrudaya the characteristics of Triguna are mentioned as Satvika person having Guna like cleanliness, have faith in God, righteous, honest & intellect. Rajasika persons are talkative, having anger, jealousy & are proud. Tamasika persons are coward, illiterate, sleepy, lazy & non-enthusiastic. According to Sankhya philosophy, Satva guna is the indicator of purity, creativity & bliss. Rajasa is distinguished by movement, dynamism & reactivity. Tamasa is characterized by ignorance, delusion & power of resistance.^[6]

Aim: To study the concept of Triguna critically.

Objectives: To study the effect of Triguna on human behavior.

METHODOLOGY

1. Shrimada Bhagavata Geeta – 14th Chapter⁸

The highest of three qualities is Satva. It is pure. It brings about happiness, wisdom & illumination. The second quality is of Rajasa gives rise to passion manifested by intense, attachment & greed. It causes sorrow & suffering. The third, Tamasa is the worst of all. It arises due to ignorance & results in darkness, lethargy & delusion.

One should control Rajasa by holding it in check, divert its power towards good kind of activities. Satva should be carefully cultivated, developed & conserved in order to enable us to attain immortality. Lord Krishna in Bhagvata Geeta says that, one who rises beyond all the Triguna through spiritual practices become free from birth, death, old age, sorrow & enjoys immortality. Triguna; Satva, Rajasa, Tamasa are born of prakruti which binds immortal soul

to body in its embodied state. Satva which from its stainlessness is luminous & healthy, binds by attachment to knowledge & to happiness. Rajasa to be of nature of passion, the sources of thirst (for sexual enjoyment) & attachment. It binds fast & embodied one by attachment to action. Tamasa is born of ignorance, deluding all embodied beings, it binds fast, is full of thoughtlessness, sleep & ignorance.

Satva attaches to mood of joy, while Rajasa to action. Tamasa to ignorance & heedlessness. When Satva is dominant, then all the senses, knowledge, happiness & similar characteristics manifest. Greed, extroversion, ceaseless, planning & execution of work, restlessness, desire for enjoyment, these arises when Rajasa is predominant. When Tamasa dominates there is lack of intelligence, lack of effort, negligence & delusion.^[8]

2. Shrimada Bhgavada Geeta 17th Chapter -

These endowed with Satva, worship devotes those with Rajasa worship Rakshas & Rakshasas. Those with Tamasa worship the spirits of dead ancestors & elementals. Ahara is of three kinds, the person who are Satvika by nature, like food that promotes longevity, vitality, energy, health, happiness, cheerfulness & that are juicy, soft, nourishing & agreeable. Person who is Rajasika by nature like food that are katu, Amla, lavana excessively ushna, teekshna, ruksha, vidhahi & thirst producing, as also which brings on uneasiness, depression & diseases. Persons who are Tamasika by nature like food that is state, fastless, putrid, decayed unclean & constitutes the leavings of others (leftovers).

The Dana given to others with the absolute sense of duty, without expectation of any kind of return, given at the proper time & place to a fit recipient is said to be of the nature of Satva. The Dana Which is given in consideration of some gift in return or with some fruit to be reaped in future or in a grudging mood, that is the nature of Rajasa. The Dana is made at an improper time & place to an unworthy recipient, who is with lack of courtesy & in a disregarded manner that is nature of Tamasa.^[9]

3. Sushruta Samhita

Characteristic features of Satva guna are kind, merciful, samvibhaga ruchita, patient, truthful, follow righteous way, belief in God. Dnyan, buddhi, intelligent, smruti, courageous, who do their work without any expectation.

Rajasa guna predominant persons are always in grief, wondering, unhappy, ahankaara, felling lies, Akarunya, deceiving, respectful, joyous, kama & krodha.

Tamasa guna predominant persons are in sadness, lack of belief in existence of God, doing unrighteousness things, Buddhirnirodha, Agyani, foolish, does not like to work & nidralu.^[3]

4. Charaka Samhita

Acharya Charaka mentioned mental faculty is of three types, Satvika, Rajasika & Tamasika. Satvika is one which is free from defects as if is endowed with auspiciousness.

Rajasika is defective because it promotes wrathful disposition. Tamasika is the one which is similarly & defective because it suffers from ignorance.^[4]

The human behavior comes under Satvika faculty (Shuddha Satva) as follows^{4-a} ;

- 1) Maintain cleanness & purity.
- 2) Always talks truth.
- 3) Control their sense organs.
- 4) Do equal distribution of things with their colleague.
- 5) Free from Shadripu.
- 6) Do study.
- 7) Maintain celibacy (non-indulgence in sexual activity).
- 8) Give respect to guest.

The human behavior comes under Rajasa faculty as follows;

- 1) Bravery, leadership, envy, cruelty.
- 2) Intolerance, constant anger, violence at weak points.
- 3) Restoring to abnormal diet & regimens.
- 4) Sharp reaction.
- 5) Actions without discrimination.
- 6) Attachment with passion.

The human behavior comes under Tamasa faculty as follows;

- 1) Lack of intelligence.
- 2) Hateful conduct & food habit.
- 3) Gridiness for food.
- 4) Unsteadiness

5) Excessive sexual indulgence & sleep^{4-a}.

The person having Satva as essence are endowed with memory, devotion, are grateful, learned, pure, courageous, skillful, resolute, fighting in battles with process, free from anxiety, having well directed & serious intellect and activities & engaged in virtual acts.

The person with Satva Sarata (Superior psyche) possessing short body are seen unmoved even is severe afflictions – innate or exogenous due to predominance of Satva quality. Those having medium psyche sustain themselves at the instance of others or entirely by others. But those possessing inferior psyche can sustain neither by themselves nor by others. Although having big stature, they are unable to even mild pain, they are associated with fear, grief, greed, confusion, and conceit & even during fierce, frightening, disliked, disgusting, & ugly narratives or on the look of the animal or human flesh or blood get afflicted with anxiety, abnormal complexion, fainting, insanity, giddiness or falling on the ground or even succumb to death^{4-b}.

5. Ashtanga Hrudaya

Satvika persons having guna like cleanliness, have faith in God, righteous, honest & intellect. Rajasika persons are talkative, having anger, jealousy & proud. Tamasika is the one which is similarly defective because it suffers from ignorance.^[5]

The person with predominance of Satva guna experiences happiness & misery without agitation & humanity respectively. Whereas persons of Rajasa & Tamasa do not so.^[5]

6. Triguna in Sankhya Karika

Satva guna is the indicator of purity, creativity & bliss. It can be compared with flame & is represented by white colour, Rajasa by nature is ; stimulant, hyperactive & tickle, therefore said to be the indicator of stimulation, impatience & pain. It can be compared with wick & is represented by red color. Tamasa is heavy & work as covering for the consciousness. It is indicated by ignorance, darkness & nobility. It can be compared with oil of a lamp & is represented by blue color.^[6]

7. Shrimada Bhagavata Purana

The signs of Satva are control of the mind & senses, forbearance, discrimination, austerity, truthfulness, comparison, memory, contentment, self sacrifice, lack of desire, faith, revulsion from evil, charity, absorption in the self. Signs of Rajasa are desire, activity, pride, greed, self

boasting, longing for one's selfish ends, sense of difference between man and things, sensuality, enthusiasm arising from excitement, craving for name and fame, indulgence in ridicule of others, demonstrativeness, aggressiveness.

Characteristics of Tamasa are anger, greed, untrustworthy, cruelty, beggarliness, hypocrisy, inactivity, quarrel someness, depression, delusion, despondency, wrefobedness, lassitude, expectations, fear, lack of initiative, & vigour in work. When Satva is illuminating, brilliant, pure & peaceful, dominates over the other two gunas then person will be happy and established is mortality & knowledge. When Rajasa characterized by attachment, sense of difference, & consciousness of one's power, dominates over Satva & Tamasa the man becomes subject to suffering, sorrow, following as he does the path of desire-prompted action seeking wealth & fame.

When Tamasa dominates other Rajasa & Satva, then man becomes subject to pessimism, delusion, cruelty & indulgence is vain expectations, when consciousness clears up, senses are not distracted, physical self confidence & detached mind is there, the Satva guna dominates. When intelligence is disturbed by actively, one fails to disengage from senses & mind is unsteady, it shows that Rajasa has become dominant. When mind is unstable to sustain consciousness, dissolves into sleep, dominance of inertia & pessimism, then Tamasa guna is dominant. When a person does any work in the feeling of dedication to God without desiring the fruits, then he will become Satvika. When a person expects benefit from the work then he will become Rajasika. If he is self praising himself & egoistic towards the work & performed with violence & pressure, then he will become Tamasika.

A worker free from attachment is of Satvika, binded by personal desire is of Rajasika having lose one's memory & doesn't think about pros & cans before doing any work is of Tamasika. Satva is the one who believes in spiritual Matters, Rajasika Rajasa is one who believes in outcome of trait from work. Tamasa is one who believes in Adharma.

Those who control over sense organs are called Satvika. Those who uses sense organs for enjoyment are Rajasika.^[7]

DISCUSSION

A person having Satva guna abstain from disease caused due to Pardnyaparada & Asatmendriyartha Sanyoga. Acharya Sushruta not separately mentioned the types of guna &

Satva pariksha, he explained according to the pradhan guna of manasa. In Bhgavata Geeta there is explanation about qualities.

In Shrimada Bhagavata Purana the characteristics are mentioned about Satva, Rajasa & Tamasa which are; The signs of Satva are control of the mind & senses, forbearance, discrimination, austerity, truthfulness, comparison, memory, contentment, self sacrifice, lack of desire, faith, revulsion from evil, charity, absorption in the self. Signs of Rajasa are desire, activity, pride, greed, self boasting, longing for one's selfish ends, sense of difference between man and things, sensuality, enthusiasm arising from excitement, craving for name and fame, indulgence in ridicule of others, demonstrativeness, aggressiveness.

Characteristics of Tamasa are anger, greed, untrustworthy, cruelty, beggarliness, hypocrisy, inactivity, quarrel someness, depression, delusion, despondency, wretchedness, lassitude, expectations, fear, lack of initiative, & vigour in workites of Satva, Rajasa and Tamasa guna.

Satva guna of the person at the time of vedhan, chedhya bhedyo vidhi shastra karma does not cause dukha. Satva is the capacity of mind which does not cause the frustration at the times of sorrow, joy etc. satva gunayukta purusha from his atmbala he overcomes from the pain caused by sharirika & manasika vyadhi. Raja guna pradhana purusha with the help of others he can bear & overcomes from his problems but Tama guna pradhana purusha does not bear & overcomes from such problems.^[10]

Manasika prakruti can be identified on how a person behaves or reacts to a given situation considering the place & time, Acharya Sushruta describes the same in the aspect of guna where each guna is explained with each of the exclusive character of the person & each of the character defines how the person will react to a situation.

CONCLUSION

Bhagavata Gita, Bhagavata Purana, Sankhya Karika & Ayurvedic literature gives detailed information about Triguna, their function, characteristics & their role in maintenance of health of an individual. Triguna plays major role in treatment to know about mentality of each person & their mindset towards every situation. This article provides all that information compiled at one place. Every human being behaves according to their Satva, Raja & Tama guna.

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THE PHYSIOLOGICAL AND PATHOLOGICAL CONCEPT OF AGNI

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ABSTRACT

Life (ayu), Varna, Bala, Utasaha (Enthusiasm), anabolism, Prabha, Oja, Drushti, everything depends on Agni. Agni is invariable agent in Paka (digestion), ingested food is to be digested, absorbed for maintenance of life (Ayu). Agni is present everywhere in the body for the process of metabolism and gives energy to the body, i.e., Jatharagni, Dhatvagni etc. Jatharagni is one of the most important Agni also known as Kayagni, vitiation of Agni called Mandagni and this is the main reason for Vyadhi. Therefore, for treatment of Vyadhi treatment of Agni is important. If Agni of a person is vitiated, the whole metabolism in his body is disturbed, resulting in ill health and disease. Hence, Agni is said to be the base (moola) of life.

KEYWORDS: Agni, Bhutagni, Dhatvagni, Jatharagni, Pitta.**INTRODUCTION**

Agni, Ayurveda has described the main component of the body, which is essential for the digestion and metabolism of the food. Ingested food must be digested for a healthy life and maintenance of life, this is performed by the Agni.

Ayurveda described Agni as Dehagni because Agni converts food into form of energy, which is responsible for all the functions of the body, nourishment, Oja, Teja, health.^[1]

Aacharya Charak mentioned that after stoppage of function of Agni the individual dies, when Agni is in absolute Sama state a person is healthy, and Charakacharya also mentioned that the destination of swasthya is Sama state of Agni.^[2] When Agni is vitiated by Hetu Sewana the Sama state of Agni is disturbed and individuals get suffer from disease (Vyadhi).

Aacharya Charak described Agni as Kaya, Kaya Chikitsa is a Chikitsa of Agni i.e., Agni is the base (Moola) of life.^[3]

The purpose of this article is to enlighten the function, importance, and physiological as well as pathological aspect of Agni.

Review of Literature

The term Agni which is derived from Agni = A+G+Ni. A denotes root "I" meaning "to go"; "G" denotes the root "Anja", meaning "to glitter" or root

"Daha" meaning "to burn". "NI" meaning "to carry". This etymology is given by Yasaka.^[4]

In Shabdakalpdrum 61 synonyms of Agni are described, these synonyms are given by its nature and functions of Agni.^[5] E.g., Tanoopaka, Sarvapaka, Damunasa, Rudra etc.

According to Sushrutacharya Agni is described as Pitta. Pitta is derived from "Tapa" which means combustion or digestion.^[6] When describing about Agni & Pitta different views have been suggested by Aacharyas.

Concept of Agni as a Pitta

According to Sushrutacharya there is no Agni without Pitta, means Agni is one of the guna (quality) of Pitta.^[7] Digestion and metabolism are the main functions of this Pitta or Agni.

According to Aacharya Charak Agni present in the Pitta gives good or bad results when its normal or vitiated state.^[8]

Aacharya Hemadri described Agni as having five divisions located in Pawakshaya and Amashaya. It is composed of panchmahabutas, having dominance of Tejas Mahabhuta.^[9]

Types of Agni

There are 13 types of Agni described by Aacharyas;

1. Aacharya Charak^[10]: 13

Jatahagni -1, Bhutagni- 5, Dhavatgni-7

2. Acharya Sushrut^[11]: 5

Pachakagni, Ranjakagni, Alochakagni, Sadhakagni, Bhrajakagni.

1. Jatahagni- this agni is present in Aamashaya (Stomach & Duodenum) digestion of ingested food is the main function of Jatharagni. Kayagni is synonyme for Jatharagni, if Kayagni vitiated person get diseased hence mandagni is main reason for origin of Vyadhi, it is responsible for the duration of life, health, Ojas, give strength to all Dhavtagni, Bhutagni. In opinion of Dhanvantri Pittadharakala which is situated in the entrance of Pakwashaya and acting as pathway of food. When agni undergoes vitiation, Grahani also vitiated and produce Vyadhi.

Jatharagni is classified into four categories

Jatharagni is most important because each and every nutrient which is ingested first comes to jatharagni. Separation, digestion of ingested food is another function of Jatharagni.^[12]

Jatharagni also have three types Samagni, Tikshagni, Mandagni, vishamagni.

Samagni: Is a stable state of Agni. The Samagni digest food properly at the proper time. This Agni increases quality of Dhatus, Samagni is mentioned in the definition of Swastha Purush.^[12]

Tikshanagni: Tiksha means very fast. This Agni digest food very quickly, Acharya Shushrut states that when the power of digestion increased normal to above normal, food digest quickly and produce desire for food.^[13]

Mandagni: Mandagni means slow, the agni which digest food very slowly the power of digestion is Slow.

2. Bhutagni: Bhutagni is one present in basic element (Bhuta). There are 5 Agni of each five elements, Pruthvi(earth), Tejas (Agni), Apya(water), Aakash, Vayavya(Vayu). Each and every cell of body consist of these five basic elements or MAhabut. Also, every cell consist of these five Bhutagni also. All food we eat which is also made of these panch mahabhutas with their respective Agni or bioenergy. Acharya Charak mentioned that Panch Bhutagni digest their own similar elements present the food. After the process of digestion by Bhutagni digested material containing the element and qualities similar to each Bhutas nourishes their own specific elements.^[14] Thses Bhutagni acts after process of Jatharagni, the digestion by Bhutagni is called as "sukshma Paka".

3. Dhatvagni: there are seven Dhatus present in the body contain their own Agni for metabolism of nutrients. Agni metabolized the materials and supply to specific Dhatus.

Thses Agni namely

- Rasagni
- Raktagni
- Mansagni
- Medagni
- Asthiagni
- Majjagni
- Shukragni

The action of these Agni is selective. Acharya Chaerak mentioned that seven Dhatus contains their own Agni, and their own Agni they digest and transform nutrients and supplied to the specific Dhatus this is also called as "Sukshama Paka".^[15]

Importance of Agni

Bala, Varna (colour), Swasthya(health), Utsah (entusiasim), Ojas, Upchaya (development of body), Prabha, Tejas(valour), Ayu(life) all depends on Agni and its Sama State.^[16] As long Agni is in Sama state person can have healthy long life, loss of Agni leads to loss of life. To maintain Swasthya, digestion and metabolism is the main function if Agni.

Physiological and Pathological Aspect of Agni

- Samagni:** this is physiological state of Agni, not associated with Dosha so called as Samagni. The Samagni digest food properly in proper time. This increase health of individuals, quality of Dhatus.^[12]
- Vishamagni:** Vishamagni is state in which improper digestion of food takes palce. Sometime it performs normal metabolism, sometime abnormal metabolism shows following symptoms- Flatulence, abdominal pain, upward movement of Vata in sode koshta, atisar, intestinal gurgling, straining during defecation. When Agni is affected by Vatadosha created Vatavyadhi.
- Tikshangi:** Pitta Dosha dominance present in Tikshagni. Tiksha means Fast/quick. When power of digestion increased normal to above normal food digest very quickly and produces hunger or desire for hunger this condition known as "Bhasmak Roga" in Ayurveda.^[13] Pitta dominance Prakruti Purush have lakshans of Tikshangi.
- Mandagni:** Mand means slow, the digestive power of Mandagni is very low. Kapha Dosha dominance is present. Dhanvantri says this Agni digests the least amount of food in great amount of time and produce symptoms like- heaviness in abdomen and head, cough, dyspnea, vomiting, excessive salivation. Mandagni gives rise to Kaphaj vikara.

CONCLUSION

After detailed discussion of Agni, it can be concluded that, Agni is moola of life. Nourishment of body cells is the important function of Agni takes place through the digestion (Sthulpaka and Sukshama Paka). Sthulpachan is digestion of food in stomach by Jatharagni and Sukshmapachan is digestion of nutrients through

Bhutagni as well as Dhatugani. Agni is main reason for healthy ayu. Sama state maintain Swathya. And vitiated state gives rise to Vyadhi, hence in Kayachikitsa treatment of Agni is also important, for that Agni Parikshan is main tool to Diagnose cause of Vyadhi and correct treatment of Vyadhi.

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Unusual Branching of Left Superior Pulmonary Vein: A Case Report

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Abstract :-

Human dissection is indispensable for a sound knowledge in anatomy which can ensure safe as well as efficient clinical practice and the human dissection lab could be the ideal place to cultivate humanistic qualities among the future physicians in the 21st century. Dissection of human cadaver has a long tradition. It paved the way for modern anatomical knowledge and plays a crucial role in the education of medical students. Though fundamental anatomy has mostly been established, cadaveric studies still yield valuable findings.

On each side of the base of the heart, the superior pulmonary veins carry oxygenated blood from lungs to left atrium of heart. The variation in number and branching pattern of pulmonary veins is frequent and this knowledge is valuable for various procedures involving pulmonary veins. This variation in pulmonary veins ranges from variation in number to drainage pattern in left atrium. [1]

In approximately 48 years old Indian male cadaver during routine dissection, we reported a variant of pulmonary vein branching pattern where the left superior pulmonary vein has 3 openings while remaining 3 veins i.e. left inferior pulmonary vein, right superior pulmonary vein and right inferior pulmonary veins have their normal one opening. The anatomical and morphological variations of the left superior pulmonary veins are significant for diagnostic, surgical procedures and vascular radiology in head and neck region.

It is of clinical importance to know origin and course of pulmonary veins in detail and being aware of possible variation.

Keywords: Pulmonary veins, left atrium, variations, left superior pulmonary vein, radiological procedures.

1.Introduction :-

A cadaver or corpse is a dead human body that is used by medical students, physicians and other scientists to study anatomy, identify disease sites, determine cause of death, and provide tissue to repair a defect in a living human being.

Human cadaveric dissection has been used as the core teaching tool in anatomy for centuries. [2] It is noteworthy that the innovative modes of learning anatomy such as the interactive multimedia resources have not replaced student's perception about the importance of cadaveric dissection.[3] For many centuries, physicians of ancient Greece gained considerable information about human body and health. [4]

For a cadaver to be viable and ideal for anatomical study and dissection the body must be refrigerated or the preservation process must begin within 24 hours of death. [4]

In anatomy, normality embraces a range of morphologies. It includes those are more common and others called variations which are less frequent but not considered abnormal. [5]

The primary pulmonary circulation comprising of pulmonary arterial tree, extensive capillary bed and

pulmonary venous tree, connected in series is a low pressure, high capacitance system which provides large surface area for gas exchange.

An understanding of variability of pulmonary vein remains most important in radiological procedures and cardiothoracic surgeries, where an incompatible knowledge of anatomy can lead to complications. The pulmonary veins drain oxygenated blood from both lungs to left atrium. The pulmonary veins course in the inter segmental septa and as such don't run with bronchi like pulmonary arteries do. The left superior pulmonary vein take an oblique infero medial course, whereas both right and left inferior pulmonary veins runs horizontally before taking a more vertical course. They pass through lung hilum antero inferior to pulmonary arteries, forming a short intra pericardial segment, to drain into left atrium of heart. [6,7]

The ostia of inferior pulmonary veins are more posteromedial and left inferior Pulmonary vein being more superior. [8]

The knowledge of these variations is valuable in cardiothoracic surgeries and radiological procedures such as radiofrequency ablations in atrial fibrillations, cardiac valve replacement, pulmonary lobectomy and others [9, 10].

2. Material and Method :-

During routine dissection of a 48 years old Indian male Cadaver in Dept. of Anatomy, CSMSS Ayurved Mahavidyalaya, Aurangabad, it was observed that the left superior pulmonary vein has unusual branches emerging from left atrium of heart, in addition to 3 openings present for right superior and inferior pulmonary veins and left inferior pulmonary vein.

3. Inclusion criteria :-

- a) All the limbs of the cadaver are intact.
- b) Death is natural.
- c) The age of cadaver is between 20 – 60 years.

4. Exclusion criteria :-

- a) Absence of one or more limbs.
- b) Death is due to poison or accident.
- c) Age of cadaver is less than 20 years or more than 60 years.

5. Case Report :-

During a routine dissection of thoracic and abdominal cavity, an atypical left superior pulmonary vein found, which has 3 branches in a 48 years old Indian male cadaver in the anatomy dissection hall at CSMSS Ayurved Mahavidyalaya, Aurangabad. After opening the thoracic cavity, the left superior pulmonary vein was seen having 3 branches. The remaining i.e. left inferior pulmonary vein, right superior and inferior pulmonary vein has normal one opening and one branch. No other congenital variations were found. The further course, branching and drainage pattern of these pulmonary veins were normal.

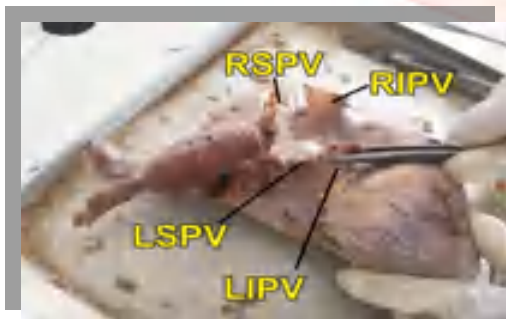


Fig. 1: Showing unusual branching of LSPV and normal branching of remaining 3 Pulmonary Veins. (LSPV-Left superior Pulmonary Vein, LIPV-Left Interior Pulmonary Vein, RSPV-Right Superior Pulmonary Vein, RIPV-Right Inferior Pulmonary Vein).

6. Discussion :-

Anatomical and morphological variations of pulmonary veins are of immense importance in cardiothoracic surgeries and radiological procedures. [7]. Researchers have documented that decreased use of dissection as teaching tool is one of the factor that can have a negative influence on anatomical knowledge of medical students. [18] Evidence suggests that learning anatomy by active exploration through cadaveric dissection actually contributes to improvement of anatomic knowledge. [19] Medical training essentially begins with cadaveric dissection and nearly all clinicians remember the details of their first interaction with the human cadaver. [20]

In our study, we found the unusual branching pattern of left superior pulmonary vein. Earlier it was considered that variations in number and course of pulmonary veins were rare and they are confined only few case reports. [8] Recently, however it has been found that variation in pulmonary venous anatomy were seen in 36% of patients. [9] and they were one of the etiologies for ectopic heart beats. [10] This greater than expected variability in pulmonary venous anatomy could substantially alter success rates of radiofrequency ablations, as ectopic foci could go untreated in variant veins. The successful treatment of atrial fibrillation by radiofrequency ablation of ectopic foci can be made possible only by having accurate knowledge of normal pulmonary venous anatomy and its measurement. [13] The knowledge of these variations is valuable in cardiothoracic surgeries and radiological procedures [15] such as radiofrequency ablations in atrial fibrillation, cardiac valve replacement, pulmonary lobectomy and others. [14]

7. Conclusion :-

Human cadaveric dissection has survived the test of time and till time the student-cadaver encounter remains paramount in medical education. The rise of ancient Greek medicine paved the way for the inception of human cadaveric dissection as a tool for teaching anatomy in 3rd century B.C.

Typically there are four pulmonary veins with superior and inferior pulmonary veins on either side draining into the left atrium. [6]. There may be anomalous drainage in the left atrium or systemic veins. On left side, there may be convergence of the left pulmonary veins into a short or long common trunk that drains into left atrium. Anatomic variants on right side are less common and include accessory veins such as accessory right middle or upper pulmonary veins draining independently into left atrium. Partial Anomalous Pulmonary Venous Return (PAPVR) into a systemic vein produces a left to right shunt. In left sided PAPVR, left upper lobe pulmonary

veins form a vertical vein that joins the left brachiocephalic vein or coronary sinus. Anomalies in the branching pattern of pulmonary veins have been documented worldwide. We hope that our study has provided valuable data to clinicians and anatomists by enhancing their knowledge regarding the variation of the branching pattern of left superior pulmonary vein is important in cardiothoracic surgeries. The wide spectrum of variations in anatomical arrangement of human pulmonary veins and its branches offer valuable information to replace cardiac valve safely and performing pulmonary lobectomy. These anatomical and morphological variations in pulmonary vein are significant for diagnostic procedures and cardiothoracic surgeries.

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Review of *Rasashastra* from the Perspective of Adverse Drug Reactions

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ABSTRACT

Pharmacovigilance is the need of hour to keep an eye on the adverse drug reactions induced by all systems of medicine. A Drug or formulation produces adverse events if it is not procured, produced, and used as per the classical guidelines. Various classical preparations along with some proprietary formulations were manufactured by the developed pharmaceutical industries which have brought many challenges about safe use of Ayurvedic Medicines especially metallic preparations and herbo-mineral drugs of *Ayurveda* are always in doubt regarding safety and toxicity. *Rasashastra* is the alchemy of traditional Indian system of medicine which deals with the preparation of therapeutic products by using metals, minerals, animal products and toxic substances. *Rasaushadhis* were known to cure illnesses in a short time period, very small dosage, and also easily palatable. Being the pharmaceutical branch *Rasashastra* literature is full of standard methods to prepare various medicines, and it also mentioned adverse drug events occurred due to inaccuracy in the procedures accepted. In this review article an attempt was made to throw some light on origins of those adverse drug reactions mentioned in literature.

Key Words *Rasaushadhi, Adverse drug reaction*

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INTRODUCTION

Medicine or Drug is the one amongst four basic factors of the *Ayurvedic* treatment¹. The *Ayurvedic Materia Medica* mentions resources of plant, animal, metal, and mineral origin² which are suggested to be used in numerous pathologies. Considering the resources, *Ayurvedic* formulations are mainly -1) Herbal 2) Mineral / metallic and 3) Herbo-mineral combination. Herbo-mineral, metallic and mineral drugs are

called as *rasaushadhi*. *Rasushadhis* are palatable, highly effective in minute doses in a very short time, builds popularity and occupied a significant place in *Ayurvedic* therapeutics³. They are being routinely prescribed in different parts of the India for hundreds of years but globally a serious question was raised about the safety of *Ayurvedic* preparations because it contains various heavy metals like mercury, lead, and also some poisonous substances like aconite.



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Any untoward effect caused because of a drug, aside from expected beneficial action is named as adverse reaction⁴. A drug or formulation produces adverse events if it is not obtained, manufactured, and prescribed as per the classical guidelines. Some therapeutic factors which can also contribute to a rise within the chances of ADR of *Ayurvedic* medicines like the irrational use of medicines without precision in diagnosis, disease variant, stages of the disease, and specific prototype of the person.

In earlier period *Rasavaidyas* or *Ayurvedic* Physicians were used to prepare medicines for their patients themselves but now days increased industrialization in *Ayurveda* manufacturing brought many challenges regarding drug safety. Good manufacturing practices are essential to produce quality genuine medicines. The Drug and Cosmetic Rule 1945 also in its Schedule T

explains G.M.P. for *Ayurveda* Drugs which clearly target on the Safe Basic control measures and procedures that need to be administered to produce a product that meets specifications and is safe to consume.

Rasashastra, an important branch of *Ayurveda* entirely uses various metals and minerals in therapeutics. It deals with types, characteristics, processing techniques, properties, and therapeutic uses of metals, minerals & poisonous herbs. Ancient *Ayurvedic* scholars were very much aware of the toxic nature of raw material used and keeping within the mind they have described ‘*Aushadh sevan janya vikar*’ in their classics elaborately, which reflect their concern about the adverse effect of *Ayurvedic* drugs. There are some guidelines given by the *Rasacharya* to minimize adverse drug reactions and increase the safety of *Rasaushadhi* during their preparation and use.

Table 1 *Rasadravya grahyagrahyatva* (characters and variety of authentic raw material)

Name of <i>rasadravya</i>	<i>Grahya lakshana</i>	<i>Grahya prakar</i> (Acceptable variety)
<i>Abhraka</i>	Black colour, Sigdha, Heavy, Pruthudala ,	<i>Krishna Vajrabhraka</i>
<i>Makshika</i>	Bright golden colour with blue ting, heavy, angle less	<i>Suvarnamakshika</i>
<i>Vimala</i>	Heavy, Shiny, Hexagonal	<i>Hemavimala</i>
<i>Shilajatu</i>	-----	<i>Karpurganghi Shilajeet</i>
<i>Rasak</i>	Without lamellae	<i>Karvellak</i>
<i>Gandhak</i>	<i>Shukapicchavat</i> -Greenish Yellow, Hard, Smooth	<i>Amalasar</i>
<i>Gairik</i>	Deep red Colour ,Soft ,Smooth	<i>Suvarnagairik</i>
<i>Hartala</i>	Golden colour, <i>Guru, Snigdha, Tanupatra</i> , Bright	<i>Patra</i>
<i>Manshila</i>	Red colour with yellow tinge, heavy	<i>Shyamangi</i>
<i>Kapardika</i>	Oval shape ,large edges, yellow tinge, possess nodule on its back,	----
<i>Hingul</i>	Coral red colour , possess white shiny lines	<i>Hamsapada</i>
<i>Suvarna</i>	Red colour on heating, White on cutting, yellow while rubbing on touch stone, shining, bright, heavy, soft, smooth	<i>Khanija</i>
<i>Rajat</i>	White like moon while heating-cutting and running on touch stone, bright, heavy	<i>Khanija</i>
<i>Tamra / Copper</i>	Smooth ,red, heavy, malleable	<i>Nepalaka</i>
<i>Vang / Tin</i>	White like silver, soft, smooth, heavy, melt rapidly	<i>Khuraka</i>
<i>Naag / Lead</i>	Black, heavy, soft, rapidly melt, smells putrid.	-----
<i>Yashada</i>	Heavy, soft, bright, quick melting	-----
<i>Vatsanabh</i>	Bulky, Heavy, smooth, newly harvested, not contaminated	-----



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MATERIALS AND METHODS

A) Selection of raw material:

The raw material used to prepare medicine should be authentic and prescribed quality⁵.

Rasashastra literature mentioned differing kinds of metals and minerals along with the preferred varieties (*Grahyadravya*) as shown in table no.1.

If the chosen material variety is different from the approved variety mentioned within the texts then the prepared medicines are of deprived quality and it would be harmful to the individuals.

B) Shodhan / purification process:

Metals, minerals, *vishadravya* are considered to be toxic on consumption but while using it as an ingredient in *rasaushadhis*, these materials should pass through a unique pharmaceutical process called *shodhan* or purification⁶. It was indicated to diminish the toxic properties of *rasadravya*. Various processes like *nirvaap*, *dhalan*, *swedan*, *bhavana*, etc with the particular medium on *rasadravya* results in the elimination of unwanted doshas⁷. If any substance was administered further without purification then the prepared medicine may lead in serious adverse events as shown in table no.2.

Table 2 Toxic effects due to use of *Ashuddha dravya* for medicine preparation

Name of <i>Rasadravya</i>	Toxic effects caused by <i>ashuddha dravya</i>
<i>Abhraka</i>	<i>Hrud-parshvapida, Shotha, Pandu, Kushtha roga, Agnimandhya, Guru. Vata-kaphavardhaka</i>
<i>Vaikrant</i>	<i>Kilasa, Kushtha, Daaha, Parshvapida&pandu.</i>
<i>Makshik</i>	<i>Netravikara, Mandagni, Kushtha, Halimaka.</i>
<i>Shilajatu</i>	<i>Daaha, murccha, Bhrama, Raktapitta, Agnimandya</i>
<i>Tuttha</i>	<i>Vaanti, Bhraanti</i>
<i>Kharpara</i>	<i>Vaanti, Bhraanti</i>
<i>Gandhaka</i>	<i>Kushtha, Taapa, Bhrama, Pittajavikara, Roopasukha-virya-balahara.</i>
<i>Hartala</i>	<i>Daaha, kshobha, kampa, toda, raktavikara, kushtha, vaatakaphaja roga karaka, mrityukaraka.</i>
<i>Manahshila</i>	<i>Ashmari, mutrakruchcha, mandagni, malabaddhata.</i>
<i>Hingula</i>	<i>Andhata, kshaya, klama, bhrama, moha, prameha.</i>
<i>Swarna</i>	<i>Sukha-virya-balanaashaka, rogakaraka.</i>
<i>Rajata</i>	<i>Aayu-sukha-balahara, santaapa, malabaddhata, rogakaraka, angasaada.</i>
<i>Taamra</i>	<i>Vaanti, moorchcha, bhrama, utklesha, kushtha, daaha, moha.(ashtadosha)</i>
<i>Lauha</i>	<i>Aayu-bala-kantinashaka, hridpida, shaitihilya, rogakaraka</i>
<i>Vanga</i>	<i>Kantihara, kushtha, kilasa, gulma, prameha, kshya, paandu, shotha, shleshma-jwara, bhagandara, shukraashmari, raktavikara.</i>
<i>Naaga</i>	<i>Kantihara, kushtha, sandhivedana, pakshaghata, gulma, prameha, aanaha, shotha, bhagandara, agnimandhya, anshashotha, udarashula, kshya.</i>
<i>Yashada</i>	<i>Gulma, prameha, kshaya, kushtha.</i>
<i>Vatsanabha</i>	<i>Daaha, murccha, hrudgati avarodha, mrutyu.</i>

C) Drug manufacturing process:

Rasaushadhis although named after mercury '*rasa*' or '*parada*', can be classified into two distinct groups mercurial and non-mercurials. *Murcchana* is the process to induce assured therapeutic properties in *parad* with a certain process while *marana* or incineration is the methodology where

metals and minerals get converted to bodily assimilable ash.

1) *Murcchana*⁸:

It is the process in which mercury with or without sulfur is converted into a suitable compound, which could be used internally for curing diseases even without reduced to ashes. Basic types of



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murcchana are described in table no.3. Long-term use of *sagandha murcchana* was permissible, itself suggest the safety of a selected formulation. *Rasaushadhies* prepared by *parada* without *gandhaka* i.e. *nirgandha murcchana* should not be

used for several days; its use was restricted till the disease condition cured. If such formulations were continued further then it may produce adverse events.

Table 3 Types of *Murcchana*

Type of <i>Murcchana</i>	Example	Duration of therapy
<i>Sagandha murcchana</i>	<i>Kajjali, rasantoor, rasaparpati</i>	Can be used as long term therapy
<i>Nirgandha murcchana</i>	<i>Mugdharasa, rasapushpa, rasakarpoor</i>	Limited use till the disease cured.

2) *Marana / Incineration:*

Incineration is the process in which *rasadravya* with the help of *maraka dravya* and herbs are

reduced to ashes by *puta*. It yields an assimilable product called *bhasma* which will not create any harm to the human body.

Table 4 Methods of *Dhatu maran*

<i>Bhasma</i>	<i>Maraka dravya</i>	<i>Bhasma quality</i>
I	<i>Parad / mercurial compound</i>	<i>Uttam bhasma</i> (superior quality)
II	Herbs	<i>Madhyam</i> (medium quality)
III	<i>Gandhak / sulphur</i>	<i>Kanishtha</i> (inferior quality)
IV	<i>Ari loha</i>	<i>Durgunprada</i> (non acceptable for internal use)

Table 5 *Puta* required for various drugs

Name of <i>rasadravya</i>	Type of <i>puta</i>
<i>Suvarna , rajat , naag , vang , mukta , praval</i>	<i>Kukkutaputa</i>
<i>Louha , tamra , abhraka , shankh</i>	<i>Mahaputa , Gajaputa</i>
<i>Makshika</i>	<i>Varah puta</i>
<i>Hartala, somal</i>	<i>Bhandputa</i>

Table 6 *Bhasma pariksha* of *rasadravya*

<i>Bhasma pariksha</i>	Name of <i>Rasadravya</i>
<i>Nischandra</i>	<i>Abhraka</i>
<i>Avaami, Amlapariksha</i>	<i>Suvarnamakshik , Tuttha, Tamra,</i>
<i>Nirdhoom</i>	<i>Hartal, Manashila, Somal</i>
<i>Apunarbhav, Niruttha</i>	For All <i>Dahatubhasma</i>
<i>Varitar, Rekhapurna , Niswadatvam</i>	Common tests for all <i>Bhasma</i>

i) *Maraka draya:* Ancient Scholars of *rasashastra* explained four conducts⁹ of *dhatu marana* /metal incineration according to the *maraka dravya* used in the process as shown in table no.4. Administration of *bhasmas* prepared with *arilohas* was not suggested as it has the tendency to harm. *Rasoushadhi* manufactured with such *bhasma* as an ingredient may cause adverse events to the end-users.

ii) *Application of puta:* Temperature required for the preparation of *bhasma* was although the temperature employed in the *maran* that is *puta*. It helps in making the metals and minerals acquire better therapeutic values and also in removing or reducing their toxic properties to such an extent that they will not produce any harmful effects on body tissue when used for therapeutic purposes¹⁰. The type and number of *puta* were variable as it



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depends upon the material and purpose¹¹. Types of *puta* required for *rasadravya* are explained in table no.5. If adequate type and number of *puta* were not given then the *bhasma* was said to be ‘*apakwa*’ and possibly will produce adverse effects¹².

iii) *Bhasma pariksha*¹³:

The processed sample of *bhasma* must be tested on the basis of specific parameters given in classical texts, organoleptic parameters like colour, texture, etc, physicochemical parameters- *niruttha*, *amlapariksha*, *apunarbhav* etc. Specific

bhasma pariksha was essentially indicated for some *rasadravya* as per table no.6 with added common parameters.

iv) *Amrutikaran*¹⁴: It is an important process found described in the context of *abhraka*, *louha* & *tamra marana*. It had been indicated to eliminate leftover *doshas* of *bhasma* and to make them suitable for therapeutic uses. If these *bhasmas* were used without *amrutikarana* then it will cause adverse effects due to the residual *doshas*.

Table 7 *Apathya* during *rasaushadhi sevankaal*

Name of <i>Rasadravya</i>	<i>Apathya</i>
<i>Parad</i>	<i>Kakarashataka</i>
<i>Abhraka bhasma</i>	<i>Kareer, karvellaka, kshara, vruntaka, Oil</i>
<i>Louha bhasma</i>	<i>Kushmand, Til taila, mash, rajika, madhya, amlarasadravya</i>

Table 8 Remedies to cure adverse effects caused due to *rasaushadhi sevan* (*Vikarshanti Upaya*)

Name of <i>Rasadravya</i>	<i>Vikarshanti upaya</i>
<i>Ashuddha Parad</i> /Mercury	<i>Kakamachi swaras</i>
<i>Amurcchit parad</i>	<i>Kushmandadi Gana, shuddha gandhanka + cow's milk</i>
<i>Abhraka</i>	<i>Atasibeej powder with water</i>
<i>Makshik</i>	<i>Kulattha kwath, daadim tvak kwath</i>
<i>Rasak</i>	<i>Cow's urine</i>
<i>Gandhaka</i>	<i>Cow's milk+ cow's ghee + sugar</i>
<i>Hartal</i>	<i>Kushmand swarasa + sugar + cumin seeds</i>
<i>Manshila</i>	<i>Cow's Milk + honey</i>
<i>Naag</i>	<i>Shuddha gandhanka + cow's milk</i>

Table 9 Contraindications of *vishdravyayukta rasaushadhi*.

Name of Drug	Individuals	Disease condition
Formulations of <i>vatsanabha</i>	Children, elderly, pregnancy	<i>Heart disease</i>
Formulations of <i>ahiphena</i>	Children, elderly, pregnancy	<i>Diabetes, kidney disease, productive cough</i>
Formulations of <i>jaypala</i>	Children, elderly, pregnancy	<i>Piles, bowel disease, diarrhea, rectal prolapse</i>

D) Drug administration (Sevanvidhi):

1) *Matra/Dose*: *Rasaushadhis* are more popular than herbal medicines because of their minute

dosage. All the *rasaushadhis* mentioned in the classical texts are described with their individual therapeutic doses best suited for the individuals.



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Consumption of remedy in *alpamatra* /reduced dose, or *atimatra* /overdose can lead to toxic or untoward effects.

2) Duration: Long-term consumption of certain drugs can produce complications eg: *arogyavardhini* is one of the popular *rasaushadhi* effectively used in many disease conditions but its use should be limited for one *mandala* period, after that, it may produce adverse effects. A *mandala* is a period of nearly 40 days in which time the human system completes one physiological cycle. Likewise, inadequate action of the drugs may be noticed if not administered for a prescribed period.

3) Sahapana and anupana¹⁵: *Rasaushadhi*'s were advised to be administered with specified *anupana* and *sahapana* or vehicle, which helps in proper assimilation and absorption of the medicine. An ordinary medicine with appropriate *anupana* can yield extraordinary outcomes. It also helps in controlling the untoward effects of the prescribed drug.

4) Pathya-apathya: *Pathya* literally means anything it may be *ahara* and *vihara* which is not harmful to one's physiological state, in contrast, the *apathyas* are considered to be harmful to our body channels. The concept of *pathya-apathya* is important during the consumption of *rasaushadhi* as it may alter the pharmacokinetics of the drug. *Apathya ahara-vihara* may induce the failure of treatment which in turn leads to unintended drug reactions. *Apathya ahara* while consumption of certain *rasaushadhi* mentioned in ancient scripture is enlisted in table no.8.

5) Contraindications¹⁶: *Vishdravyas* are natural poisons but in *rasashastra* they are used as an ingredient in manufacturing *rasaushadhi* only after proper purification. Such formulations were contraindicated in some patients and certain disease conditions as shown in table no.9. Care must be taken while prescribing such cautious products otherwise it may lead to adverse drug reaction.

E) Remedies for Adverse drug reactions:

If any undesired events were noticed due to faulty processing, improper administration, or non-compliance of code of conduct, treatment procedures for such complications have also been prescribed as per table no.8

DISCUSSION

Ayurveda the traditional system of healing is gaining prime importance and becomes popular globally. World Health Organization in 2004 proposed guidelines of the safety monitoring of herbal medicines. To respond the same AYUSH decided to implement Pharmacovigilance programme to keep watch on the adverse drug reactions caused by the ASU drugs. Before that all users believed that the *Ayurvedic* formulations are harmless, without side effects but these all are evidenced as myths. Our ancient scholars are very well known about the possible adverse events, ample pieces of evidence available in the classics clearly reflect that the pioneers of *rasashastra* were well aware of the toxicity or untoward effects that can occur with the improper usage of metals



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or minerals. They have documented evidences of raw material authentication, standard operating procedures like *shodhana*, *marana*, *murcchana*, *amrutikaran* to convert inorganic material into therapeutic active compounds. Quality control parameters of the finished goods and user guide (*matra*, *anupan*, *kaal*, *pathya-apathya*) were also described deeply to avoid every chance adverse reaction. By chance any adverse reaction exists due to any reason than to overcome such casualties therapeutic remedies were also enlisted.

CONCLUSION

Rasaushadhi can cause adverse effect if it is not manufactured as per the classical guidelines. GMP is very much essential to prepare quality genuine medicines, which will be safe to consume. Unauthentic or Adulterated raw material, improper processing, lack of quality control and faulty administration, drug interactions are some possible reasons of ADR. Ancient *rasacharyas* were well versed with the, pharmacokinetics and pharmacodynamics of metallic preparations. Detailed literal awareness is necessary while practicing to curtail the occurrence of adverse effects.



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**AYURVEDIC MANAGEMENT OF PELVIC PAIN IN GYNAECOLOGY****Dr. Priya R. Suryawanshi*¹, Dr. Medha Paithankar*² and Dr. Jayashri S. Deshmukh*³**

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ABSTRACT

Pelvis is part of body that lied between the lower abdomen and the lower extremities. Pelvic pain present as main symptom in 71%-87% causes of gynaecological problem. The management modalities to cop with the chronic frustrating pelvic pain or acute pelvic pain are still not reassuring. Ayurveda can provide effective pain management protocol. Mainly pelvic pain may also occurs due to Vata Dosha depletion and due to this the management of pelvic pain in gynaecology should concentrate on Vata Dosha like Basti, Snehana, Swedana, Abhyanga, Yonipichu etc.

KEYWORD: Pelvis, Vata dosha, Basti, Snehana, Swedana, Abhyanga, Yonipichu.

INTRODUCTION

Pain is an unpleasant sensory and emotional experience associated with actual or potential damage. Pelvic pain is common symptom in gynaecology.

Pelvic pain is known as KUKSHI SHOOL in Ayurveda. Common cause of pelvic pain are improper dietary habits and intake of Vata increasing habits are consider to be the major causative factor of pelvic pain and disease. Mainly pelvic pain may occurs due to Vata depletion and due to this the treatment should concentrate on vata Dosha . Basti technique of

Panchkarma along with Swedana and local massage are the main Ayurvedic therapy used for the treatment of KUKSHI SHOOLA.

Ayurvedic herbs like Nirgundi, Amalaki and Erand along with formulation such as Dashmool Kwatha and Abhayarishta are Helpful in treating the disease that lead to Pelvic Pain.^[1]

Types of pelvic pain-1.Acute 2.Chronic

Acute Pelvic pain- Acute pelvic pain is of short duration and generally the symptoms are proportionate to the extent of tissue damage. The basic mechanism of acute pain is due to irritation of peritoneum by either blood or infection.

Causes of Acute Pelvic Pain

1. Disturbed Tubal Pregnancy
2. Ruptured Chocolate Cyst
3. Ruptured corpus luteum or Follicular cyst
4. Acute PID
5. Tubo ovarian abscess
6. Following HCG
7. Abortion
8. Dysmenorrhea
9. Axial rotation of ovarian tumour pedical

Chronic Pelvic Pain

It is defined as the non cyclic pain of 6 month duration or more localized to the pelvis , anterior abdominal wall below the pelvis or lower back severe enough to cause functional disability that require medical or surgical treatment.

Causes of chronic pelvic pain

	Cyclic	Acyclic
1	Intermenstrual pain	Endometriosis or Adenomyosis
2	Dysmenorrhoea	PID
3	Premenstrual syndrome	Uterine displacement
4	Pelvic congestion syndrome	Uterine fibroid
5	Endometriosis	Ovarian cyst
6	Adenomyosis	Pelvic adhesion disease
7	Ovarian remanant syndrome	Intrauterine device
8		Trapped or residual ovarian syndrome
9		Idiopathic

Investigation

1. Blood investigation- for any infection
2. Urine examination- for UTI
3. USG or TVS-for adnex pathology like torsion, ectopic pregnancy or any uterine mass for fibroid.
4. X-ray abdomen- for free fluid suggest ruptured cyst
5. Laparoscopy -It is helpful to visualise pelvic pathology.²

Treatment

In detectable pathology where surgery is needed there surgery should be done eg. cyst, abscess, ectopic rupture etc.

Ayurvedic treatment for pelvic pain**Basti**

Basti is procedure in which Kwath or Oil introduce as enema in the large intestine.

Preparation are mainly oil based or decoction based

Basti is useful in the treatment of Dysmenorrhoea, UTI, Ovarian cyst, PCOD, and also help to maintain normal function in the pelvic area.

UTTAR Basti is given for the treatment of ovarian cyst and other uterine pathologies .and also helps to regulate physiological function of uterus, and nerve function of uterus.

Niruha and Anuvasana basti are highly effective in Dysmenorrhea.

Swedana

Swedana is the procedure in which induction of sweating involves to reduce the Heaviness, coldness, stiffness, in the body.

Swedana is treatment given Vata dominant condition. Before giving swedana internal or external Snehana might be performed for Best Result.

Swedana is very effective in treating Dysmenorrhea. Therefore it can provide relief from pelvic pain caused due to period pain.

Abhyanga

Abhyanga is the procedure in which medicated oils are applied to the affected area and massaged in specific direction.

Massaging the lower abdomen with til tail or sarshap tail for about 10-15 min. Followed by Swedana helps to relief pelvic pain.

Abhyanga is also useful in treating Constipation and also enhance muscles and bonestrength.

Yoni pichu

Yoni pichu is the procedure in which soaked cotton pad with medicated oil or in medicine are placed in vagina or desired area.

Yoni pichu given with nimb tail, chnadanbala lakshadi tail or lukewarm til tail in PID, or in abnormal vaginal discharge, and before menstruation reduce pelvic pain.

Ayurvedic Herbs for pelvic pain- Nirgudi

Nirgudi is used to treat irritable bladder, rheumatism bloody discharge from bowl syndrome, Inflammation joint swelling, piles.

It has pain relieving Diuretic aromatic, antiparasitic properties.

Nirgundi is effective in the management of endometriosis and helps in relieving pelvic pain caused due to this condition.

Amalaki

Amalaki acts on the excretory, circulatory, and Digestive system. Amalaki used to treat condition like hepatitis, piles, UTI, Diabetes

It is also helpful in treating UTI and relieving pelvic pain due to urinary infection

Eranda

Eranda has Analgesic and purgative properties, and act on excretory, urinary, and digestive system

It is effective in the Management of Constipation, dysmenorrhoea, PID.etc.

Eranda Tail is one of the primary herb that are used for treating Vata Dosh related Disorder,

irritable condition and inflamed Bowel and also treating dysmenorrhoea and relieve pelvic pain.

Musta

Musta is used to treat candida and yeast infection.

It is Useful in treating dysmenorrhoea, bloody stool, Diarrhoea one of the symptom of IBS, it also relieves pelvic pain caused due to IBS.

Ayurvedic Preparation for Pelvic pain-Dashmool Kwath

Dashmool Kwath is a decoction prepared from dashmoola [Bilva, Shonak, Agnimanth, Patala, Gokshur, Kanatkari, Prushniparni, Gambhari, Shaliparni, Bruhati]

This medicine is primarily indicated for Vata Vyadhi, and also used to treat Dysmenorrhoea and Pelvic pain.

Abhayarishtam

Abhayarishta consist of 11 ingredient [Haritaki, Amalaki, Pippali Vidang, mrudivika, Madhuk pushpa, chavya Danti, Trivrutta, dhatki, Gokshur etc.

It indicated in the treatment of oedema, uterine pathologies, menstrual disorders etc. It can also provide pelvic pain caused due to Dysmenorrhoea and Constipation.^[3]

CONCLUSION

Ayurvedic treatment provide best pain management in gynaecological pelvic pain. As per Ayurved pain is caused due to vitiate Vata Dosha. Kati, Pakwashaya, Basti are Moolsthana^[4] of vata that's why the Kati Shoola is best managed by Ayurvedic treatment.

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**EFFECT OF JALAUKAVACHARAN IN PROLAPSED THROMBOSED HEMORRHOID- A CASE STUDY.**

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ABSTRACT

Hemorrhoid is a very common Ano-rectal condition defined as the symptomatic enlargement and distal displacement of the normal Anal cushion. Hemorrhoid (Arsha) is an ailment that affects all the economic groups of population. The disease has its own complications like severe hemorrhage, inflammation and thrombosis which lead to severe pain disenable to perform routine work. Prolapse hemorrhoid is an emergency condition. The condition become worse after thrombosis and strangulation of the pile mass. Urgent surgical intervention is required in all the cases. Venous return of strangulated hemorrhoid mass become very low and severe edema takes place along with serious painful condition. Hemorrhoidal mass is not able to reduce further in Anal canal. Patient struck in serious, urgent surgical

attention. Jalauka can be used as a successful tool in this situation by relieving venous pooling of blood and also by liquefying the clotted blood in hemorrhoidal mass. In present case study, a patient of grade 4 hemorrhoid was cured by Jalaukavacharan.

INTRODUCTION

Ayurveda, the Indian system of medicine comprises of eight different specialities in which Shalyatantra, the surgical school of thoughts has got prime importance. Acharya Sushruta father of surgery has considered Arsha in Ashta mahagada. In Ayurveda.

- 1). It is a common disease of anal canal. Acharya Charak believes that vitiated doshas follow bahya and abhyantar rogamarga to produce Arsha.
- 2). Acharya Sushruta has described Arsha as rakta-mansa pradoshaj vyadhi common complaints. Complication of Arsha includes trishna, aruchi, shoola, raktastrava, shofa, atisara as per the Acharya Sushruta.
- 3). In Ayurveda, Kshar sutra ligation is a preferred surgical treatment in advance stage of Arsha. But in some situations, where surgery is not possible, due to patients complication, “Jalaukavacharan” is a good alternative treatment available. However Acharya Sushruta has contraindicated bloodletting in Arsha.
- 4). But in certain critical situation of hemorrhoids, it is advisable.
- 5). Acharya Charak has mention Jalauka karma in Raktaarsha(bleeding piles).
- 6). Acharya Vagbhata has also advised bloodletting in sanchit dushta rudhira(thrombosed), shoon(swelling), and kathin(hard) Arsha.
- 7). The present study is a case report of a grade 4th hemorrhoid patient, which was treated successfully with Jalaukavacharan.

Hirudin, calin and factor X_a which are present in salive of leech act as anti-coagulant and prevent clot formation, bdellin B-3 act as anti-inflammatory agent there by maintaining normal circulation.

AIM

The aim of case study was to find out the result of Jalaukavacharan in case of prolapsed and thrombosed hemorrhoid.

CASE REPORT

A 41yr old male patient, OPD registration no. 4711/168 come to OPD of Shalya dept. 25/5/2021 in a very panic and emergency situation. He had the following complaints since 5 yrs on and off symptoms.

- Sever pain and burning sensation in Anal region.
- Two big mass out side the Anal verge.
- Bleeding per rectum
- Difficulty in passing stool
- Constipation

Past History

He had a past history of surgery of hemorrhoids at an Allopathic hospital taken injection sclerotherapy before 3yrs back.

He had no history of DM, HTN, CHD or Koch's.

Examination

Patient was examined in lithotomy position. He has bluish blackish mass coming out from his anal verge. After proper digital examination it was found that there was a large prolapsed, thrombosed pile mass at 3 & 11 o'clock. It was not reducible pile mass at site so, it was diagnosed as case of grade 4th hemorrhoid. The patient was admitted in male surgical ward Reg. no. IPD 168.

Systemic Examination

Patient was conscious, oriented and good general condition. His vitals were recorded normal. B.P.- 130/80 mm of Hg, P.R.- 82/min. Temp. – 99 F. Baseline data collection and laboratory investigation were done on 25/5/2021 before Jalaukavacharan.

Blood Investigation**25/5/2021**

Hb – 9.8 g/dl

MCHC – 31.2g/dl

TLC – $8.8 \times 10^3/\mu\text{l}$

MCH – 23.9 Pg

RBC – $3.94 \times 10^6/\mu\text{l}$

Platelet count – 1.74 lakh

PCV – 30.1%

MCV – 76.4fL

B.T.– 1Min.,50sec

N – 6.3 %

C.T. – 5Min, 10sec.

L – $0.8 \times 10^3/\mu\text{l}$

P-LCR – 31.3%

BSL –® - 90 mg/dl

ECG – normal

HbsAg – Non-reactive

HIV – Non-reactive

Chest X-ray PA view- Normal

METHODOLOGY

Patient was admitted to Shalya IPD in male ward taking written consent of patient of patient.

Procedure of Jalaukaavacharan

As the patient was belonging to the emergency conditions assessed on the basis of signs and symptoms, respiration, pulse, blood pressure, apprehensive look, anxiety, etc. Hence it was not possible to put the patient, the known procedures of purvakarama for Jalauka application. Therefore patient was subjected to the application of Jalauka to the relief to the patient.

Material Required

- 1). Jalauka
- 2). Warm and cold water
- 3). Gloves
- 4). Gauze pieces
- 5). Cotton pads
- 6). Haridra churna
- 7). Bandages

Purvakarama for jalauka

To activate the Jalauka, they were put in a bowel containing a solution of haridra and water for 10-15min. later on Jalauka were cleaned by keeping them in another bowel, of pure, water for 5-7min.

Position

The patient was advised to lithotomy position for better exposure of anal region.

Pradhan Karma

Jalauka was applied over the most prominent part of the swelling at 11 & 3 o'clock. There after the Jalauka were covered with a gauze piece to keep it moist over the gauze piece, few drops of water were poured on and often. As soon as the Jalauka showed the signs of elevated head and pumping action of the anterior sucker region, the times was noted, when the Jalauka got detached at their own.

Procedure during application

Due care was taken, so that the Jalauka do not enter the anal canal.

With the onset of symtomatologies like burning, itching, pricking pain. The Jalauka were removed by sprinkling haridra powder.

Paschat karma

Some after the Jalauka got detached, the site of application was cleaned and after that sprinkling of haridra churna was done followed by a 'T' bandage. Patient were kept under observation in IPD. Reduction in the size of the pile mass, local swelling bleeding and other signs were recorded.

Jalaukavacharan 3 setting done on alternate days. First setting on.

1st setting on 27/6/2021

2nd setting on 29/6/2021

3rd setting on 31/6/2021

After that patient was observed for 10 days.

Oral medication

Tab. Arsh kuthar ras 2 tablet BD.

Gandharvahratik churna 10gm HS with koshana jala at night.

Local Application

Hot sitz bath with Triphala curna kwath BD

Matra basti of Jatayadi taila 5ml at night.

Observation

Symptoms were taken into consideration under grading symptoms according to their severity

No symptoms – 0

Mild – 1

Moderate – 2

Severe – 3

Observation Table

Symptoms	Before treatment	1 st setting	2 nd setting	3 rd setting
Pain	3	3	2	0
Tenderness	3	2	1	0
Burning Sensation	3	2	1	0
Bleeding	3	2	1	0
Mass Prolapsed	3	3	2	1
Constipation	3	2	1	0

RESULT

- As the Jalaukavcharana was started patient got relieved of pain and tenderness discomfortness level was also reduced.
- After 2nd setting size of prolapsed hemorrhoid was also reduced.
- After 3rd setting he was completely relieved and satisfied with the treatment only painless tag like structure is left in anal verge.
- He was discharged after giving proper diet instruction.
- Patient follow up after 7 days in OPD on examination observed that hemorrhoid mass was shrink in size.
- No bleeding or pain or tenderness was observed during per-rectum examination.

DISCUSSION AND CONCLUSION

Severe tenderness and bluish-black discoloration are the characteristics features of thrombosed pile mass. Bdellin present in the saliva of Jalauka act as anti-inflammatory agent there by reducing inflammation, maintains normal circulation and recovering discoloration. Anesthetic gel present in saliva of Jalauka reduces pain and tenderness giving symptomatic relief. Due to qualities of Jalauka anti-coagulant, vasodilator, thrombolytic, anti-inflammatory and anaesthetizing substances. Jalauka has been proved as a medical device. Though their sucking effect, Jalauka stimulate circulation of cells at risk of necrosis and maintain oxygenation of the tissue. They accelerate the hematoma congestion process. They ensure drainage and by partially or totally replacing venous return, they can be used in venous disorders. They benefit of Jalauka is that they are particularly attracted to deoxygenated blood.

In this case study it was observed that Jalaukaavcharan was found to be very effective in thrombosed hemorrhoids. Patient completely relieved after 7 days. Hence Jalaukavacharan can be an alternative treatment in the management of thrombosed hemorrhoids in which surgery is advised and patient is not willing for same.

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KAPHAJA YONI VYAPAD - LITERARY REVIEW

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ABSTRACT-

Gynaecological disorders have found its immense importance in the field of medicine due to fact that women have a unique function of giving birth. In Ayurveda, women health care is related in separate section, where the term *Yoni vyapad* includes majority of gynaecological disorders. Before knowing the management, literature of the disease should be known. Therefore, in this study an effort has been put forth to make a conceptual study covering almost all the aspects of *Kaphaja yoni vyapad* as per Ayurveda .

A healthy woman is a promise of a healthy family. In different phases of a woman's life, from puberty to menopause, the concept of healthy yoni has been mentioned in *Ayurveda* as well as in modern. Now a days, infection related to yoni is a burning problem irrespective of their age or socioeconomic status. Due to infection, there may be sign and symptoms like vaginal discharge, itching, coldness. in Ayurveda, these types of sign and symptoms are found in *Kaphaja yoni vyapad*

KEYWORDS: Ayurveda, *Yoni*, *Kaphaja yoni vyapad*, Vaginal discharge.

INTRODUCTION-

A specific group of the diseases of women i.e. *yonivyapad* has been mentioned in *ayurvedic* classics, which disrupts the women hood in various ways. Health care of woman is very important. Any disorders that hampers the general, mental as well as the reproductive health of woman should be considered with care and required medical attention. Female body is highly complex and delicate. Because of special reproductive role, women are at risk of some

distinct female disorders. *Kaphaja yoni vyapad* is one of those diseases. Vaginal discharge means *yonistrava* is seen as a symptom in case of this disease. As the *Stree* is *mula* of reproduction, *Stree* is important part of our society and family. Being Daughter, wife, mother, carrier oriented women, she plays different roles and follows social and family responsibilities. Nature has given special role to *Stree* to become mother. Along with that as today's women is carrier oriented she is becoming independent, making her own decision and thus making her own space in the society. Thus in this fast life she is subjected to all sorts of physical and mental hardship. Due to change in lifestyle, modern food habits of fast food, junk food she is unable to follow the rules of *Dincharya*, *Rutucharya*, *Rajaswala*, *Rutumati* and *Sutikaparicharya* which are explained by *Aacharyas* for women's health. Thus she is prone to various *yonirogas* one of which is *Yonigat shewtapicchilsrava*, *Yonikandu*, *Yonigata Alpavedana* which are features of *Kaphaj yoni vyapad*.

Yonivyapadas are related to

Tryavartayoni⁽²⁾. *Yonivyapadas* causes *Apatyavighat*, because *vikruti* of *Kshetra*, of *Tryavartayoni* causes *Garbhpat*, *Garbhastrva*, *Leenagarbh*, *Garbhvikruti*. *Yonivyapada* has been described in Various Literatures of *Ayurveda* viz. *Charak Samhita* (Chi.30), *Sushrut Samhita* (U.38), *AsthtangHridaya*(U 33), *AsthtangSangraha*(Uttarshan38) *Madhav Nidan*(63), *Sharangdhar Samhita*

(*Purvakhanda*7) *Kashyap Samhita* (Su.27) *Bhavprakash*&*Yogratnakar*(*Yoniraogadhi kara*).

As in our country due to poor nutrition, multiple childbirth, low socio-economic status, poverty, population growth, negligence of proper hygiene, many women are anemic, malnourished, illhealth. So they are prone to various *yonirogas* like *Kaphajayonivyapada*. Among the 20 *Yoni Vyapats*, *Kaphaj Yoni Vyapat* is explained under the classification of the *Kaphapradhana Yoni Vyapat* characterized by clinical features of *Kapha Vriddhi*.

Etiology (Nidan) of *Kaphaja yoni vyapad*

<i>Charak</i> ¹	<i>Sushrut</i> ²	<i>Vagbhat</i> ³	<i>Madhav Nidan, B.P, YR</i>
<ul style="list-style-type: none"> • <i>Mithyachar</i> (abnormal diet and mode of life) • <i>Pradusta-Artava</i> (abnormalities of <i>Artava</i>) 	<ul style="list-style-type: none"> • <i>Mithyachar</i> • <i>Pradusta-Artava</i> • <i>Bijadosha</i> • <i>Daivakopa</i> 	<ul style="list-style-type: none"> • <i>Dustabhojan</i> • <i>Bisamangasayan bhrisa maithun sevan</i> • <i>Dusta artava</i> 	Followed charak ⁴
<ul style="list-style-type: none"> • <i>Bijadosha</i> (abnormalities of <i>Bija</i>) • <i>Daivakopa</i> (curses or anger of God) 	<ul style="list-style-type: none"> □ <i>Prabridhdha linga purush atisevana</i> 	<ul style="list-style-type: none"> • <i>Apadravya prayog</i> • <i>Bijadosha</i> • <i>Daivata</i> 	

These are the general *Nidan* of *Yoni vyapad*. If we observe the *Nidan* of *Kaphaja yoni vyapad* then it will be cleared that in classics *Nidan* for *Kaphaja yoni vyapad* is not mentioned directly.

Qualities of *Kapha*⁵

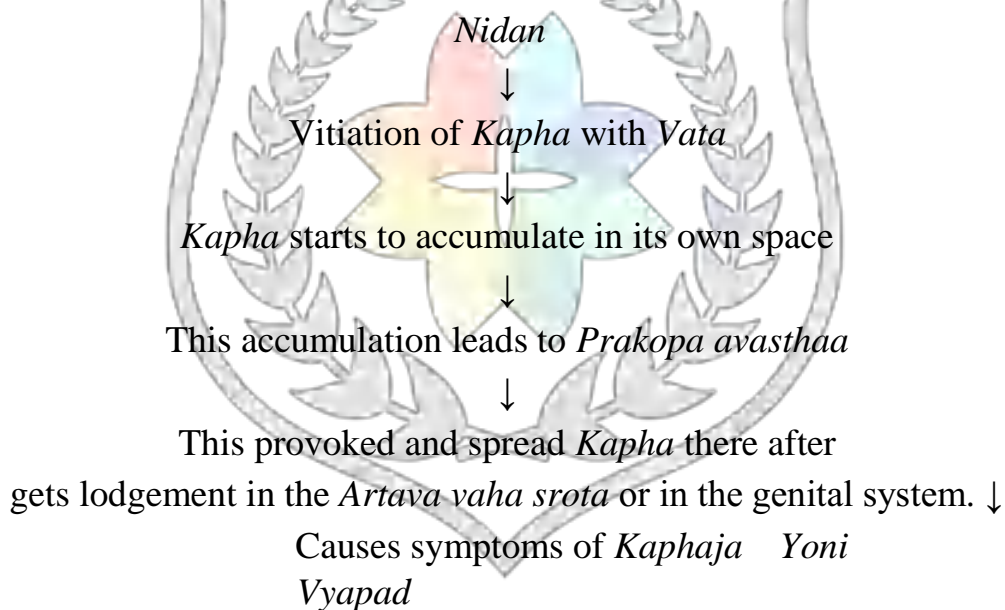
- *Guru*
- *Shita*
- *Mridu*
- *Snigdha*
- *Madhur*
- *Sthira*
- *Picchila*

So, the qualities agonist to these can vitiate *Kapha*.

Relation between *Kapha* and *Rasas*⁶

<i>Kapha prakopak</i>	<i>Kapha shamak</i>
<i>Madhur</i>	<i>Katu</i>
<i>Amla</i>	<i>Tikta</i>
<i>Lavan</i>	<i>Kashaya</i>

Samprapti



Samprapti Ghatak

- *Dosha – Vata + kapha*
- *Dushya – Rasa, Rakta & mamsa*
- *Srotas – Rasavaha, artavaha, raktavaha*
- *Srotodustilakshan – Atipravriti*
- *Adhistan – Yoni*
- *Rogamarga – Abhyantara*
- *Sthanasamsraya – Yonimarga & Garbhashaya*

Types of *kaphaja yoni vyapad* by different Acharyas

<i>Charaka</i> ⁷	<i>Vagbhata</i> ⁸	<i>Sushruta</i> ⁹
<i>Sleshmaja</i>	<i>Sleshmaja</i>	<i>Sleshmaja</i> <i>Atyananda</i> <i>Aticharana</i> <i>Acharana</i> <i>Karnini</i>

Lakshan

Sleshmaja yoni vyapad

	<i>Charaka</i> ¹⁰	<i>Sushruta</i> ¹¹	<i>Vagbhata</i> ¹²	<i>Madhav Nidan</i> ¹³	<i>Bha. Prakash</i> ¹⁴
<i>Yoni picchilata</i>	+	+	+	+	+
<i>Shitalata</i>	+	+	+	+	+
<i>Kandu</i>	+	+	+	+	+
<i>Alpavedana yoni</i>	+	-	-	-	-
<i>Avedana yoni</i>	+	-	+	-	-
<i>Pandu varna srava</i>	+	-	+	+	+

Other 4 types of *Kaphaja yoni vyapad*

	<i>Atyananda</i>	<i>Aticharana</i>	<i>Acharana</i>	<i>Karnini</i>
<i>Sushruta</i> ¹⁵	woman suffers from this disease does not satisfied with coitus.	It is caused by excessive sexual act. Woman does not achieve conception.	Woman gets excited before coitus as well as much earlier than her husband.	<i>Kapha</i> and <i>Rakta</i> produces <i>Karnika</i> in yoni
<i>Charaka</i> ¹⁶	Not mentioned	<i>Sopha</i> (inflammation), <i>Supti</i> (numbness) & pain occur.	Non cleanliness of vagina produces <i>Krimi</i> which produces itching in yoni and due to this	Due to straining before starting of labour pain, <i>Vayu</i> is obstructed by foetus, along with <i>Kapha</i> and <i>Rakta</i> produces

			Woman feels excessive sexual desire.	<i>Karnika in Yoni.</i>
<i>Vagbhata</i> ¹⁷	Followed <i>Charaka</i>	Followed <i>Charaka</i>	Followed <i>Charaka</i>	Followed <i>Charaka</i>
<i>Madhav nidan</i> ¹⁸	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>
<i>B.P. & Y.R.</i> ¹⁹	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>	Followed <i>Sushruta</i>

According to Charak and Vagbhat, Due to consumption of *Abhisyanidi* substances (*Kapha karak ahar*), *Kapha* gets vitiated and reaches yoni and produces sign and symptoms of *Kaphaja yoni vyapad*.

Pathya-Apathya:

Pathya-

Ruksha, Ushna drugs, Kaphahara Taila, sidhu and Arista, Saindhava Lavana, yava anna, abhayarishtham, seedhu, taila, pippali, ayoraja along with ksoudra (honey), Lasuna (garlic) which is explained as *rasayan* by *acharya kashyap*.

Apathya-

Manda (scum of boiled rice) is contra indicated to the women suffering from *Yoni roga* as *vata* is the most responsible factor for all *yoniroga, vatavidhikara ahara vihara* (diet and regimens causing increase of *vata*) including *manasika bhavas* (mental factors) can also be considered as *apathya*. *Acarya Kasyapa*, contraindicated *manda* (supernatant water of rice gruel) for women suffering from *yoniroga* (gynaecological disorders).

DISCUSSION- This disease can be cured mainly by taking hygiene. Personal hygiene is very important for every woman. Vaginal problems are mainly due to disturbances of the vaginal flora. So, approach should be done to correct the vaginal flora by which one can get rid of vaginal problem.

Gynaecological disorders have found its immense importance in the field of medicine due to fact that women have a unique function of giving birth. In Ayurveda, women health care is related in separate section, where the term *Yoni vyapad* includes majority of gynaecological disorders

CONCLUSION- *Kaphajayonivyapat* is the one of the commonest problem among women of reproductive age. As per *ayurveda* by maintaining of proper hygiene and taking appropriate food in time and doing regular exercise can help in maintaining the reproductive health. *Yonivyapat* are classified as *ekadoshaja* (involvement of any single dosa), *dvidoshaja* (involvement of two dosas) and *tridoshaja* (involvement of three dosas) in *Carakasamhita* and *Ashtanga Hridaya* whereas *Sushrutasamhita* explained *ekadoshaja* and *tridoshaja* only.

Krimijayonivyapat is the concept which is explained only by *Vagbhata*. It is seen that the same *yonivyapat* explained differently by different *samhita* represents the chronicity of a single condition. Hence rather than going with description of a single *samhita*, analyzing the explanations in all *Samhitas* will help us to understand the pathogenesis of vaginitis in detail.

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ROLE OF VIRECHANA IN MANAGEMENT OF RAKTAPRADAR-CASE STUDY

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ABSTRACT-

Menstruation is a natural specific property of a female in the reproductive age. Therefore in order to give healthy progeny, special attention must be given to conserve mother's health. Raktapradar is one such disorder, commonest among all Gynecological complaints, which may lead to various complications in female and also affects the quality of her life. According to Ayurveda, due to consumption of excessively Salty, Sour, heavy, acidic substances, deep fried, greasy food, there is increase of Sar and Dravaguna of Pitta Dosha and Chalaguna of Vata Dosha. Also Pitta and Rakta have same properties, so increased Pitta increases the blood which entered into Uterine cavity with the help of Rajovahasira and Vata eliminates this increased Menstrual blood from the Uterus.

KEYWORDS-PRADAR, RAKTAPRADAR, SHODHAN, CHIKISTA, VIRECHANA.

INTRODUCTION-

Since there is excessive excretion of "Asruk"(menstrual blood) this disease is called "Raktapradar" and excretion of excessive quantity of "Raja" it is called „Pradar". Bhavaprakash defined Pradar as flow of vitiated blood in bulk quantity through the vagina or Yonimarga.

Synonyms: Raktapradar by- Sharangdhara; Pradar by- Charak

Vyapada by- Sushruta; Raktayoni by-Ashtang Sangraha and Ashtang Hridaya.

Asruk + Dara = Asrugdara

Menstruation is a natural specific property of a female in the reproductive age. Therefore in order to give healthy progeny, special attention must be given to conserve mother's health. Due to Pradirana of Raja it is named as Pradar and since, there is Dirana of Asruk it is known as Raktapradar 1 . Raktapradar explains about excessive and prolonged bleeding during Menstruation 2 . According to Ayurveda, due to consumption of excessively Salty, Sour, heavy, acidic substances, deep fried, greasy food, there is increase of Sar and Dravaguna of Pitta Dosha and Chalaguna of Vata Dosha. Also Pitta and Rakta have same properties, so increased Pitta increases the blood which entered into Uterine cavity with the help of Rajovahasira and Vata eliminates this increased Menstrual blood from the Uterus. Due to increased Pitta and Vata, there is heavy and prolonged bleeding results in Raktapradar 3 . Ayurvedic texts have describe a variety of treatment options in the management of Raktapradar. Principally 2 types of therapy employed i.e. Shodhana & Shamana. Sharangdhar has mentioned Shodhana Chikitsa for complete eradication of diseases and prevent its recurrence 4

MATERIALS AND METHODS-

So in the present study I have selected Virechana Karma by Trivrutta Choorna with Triphala and Danti churna (used in the process of Virechana Karma) and Pushyanug Choorna used as shaman dravya in the management of the disease Raktapradar.

Virechana is one type of Shodhana Karma mentioned by Kashyap in the treatment of Raktapradar. Also, amongst the Panchakarma, Virechana is very important therapy for Pittaj and also for Tridoshaja Vyadhi 8. Also have been effective in Raktaj Vitiation. Rather than temporary cessation of heavy bleeding and for regular menses, Virechana therapy will give permanent relief.

As modern medicine failed to offer complete cure from this menstrual diseases, this Shodhana therapy will give best results at least to avoid- last option of modern medicine i.e. hysterectomy. In this way, Virechana eliminates the Vitiated Pitta from its root. So it relieves excessive bleeding. Thus Prakrut Artava reaches to Garbhashaygat Rajovahasira. Virechana is useful for treatment of Vata Doshas¹⁴, and so it leads Prakrut Apanvayu, controls the Deerana of Raja. Thus cures the Raktapradar.

Virechana is less stressful procedure and has least possibilities of complications. Hence it is widely used as a Shodhana therapy. As menstrual bleeding i.e. Artava is formed mainly from Rasa-Rakta Dhatu and Artava Dushti(vitiated menstrual blood formation)mainly occurs from Vitiation of PittaPradhana Tridoshas and Raktadhatu which leads to Raktapradar. By taking in mind, Samprapti of menstrual diseases Vitiated main Dosha is Pitta and Rakta and Vitiated Apanavyau, Virechana therapy would be effective

In Sushruta Samhita 14th Adhyaya of Sutrasthana description about Ras Dhatu, Utpatti of Raktadhatu, Utpatti of Artava from Rakta Dhatu and its importance is given. Artava Vriddhi with their Nidana, Lakshana and Chikitsa have been described. Though the description of Raktapradar is very short, Sushrutacharya has included even normal scanty bleeding coming

in short intermenstrual period under it 9. Acharya Vagbhata described Pradar as Raktayoni. 10.

Detail classification and clinical features of Raktapradar of Charak Samhita, Artavavaha Srotasa, Marma and genital tract, Artavakshya and Artavavrudhi given .

Table No. A-1: Showing stages of Rutuchakra

Sr. No.	Specific stage	Duration	Condition of Reproductive system	Dominant Doshas
1.	Raja Kala	3-5 or 7 days	Menstrual blood loss	Vata
2.	Rutu Kala	12-16 days	Establishment of new Raja, optimum chances of fertilization, sexual desire etc.	Kapha
3.	Rutuvyatit Kala	9-13 days	Presence of Purana Raja and constriction of Yoni, less chances of conception	Pitta

Any disease originated due to summation of Aprakrut Dosh and Dushya. The success of Chikitsa depends upon the four constituents named as Chikitsa Chatuspada. They are Bhishag, Dravya, Rugna and Paricharak¹. In that Dravya has very much importance and it is one of the base of Ayurveda, illustrated by Acharya Charak.

Treatment of any disease is basically Samprapti Vighatan. So the choice of any drug for the treatment of a particular disease should be ideally based on a thorough consideration of the Samprapti Ghatak. According to Ayurveda Tridoshas mainly Pitta Dosh Dushti and Raktadi Dushya Dushti are responsible for creating the disease like Raktapradar. And in order to treat Raktapradar, Virechana i.e. the Shreshta Chikitsa for Paitik disorder plays an important role. Virechana purifies the Pitta Dosh and Rakta Dhatu and prevents the recurrence of disease. In the process of Virechana Karma the selection of drug according to Dosh-Dushyas involved in the disease also become necessary.

Therefore in present study Trivrutta Choorna with Triphala and Danti churna (used in the process of Virechana Karma) and Pushyanug Choorna are used in the management of the disease Raktapradar.

❖ Virechana Karma:

Virechana is a specific therapy for Pitta Dosha 11, and Samsarga Doshas. It is also treatment for Raktaj Vikaras 12

❖ Mechanism of action of Virechana:

Action of Virechana Karma is divided in the following 2 ways-

1. **Systemic-** By which it brings down the morbid Doshas, particularly Pitta from Shaka to Koshta
2. **Local Evacuant-** Which is concerned with the evacuation of these Doshas in form of Mala, from the gut by Adhobhagahara property.

CASE STUDY DETAILS-

A single case study of RAKTAPRADAR- Study design A single case study of patient was taken from OPD of our Ayurved Institute Informed & written valid consent was taken.

Case presentation A case study of 23 years old unmarried female patient, Hindu by religion ,Student by occupation presented with chief complaints of painful heavy flow menses, associated with nausea & constipation suffering from menorrhagia more than 4 cycles without the involvement of any secondary disease. Prakriti – Pitta vata B.P- 120 / 70 mm Hg Pulse – 78 / min wt-50 kg, Patient was not obese. Menstruation was painful. She cannot do even her normal routine work and has to absent from outdoor work during menses had to take analgesics & antispasmodics but poor effect ,due to heavy flow she felt weakness.

Menarche – at the age of 13 years

M/H – Pain continues for 12 – 24 hours She used 5-6pads/day/cycle

Duration of menses – 4-5 days / 28- 30 days Nausea & constipation was present. Fatigue by normal daily routine For this, patient took allopathic treat for long time but disease recurrence was seen.

Sonography and all blood tests (routine test) were within normal range. Past History- not significant. Treatment protocol as foliows,

SHAMAN CHIKISTA-

- 1.Amapachak vati 250 gm -8days
2. Pushyanuga churna 5gm bd with Tandulodak –1 month
- 3.GOGHRITA SNEHA –ABHYANTER SNEHAPANA .[4 days]

SHODHAN CHIKISTA-**VIRECHANA-**

Sarvang snehan –with ksheerbala taila-4,5,6,7,8th day

Swedana-Dashmula kashaya-4,5,6,7,8th day

Virechan preparation-

TRIVRTTA CHURNA 10 GM + TRIPHALA CHURNA 10 GM + DANTI CHURNA 10GM +WATER 500ML----DECOCTION PREPARED REDUCE UP TO 200ML KASHAYA, given on 8 th day

RESULT

Improvement in symptoms of patient. Relief was found in heavy flow, painful menses, nausea & constipation. Advice given to the patient

.Ahara: To take fruits, green vegetables, simple foods. To avoid spicy food, fried food, fermented food, non-veg. on and around menstruation

. Vihara: To take rest, do Pranayama for 10 minutes. To avoid heavy weight lifting, journey, heavy stenosis work, tension.

DISCUSSION-

Virechana drugs are having Ushna, Tikshna, Sukshma, Vyavaee, Vikasi properties and Adhobhaghara Prabhav. Virechana Drvaya get absorbed by its virya, it reaches to Hrudaya, then the Dasha Dhamani and there after it reaches to macro and micro channels of the body. i.e. Sukshmati Sukshma Srotasa. Ushna Guna as Agneya property and hence the Dosha Sanghata is liquefied (Vishayandana) hence it facilitates movement of morbid Doshas toward Koshta. Due to Tikshna Guna,

Mala and Doshas break upto in micro form that helps in quick excretion. Due to Pranavbhava of Sukshma Guna, it opens micro channels and makes the Doshas to move towards Koshta. Due to Vyavayi Guna these drugs spreads quickly throught body and starts the action before its digestion. Vikasi Guna of drugs causes loosening of the bond between Dosha and Dhatu causing Dhatu Shaithilya. From all these properties, Doshas are driven to Koshta. These drugs consists of Prithvi and Jala Mahabhutas which are heavy in nature and Adhobhaghara prabhava which helps in expulsion of Dosha from Adhobhaga(Anal route).

From the above description it can be concluded that due to Virya of the Virechana drugs softening, disintegration, liquification of endogenic metabolic products occur, and brought to the Koshta for elimination. In this way Vitiated Pitta expelled out, results in decreasing Pitta Dosha, which results in decrease in Vitiated Rakta Dhatu(as due to Aashryaashryi Bhava), and cures Raktapradar.

CONCLUSION-

Raktapradar is a disease caused due to predominance of Pitta Doshas as well as due to Dushti of Rakta Dhatu. Also Raktapradar is caused due to Pittavrutta Apanavayu Vikruti. Thus as per Samprapti of Raktapradar all three Doshas i.e. Vata, Pitta and Kapha; Rakta and Rasa Dhatu are responsible factors. According to different Acharyas, Virechana Karma is the best procedure for all of these Samprapti Ghatak. It is Shrestha Chikitsa for Pitta Dosh Dushti. Again in all types of Yonirogas Virechana is the best treatment. And the most important is that the Virechana is less stressful procedure among the Panchakarmas and patient can easily become willing to do this procedure. As compared to other procedure Virechana has less complications. It prevents the recurrence of disease. It decreases vitiated Pitta Dosha. And due to AashryaAashryitva Bhava of Pitta and Rakta, it decreases Vitiated Rakta Dhatu, and cures the disease Raktapradar. Thus in this way Virechana plays an important role in the Management of the disease Raktapradar.

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**A CASE STUDY ON THE EFFECT OF VANARI GUTIKA IN THE MANAGEMENT OF
KSHINA SHUKRA W.S.R. TO OLIGOSPERMIA****Dr. Monika V. Ambekar^{1*}, Dr. Sandhya M. Yennawar² and Dr. Jayashri S. Deshmukh³**¹PG Scholar, Department of Prasuti Tantra and Streerog, C.S.M.S.S. AyurvedMahavidyalaya, Kanchanwadi, Aurangabad.²Associate Professor and Guide, Department of Prasuti Tantra and Streerog, C.S.M.S.S. Ayurved Mahavidyalaya, Kanchanwadi, Aurangabad.³Professor and H.O.D., Department of Prasuti Tantra and Streerog, C.S.M.S.S. Ayurved Mahavidyalaya, Kanchanwadi, Aurangabad.***Corresponding Author: Dr. Monika V. Ambekar**

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ABSTRACT

Infertility is defined as a failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. Reasons such as weight, diet, smoking, medical conditions, other substance abuse, environmental pollutants and family medical history, infections might have an effect on conception in couples. Infertility can arise from either of the partners. Male infertility is one of the burning problems now a days and incidences of infertility increase day by day due to disturbing lifestyle. Oligospermia has been diagnosed with low sperm count after doing a semen analysis. Oligospermia is one of the major leading causes of infertility. According to Ayurveda, anatomical and physiological variations in Shukra Dhatu leads to infertility. There is no direct connection between Oligospermia and Shukra Kshaya but we can compare them. There are various medicines in modern science but at the same time they have adverse effects on the body. In modern science, IUI, IVF, hormonal injections, etc lots of treatments but these are really very painful methods for getting pregnant. In Ayurveda, so many medicines are given in Samhitas. But in this case, we use only Vanari Gutika along with lifestyle modifications. As Apana Vayu is responsible for proper expulsion of Shukra, so medicines are given at Apankala. It shows significant improvement in sperm count and motility, improvement in erectile dysfunction and sexual desire.

KEYWORDS: Oligospermia, Shukra Kshaya, Vanari Gutika, Apana Vayu.**INTRODUCTION**

Oligospermia means a condition of reduced number of sperms. It may also show significant abnormalities in sperm morphology and mortality. According to WHO 2010 criteria, sperm concentration should be less than 15 million spermatozoa per milli/litre.^[1] The following points need to be considered while studying male infertility,

- 1) Volume of semen
- 2) Sperm count
- 3) Motility of sperm
- 4) Structural defect of sperm
- 5) Any obstruction in the genital tract
- 6) Erectile dysfunction

Ayurveda is a branch of science which deals with the health and wealth of the humans. In Ayurveda, Vajikaran is the branch which deals with male infertility. Vajikaran is the 8th branch of Ayurveda. It provides offspring to the infertile couple and potency to the impotent. Ayurveda explains Vajikaran Chikitsa in a systematic and scientific

manner. Vajikaran is indicated in diseased persons for curative purpose and in healthy person for maintaining Swasthya and promoting positive sexual health. Ayurveda describes Oligospermia in various terms such as Kshina Shukra, Kshina Retasa, Alpa Retasa and Shukra Dosh.^[2]

In this study, Vanari Gutika used as a Vajikaran yog. In this medicine, Kapikachhu is the main ingredient. Kapikachhu with virtue of viryavardhaka, madhur, pushthikara, vatanashaka, balyadayaka, kapha-pitta-rakta vikar vinashaka. It's Beej has the property of vatanashaka and significantly vajikaran.

^[3]Kapikachhu recovers the Hypothalamus-pituitary-gonadal axis and it increases the number of testicular germ cells. Ultimately leading to increased sperm count and motility.^[4] So taken this medicine for Oligospermia.

Patient's profile

A 33 years old male patient with BMI 32.5 m²/kg came

in CSMSS Ayurveda College Kanchanwadi. Patient was married since 6 years and the couple wanted an issue. His wife fail to conceive with unprotected frequent coitus even during 12th and 18th day of menstruation since last 4 years. The woman was normal at clinical and endocrinologist examination. Couple have already taken modern medication for the same. IUI was also done in two cycles. It was found that progressively patients report was getting worse during modern medication. Latest report of semen before wash in IUI showed Severe Oligospermia. No other parameters except sperm count, motility and morphology were abnormal in the male investigation.

The personal history revealed that he worked in company as a supervisor. No habits of tobacco, drinking occasionally, no major stress factors. He was not having past medical history of mumps, hydrocele, orchitis, Tuberculosis and trauma to gonadal part or history of any other long term illness or life threatening emergency. He was not having history of previous surgical intervention like vasectomy reconstruction, herniorrhaphy and no history of consumption of gonadotoxic agents.

Before starting medicine, semen examination report revealed very low sperm count 8mil/ml out of which about 30 % of sperms were motile.

Treatment

Firstly patient was given Deepana - Pachana for 5 days with the Ayurvedic remedy Panchakola Churna with koshna jal. Then Vanari Gutika 2 tab before meal 2 times / day was started for 3 months continuous without any type of gap in the taking medicine.

Advice^[5]

1. Advice of diet and lifestyle changes was given.
2. Have sex less often maintain a gap of 3 days between two consecutive ejaculations.
3. Avoid the habits like smoking, alcohol consumption, etc. Alcohol affects liver function which in turn causes a dramatic rise in oestrogen levels. Even two drinks a day will have long term effects on sperm production.
4. Do exercise regularly.
5. Take a diet that's low in fat and high in protein vegetables and whole grains are good for weight loss as well as reproductive health.
6. Avoid bitter, astringent and spicy food.
7. Reduce caffeine intake.
8. Avoid heat of testicle, wear loose, cotton boxer shorts, avoid hot bath and loose excess weight which tend to cause Testosterone and oestrogen imbalance.
9. Reduces stress levels by Relaxation techniques i.e. with the help of Yoga and meditation.
10. Do body massage which improves blood circulation.

BEFORE TREATMENT

Parameter	Observations	Lower Reference Limit
Physical examination		
Liquefaction	30 Minutes	< 30 Minutes
Appearance	Gray Opaque	Gray opaque
Viscosity	Normal	Normal
Semen Volume	2 ml.	1.5 ml.
Agglutination	Nil	Nil
Clumping	Nil	Nil
pH	7.2	5-7.2
Microscopic Examination		
Sperm Concentration	4 million/ml.	15 million/ml.
Total Sperm Number	8 million/Ejaculate	70 million/Ejaculate
Total Motility	30%	40% (PR+NP)
Progressive Motile (PR)	15%	32%
Non Progressive Motile (NP)	15%	
Immotile (IM)	70%	
Cellular Elements		
Round cells	3-4/hpf	< 1/hpf
RBC's	Present	Absent
Cell debris	present	Absent
Sperm Morphology		
Normal	<1%	4%
Head Defects	26%	
Neck and Mid piece defects	30%	
Tail Defects	28%	
Multiple Defects	12%	
Impression :-	SEVERE OLIGOSPERMIA	

AFTER TREATMENT

	Observed	Normal (WHO Standard)
Volume	2 ml.	> 2.0 ml of semen
Liquefaction time	30 min.	< 60 min/30 minutes
pH	-	> 7.2 or < 8.0
Concentration	2.5 million/ml	> 20 million/ml
Total Sperm Number	40 million	> 40 million per ejaculate
Motile	30%	> 50% or 25% with progressive forward motility
Vitality	-	> 75% mot
White Blood Cells	1	< 1 million/ml
Morphology	-	> 30% normal sperm

Examination of seminal fluid

Test	Before treatment	After treatment
Method	Masturbation	Masturbation
Abstinence	4 days	4 days
Collected at	8.00 am	9.30 am
Examined at	8.20 am	9.50 am
Physical examination		
Quantity	2 ml	2 ml
Viscosity	Normal	Normal
Liquefaction	Within 30 min	Within 30 min
PH	7.2	-
Microscopic examination		
Total sperm count	8 mil / ml	40 mil / ml
Active motility	30 %	30 %

RESULT

After taking the treatment of Vanari Gutika, repeat semen analysis was done. In that analysis, sperm count was 40 mil/ml out of which 30 % of sperms were motile. Increased sperm count seen in the after treatment semen analysis.

DISCUSSION

Acharya Sushruta clearly defines the condition of Kshina Shukra to be Vata and Pitta predominant (6). Vitiated Vata-Pitta are the main culprits in Kshina Shukra. In short, Kshina Shukra is one kind of Shukra Dushti, in which both quantitative and qualitative vitiation of Shukra Dhatu is found. Nidana of Shukra Dhatu Kshaya, Shukra Dushti, Shukravaha strotodushti, Vitiating of Tridosha (mainly Vata and Pitta). Some Nidanarthkara Vyadhi, Vaidyakrita Nidana, Dravya sevana Nidana and some miscellaneous causes are considered as the Nidana of Kshina Shukra. Vitiated Vata-Pitta causes Jatharagni vaishamya ending in Aamotpatti. Aama causes Rasavaha strotorodha and progressive evaluative metamorphosis of Dhatu is hampered leading to poor nourishment of Shukra Dhatu, which in turn produces Shukra Dhatu of low quantity and quality.^[7]

Although a number of medicines are described in Ayurveda, we have selected one recipe called Vanari Gutika from Bhavaprakasha. Kapikachhu is Dhatu Pushtikar and has Viryavardhaka action. In addition Kapikachhu is a good source of Dopamine. Centre Dopamine is a key neurotransmitter in the control of sexual function.^[8] In the preparation of Vanari Gutika, milk and sugar should be used. Dugdha is well known Aphrodisiac and life stabilizer drug. Being Rasayana, Dugdha improves the quality of Dhatu produced and also brings the Dushti of Dhatu to a normal state. Sharkara is madhur in Rasa, Balya, Dhaha Nashaka and Shukrala. So it is useful in sperm count.

CONCLUSION

The Conclusion is the final outcome of any scientific study. The Alpa Shukra is a disease which affects one's normal life to a great extent by making cracks in the relation of partners and there by disturbing the peace of mind of both the partners. The Alpa Shukra is one of the basic reasons for divorces and suicides among married partners.^[9]

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ABSTRACT

Neonatal sepsis is associated with severe morbidity and mortality in the neonatal period. Clinical manifestations range from subclinical infection to severe local or systemic infection. Neonatal sepsis is divided into three groups as early-onset neonatal sepsis, late-onset neonatal sepsis and very late-onset neonatal sepsis according to the time of the onset. It was observed that the incidence of early-onset neonatal sepsis decreased with intrapartum antibiotic treatment. However, the incidence of late-onset neonatal sepsis has increased with the increase in the survival rate of preterm and very low weight babies.

The source of the causative pathogen may be acquisition from the

intrauterine origin but may also acquisition from maternal flora, hospital or community. Prematurity, low birth weight, chorioamnionitis, premature prolonged rupture of membranes, resuscitation, low APGAR score, inability to breastfeed, prolonged hospital stay and invasive procedures are among the risk factors. This article reviews current information on the definition, classification, epidemiology, risk factors, pathogenesis, clinical symptoms, diagnostic methods and treatment of neonatal sepsis.

Neonatal sepsis defines the systemic condition that arises from the bacterial, viral or fungal origin, associated with hemodynamic changes and clinical findings and causing severe morbidity and mortality. Its incidence varies depending on the definition of the case and the population studied and is between 1 and 5 in 1000 live births. The clinical manifestations range from subclinical infection to severe focal or systemic disease. While the infectious agent may arise from intrauterine or maternal flora, it may also be of the hospital or community origin. It is classified as early-onset, late-onset and very late-onset neonatal sepsis according to the time of onset of the findings. While early-onset neonatal sepsis describes

cases where clinical manifestations occur in the first three days of life (<72 hours), some researchers consider this limit as the first seven days of life. In connection with this, late-onset neonatal sepsis describes cases diagnosed on 4th-30th days of life or cases diagnosed after the first seven days.^[1,2] Very late-onset neonatal sepsis, on the other hand, describes sepsis cases diagnosed in infants who are hospitalized in the neonatal intensive care unit from the first 30 days of life until discharge. Epidemiological studies related to neonatal sepsis since the early 1980s have shown a decrease in early-onset neonatal sepsis cases, especially with *Group B Streptococcus (GBS)*, with the improvement of obstetric care and the use of intrapartum antibiotic prophylaxis; while they show an increase in late-onset neonatal sepsis associated with increased survival rates and long hospitalization times of premature babies.^[3,4]

Terminology

Suspected sepsis: Regardless of whether there is a clinical symptom or not, the presence of sepsis risk factors in the baby or findings suggesting sepsis in follow-up.^[5]

Clinical sepsis: Clinical and laboratory findings are present, but the failure to show the causative microorganism.^[5]

Proven sepsis: Clinical and laboratory findings are present, and demonstration of the pathogenic microorganism in cultures taken from the sterile field.^[5]

Pathophysiology and Causative Microorganisms

Causative microorganisms of early-onset neonatal sepsis are generally vertically transmitted from the mother. Microorganisms in the mother's birth canal, cervix, vagina, and rectum are known to cause chorioamnionitis by crossing intact or ruptured membranes before or during labor.^[6] Nevertheless, severe clinical findings and bacteremia findings starting from birth, especially in babies without rupture in membranes and born by cesarean section, suggest placental transmission.^[7] Chorioamnionitis, which is one of the most important risk factors in early-onset neonatal sepsis, is defined as an acute inflammation of fetal membranes and amniotic fluid. It often develops due to the microinvasion of amniotic fluid as a result of prolonged rupture of membranes. Fever, leukocytosis, foul-smelling or intense discharge, abdominal tenderness in the mother and fetal tachycardia are among the clinical findings of chorioamnionitis. However, chorioamnionitis may also present with a pathological laboratory finding without clinical findings.

Diagnostic Methods

Clinical Findings in Neonatal Sepsis

Signs and symptoms are generally non-specific in neonatal sepsis. Therefore, the differential diagnosis is important. While more than one organ or system findings may occur in early-onset neonatal sepsis, signs of infection in late and very late-onset neonatal sepsis may be multisystemic or focal (such as meningitis, pneumonia, omphalitis, osteomyelitis, septic arthritis).^[6] Neonatal sepsis can present with groaning, contraction of the accessory muscles of respiration, nasal wing breathing, apnea, cyanosis, tachypnea in the respiratory system; bradycardia/tachycardia, peripheral circulatory disturbance, hypotension, prolonged capillary refill time in the cardiovascular system; nutritional intolerance, difficulty sucking, vomiting, diarrhea, abdominal distention, hepato-splenomegaly, jaundice in the digestive system; sclerema, cutis marmoratus, pustule, abscess, petechiae, purpura in the skin; and lethargy, hypotonicity, sleepiness, weak or high-pitched crying, bulging fontanelle, irritability, convulsion, hypoactivity, body temperature regulation problems and difficulty sucking in the central nervous system.

Laboratory Methods

Blood Culture

The gold standard for the diagnosis of neonatal sepsis is the growth of pathogenic microorganisms in body fluids (blood, urine, cerebrospinal fluid, pleural fluid, peritoneal fluid, joint fluid) that are expected to be sterile. Therefore, the amount of the sample and the method of obtaining the sample are important. Minimum amount of blood required for blood culture should be 0.5-1 ml. It is recommended to take two different samples, preferably from two different regions. No growth in culture may be related to insufficient sample, mother's antibiotic use, antibiotic dose applied before sampling, low amount of bacteria in the blood or short term bacteremia.^[5]

After the area that the blood culture will be taken is cleaned and prepared with an antibacterial solution, samples are taken from the arterial or venous route. Data on sterilization of intravenous catheter sites indicate that cleaning for 30 seconds or two consecutive cleansings is superior to a single, short (5-10 seconds) disinfection. Simultaneous blood culture using catheter and periphery from patients with a central venous catheter is important in distinguishing catheter-related bloodstream infections.

Cerebrospinal Fluid (CSF) Culture

The use of CSF culture in newborns with suspected sepsis is controversial. Culture-proven bacterial meningitis occurs in about 0.25 per 1000 live births. Meningitis accompanies 20-25% of newborns with sepsis and 13% of early-onset neonatal sepsis. Although there is no consensus on performing lumbar puncture in infants diagnosed with early neonatal sepsis, it should definitely be performed in infants with blood culture positivity and clinically considered meningitis. However, antibiotherapy should not be delayed to perform a lumbar puncture. On the other hand, although it is rare in asymptomatic term babies, meningitis is still seen as a complication of neonatal sepsis, and there are sources suggesting lumbar puncture in the assessment of all sick newborns.

Urine Culture

In infants diagnosed with early-onset neonatal sepsis, urine culture does not need to be evaluated as part of early-onset neonatal sepsis since the amount of urine is limited and the rate of positivity in the urine culture is low, especially in the first 72 hours of life. Urinary tract infection assessment should be performed with the bladder catheter or suprapubic bladder aspiration since there is a high risk of contamination in samples taken with urine bags. Urine culture in infants diagnosed with late-onset neonatal sepsis should be part of the evaluation of sepsis.

Tracheal Aspirate Culture

Tracheal aspirate culture may help diagnosis in babies who are diagnosed with sepsis and need mechanical ventilation due to respiratory failure; however, the risk of colonization and contamination should be considered when evaluating the result. It can be taken as a sample in patients with ventilator-associated pneumonia or in cases whose amount and characteristics of secretion varies, but it should be known that its diagnostic value is low. It is not recommended to take tracheal aspirate cultures in prolonged intubation due to rapid colonization following intubation.

Superficial Swab Cultures

Cultures obtained from superficial regions, such as the axilla, umbilical cord, outer ear canal, nasopharynx and orogastric tubes, show poor correlation with pathogens isolated from sterile areas. Routine collection of superficial swab cultures is not recommended in neonatal sepsis, as it has a low predictive value and can lead to erroneous assumptions in determining the factor.

Complete Blood Count Components and Peripheral Smear

Many studies have been conducted on the diagnosis of neonatal sepsis, such as complete blood count, white blood cell count (WBC), absolute neutrophil count and the ratio of immature neutrophil count to total neutrophil count (I/T). The WBC upper limit is set at 30.000-40.000/mm³ in many sepsis screening protocols. However, it is noteworthy that leukocytosis was not detected in one-third of cases diagnosed with sepsis.^[6 7 8] Although the normal value of WBC has a very wide range, it can be affected by the time and place of collection of the sample, the gestational week of the baby, and factors other than sepsis.^[6, 7 8 9] Among the factors other than sepsis that change the value of WBC are conditions, such as preeclampsia, intraventricular hemorrhage, perinatal asphyxia, meconium aspiration, pneumothorax, convulsions and prolonged crying.

The sensitivity of the complete blood count samples taken immediately after birth was found to be low in the evaluation of sepsis. Due to its weak positive and negative predictive value, the benefit of the use of complete blood count as a biomarker in neonatal sepsis has not been proven. However, studies show that serial normal complete blood count measurements can be reliable in excluding sepsis.

Another parameter used in sepsis assessment among complete blood count is neutrophil count. The presence of neutropenia is more valuable than neutrophilia, especially in the first postnatal 48 hours in the diagnosis of sepsis. It should be noted that as the gestational age decreases, the lower limit of absolute neutrophil count decreases. In addition, hypertension, maternal fever, asphyxia, meconium aspiration syndrome, mode of delivery, periventricular hemorrhage, reticulocytosis, hemolytic disease and pneumothorax are known to affect the neutrophil count.^[7]

In the evaluation of peripheral smear, vacuolization, Döhle bodies and toxic granulation are guiding in the diagnosis of bacterial sepsis. The I/T ratio drops from 0.16 at birth to 0.12 at 60 hours. I/T ratio of ≥ 0.2 is considered significant in the diagnosis of sepsis. However, I/T ratio may cause erroneous interpretation in cases, such as perinatal asphyxia, maternal hypertension and long-term oxytocin induction. It should also be kept in mind that the technique of peripheral smear, the knowledge and experience of the investigator can affect the results.

Thrombocytopenia is a non-specific late finding of neonatal sepsis. It was found that the platelet count below 100000/mm³ for the first 10 days of the postnatal period and below

150000/mm³ in later periods are associated with sepsis. In 50% of the cases with the bacterial infection, platelet count was found to be below 100,000/mm³. Accompanying bacterial infections more frequently, thrombocytopenia is also seen in viral infections.

C-Reactive Protein (CRP)

CRP, which is a pentameric structure, containing 187 amino acids and synthesized from hepatocytes, and an acute-phase protein, is one of the most easily available and most frequently used laboratory tests in the diagnosis of neonatal sepsis. Its synthesis is stimulated by cytokines, primarily interleukin-6 (IL-6), IL-1 and tumor necrosis factor- α (TNF- α). Its half-life is between 24-48 hours. The normal lower limit is considered as 1 mg/dL in the neonatal period. It takes 10-12 hours for it to reach the measurable level in the serum, so its reliability is low in the early diagnosis of neonatal sepsis. Serial CRP measurements have been shown to increase sensitivity in the diagnosis of sepsis 24 to 48 hours after the onset of symptoms. Serial CRP measurements are also used to evaluate the antibiotic response. Although CRP serum level rises mainly with infections, it may also rise due to non-infectious causes, such as premature rupture of the membranes, maternal fever, fetal distress, difficult birth, and perinatal asphyxia. This causes low specificity of CRP for early neonatal sepsis.

Treatment

Antimicrobial treatment of neonatal infections is divided into two as the treatment of suspected (empirical) or known (definitive) pathogens. Whether there is early or late-onset of symptoms, and the infection is nosocomial or community-acquired, affects antimicrobial selection. Although it is important to take appropriate culture samples before starting antibiotherapy, this should not delay starting treatment.

Empirical Treatment

Empirical treatment of early-onset bacterial infections should include ampicillin and an aminoglycoside antibiotic (usually gentamicin). Renal function tests should be evaluated at the beginning of treatment with gentamicin, and serum gentamicin level should be checked in infants whose antibiotherapy will be completed. If renal function tests are normal in babies whose treatment is completed after 48 hours, gentamicin level examination is not necessary. The use of third and fourth generation cephalosporins should only be added to the treatment in case of suspected gram-negative meningitis. The use of third-generation cephalosporins and vancomycin has been associated with an increase in vancomycin-resistant enterococci and extended-spectrum β -lactamase (ESBL)-producing gram-negative bacteria (GNB).^[10]

Empirical use of third-generation cephalosporins is not recommended, as it causes an increased risk of invasive candidiasis in long-term administration as well as resistance development.^[11] Ampicillin and third-generation cephalosporin regimen have been shown to be no more effective than the combination of ampicillin and gentamicin.^[12] Ampicillin + gentamicin is synergistic in the treatment of infections that arise from GBS and *L. monocytogenes*, but cephalosporins are not effective against *L. monocytogenes*.

Empirical treatment of late-onset neonatal sepsis usually includes vancomycin and an aminoglycoside antibiotic group, effective for *coagulase-negative Staphylococci*, *S. aureus* and gram-negative organisms. However, as in early-onset sepsis, if gram-negative meningitis is suspected, the addition of third-generation cephalosporins should be considered.^[11] Carbapenem group antibiotic use can be an option considering local resistance levels or if the patient has previously used a third-generation cephalosporin antibiotic.^[13] The use of piperacillin + tazobactam and ampicillin + sulbactam is gradually increasing in the treatment of infections that occur during neonatal intensive care unit hospitalization; however, penetration of tazobactam into the central nervous system is unreliable and it should not be used to treat meningitis. However, β -lactamase inhibitor sulbactam is known to reach high concentrations in CSF when combined with ampicillin.^[14] Rapid and aggressive treatment should be initiated when fungal infections, such as candidiasis, aspergillosis and zygomycosis, are suspected. Empirical antifungal therapy with amphotericin B deoxycholate can be considered in high-risk babies with risk factors for invasive candidiasis.

Treatment should be continued for 7-10 days in the diagnosis of clinical sepsis. The clinical condition of the baby, laboratory examinations and response to the treatment are monitored. The improvement of clinical findings in the first 24-48 hours from the start of treatment, the normalization of CRP level, I/T ratio and white blood cell count in 48-72 hours indicates an appropriate response is received.^[5] It is often difficult to determine an appropriate antibiotic treatment period for suspected sepsis when cultures are negative. Standard practice in babies who are fine and have no clinical or hematological evidence for infection is to stop antibiotherapy if there is no culture growth after 48 hours.^[11]

Pathogen-Oriented Treatment

Once the pathogens have been identified, treatment should be reorganized according to the type and sensitivity. When looking at the treatment regimens, in babies with bacteremia and sepsis that arise from GBS, gentamicin is often used in combination with ampicillin or

penicillin, but there are insufficient data to suggest that the aminoglycoside addition improves the result. However, it is common practice to use a combination of these two drugs in the first few days of treatment, and then continue treatment with just ampicillin or penicillin. Although ampicillin alone is sufficient in the treatment of *L. monocytogenes*, aminoglycosides show synergistic effects. Enterococci should be treated with an antibiotic containing penicillin, and aminoglycoside can be added to the treatment if the synergistic effect is documented. Aminoglycoside therapy may be discontinued when cultures result as sterile. Ampicillin-resistant enterococcal infections can be treated with vancomycin without the addition of aminoglycosides. In *S. aureus* infections, vancomycin is used for treatment until the susceptibility profile is concluded, while it is continued in patients with MRSA. If MSSA is detected, cefazolin can be used as an alternative treatment in conditions other than CNS infections and endocarditis. *Coagulase-negative staphylococcal* infections require treatment with vancomycin. Ampicillin (if sensitive) or an aminoglycoside is sufficient for the treatment of gram-negative enteric bacterial infections. However, if meningitis is suspected, third-generation or fourth-generation cephalosporin (for example, cefotaxime, ceftazidime, or cefepime if *Pseudomonas* spp is the causative agent) or carbapenem should be used. Carbapenem is the best option in the treatment of Enterobacteriaceae strains that produce extended-spectrum beta-lactamase (ESBL), while cefepime may also be considered. Infections that arise from *Enterobacteriaceae* strains that produce carbapenemase are treated with colistin in addition to carbapenem, or high-dose tigecycline, or a regimen containing aminoglycoside. It is appropriate to use clindamycin, ampicillin + sulbactam or metronidazole in the treatment of anaerobic infections; if CNS involvement is present, metronidazole is preferred. When fungal infections are evaluated, Amphotericin B deoxycholate is the first choice for the treatment of invasive candidiasis.^[15] Fluconazole can be used as an alternative therapy in the treatment of patients with sensitive fungal infections and patients without prophylaxis given.^[16] Liposomal amphotericin or echinocandin (caspofungin or micafungin) can be used in the treatment of hepatic or splenic candidiasis. Antibiotics and their frequently used doses in the neonatal period are summarized in.^[17,18]

Antibiotic doses

AMIKACINIM, IV **Gestational age <30 weeks:** PNA ≤14 days: 15 mg/kg/dose every 48 hours PNA ≥15 days: 15 mg/kg/dose every 24 hours **Gestational age between 30-34 weeks:** PNA ≤60 days: 15 mg/kg/dose every 24 hours **Gestational age ≥35 weeks:** PNA ≤7 days: 15 mg/kg/dose every 24 hours PNA ≥8 days: 17,5 mg/kg/dose every 24 hours AMPICILLINIM,

IV **Gestational age ≤ 34 weeks:** PNA ≤ 7 days: 50 mg/kg/dose every 12 hours PNA 8-28 days: 75 mg/kg/dose every 12 hours **Gestational age > 34 weeks:** PNA ≤ 28 days: 50 mg/kg/dose every 8 hours **Meningitis:** PNA ≤ 7 days (IV): 200- 300 mg/kg/days every 8 hours PNA > 7 days (IV): 300 mg/kg/days every 6 hours **CEFOTAXIMEIM, IV Gestational age < 32 weeks:** PNA < 14 days: 50 mg/kg/dose every 12 hours PNA 14-28 days: 50 mg/kg/dose every 8 hours **Gestational age ≥ 32 weeks:** PNA ≤ 7 days: 50 mg/kg/dose every 12 hours PNA 8-28 days: 50 mg/kg/dose every 8 hours **MEROPENEM IV Birth weight ≤ 2 kg** PNA ≤ 14 days: 20 mg/kg/dose every 12 hours PNA 15-28 days: 20 mg/kg/dose every 8 hours PNA 29-60 days: 30 mg/kg/dose every 8 hours **Birth weight > 2 kg** PNA ≤ 14 days: 20 mg/kg/dose every 8 hours PNA 15-60 days: 30 mg/kg/dose every 8 hours **PIPERACILLIN – TAZOBACTAM IV Birth weight ≤ 2 kg** PNA ≤ 7 days: 100 mg/kg/dose every 8 hours PNA 8- 28 days: PMA ≤ 30 GH 100 mg/kg/dose every 8 hours PMA > 30 GH 80 mg/kg/ dose every 6 hours PNA 29-60 days: 80 mg / kg/dose every 6 hours **Birth weight > 2 kg** PNA ≤ 60 days: 80 mg / kg/dose every 6 hours **VANCOMYCIN IV Loading dose: 20 mg/kg/dose Gestational age < 28 weeks:** Serum Creatinine < 0.5 mg/dL 15 mg/kg/dose every 12 hours Serum Creatinine 0.5-0.7 mg/dL 20 mg/kg/dose every 24 hours Serum Creatinine 0.8- 1 mg/dL 15 mg/kg/dose every 24 hours Serum Creatinine 1.1- 1.4 mg/dL 10 mg/kg/dose every 24 hours Serum Creatinine > 1.4 mg/dL 15 mg/kg/dose every 48 hours **Gestational age > 28 weeks:** Serum Creatinine < 0.7 mg/dL 15 mg/kg/dose every 12 hours Serum Creatinine 0.7-0.9 mg/dL 20 mg/kg/dose every 24 hours Serum Creatinine 1-1.2 mg/dL 15 mg/kg/dose every 24 hours Serum Creatinine 1.3-1.6 mg/dL 10 mg/kg/dose every 24 hours Serum Creatinine > 1.6 mg/dL 15 mg/kg/dose every 48 hours **TEICoplanin IV Loading dose: 16 mg/kg/dose Maintenance dose: 8 mg/kg/dose every 24 hours.**

The duration of treatment is determined by the site of infection and the clinical response of the patient. Bacteremia without infection focus is usually treated for 7- 10 days. Although there are few randomized controlled studies on antibiotherapy periods in premature babies with very low birth weight, duration of antibiotherapy can be extended until day 10-14 in infants younger than 32nd gestational weeks.^[11] Gram-negative bacteremia treatment is also extended until 10th-14th days. The duration of treatment in uncomplicated GBS meningitis is usually until day 10-14, while the duration is extended in focal complications.^[11] In gram-negative bacterial meningitis, treatment is continued for 21 days or for another two weeks after the first negative CSF culture.^[20]

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MANAGEMENT OF MUSCULOSKELETAL DISORDERS OF CHILDREN IN AYURVEDA**Dr. K. S. Ratnaparkhi¹ and Dr. Amol Subhash Tonchar^{2*}**¹MD Kaumarbhritya, Prof. & HOD Dept. of Kaumarbhritya.²PG Scholar Kaumarbhritya.

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ABSTRACT

‘Prevention is better than cure’ is the basic concept of Ayurveda. Curing a diseased person and redefining his healthy status, is the primary goal of a physician. It is the science which laid emphasis on the preventive aspect.^[1] In Ayurveda there is description of ‘Ashtang Ayurveda’^[2] which includes Kaya, Bala, Graha, Urdhvanga, Shalya, Danshtra, Jara & Vajikarana. Bala chikitsa is one of the important specialization in Ayurveda. In which various diseases and its management are described according to Ayurveda. Now a day’s musculoskeletal disorders are commonly found in children’s. in which Cerebral palsy, Muscular dystrophies, Delayed milestones, Viral neuritis & Erb’s paralysis are generally found in the category of

Musculoskeletal disorders. In Ayurveda there is various principles & treatment modalities are mentioned for all diseases. For musculoskeletal disorders there are various treatments are mentioned. Ex. Panchkarma, various Aushadhi kalpas, etc.

KEYWORDS: Musculoskeletal disorders, Ayurveda, Ashtanga Ayurveda.**INTRODUCTION**

Musculoskeletal disorders or conditions affect people of all age groups in all regions of the world. According to the Global burden disease report, musculoskeletal disorders are an increasing healthcare issue and have become the second most common cause of disability.^[3]

Musculoskeletal conditions are characterized by pain, limitations in mobility, dexterity and functional ability which restrict a person’s ability to work and participate in society. In

Ayurveda it can be included in the concept of Vatavyadhi.^[4] Physical and mental abilities, sensory and motor responses and all activities happening in the body are conducted by Vata dosha.

In musculoskeletal disorders includes; Cerebral palsy, Muscular dystrophies, Delayed milestones, Viral neuritis & Erb's paralysis. In which cerebral palsy and delayed milestones are commonly found.

MATERIALS AND METHODS

In Ayurveda musculoskeletal disorders are considered or correlated under the concept of 'Vatavyadhi' diseases. There are 80 vatavyadhis are described. Movements occur everywhere in body and mainly in musculoskeletal system.

a) **Cerebral palsy**^[5]: It is a form of chronic motor disability, which is non progressive, (life long & doesn't get worsen), nonfatal and yet non curable. It results from damage to the growing brain before or during birth or postnatal period. It is also known as 'Little's disease' - after the name of John Little.

Classification

1. Spastic CP	Quadriplegia, Paraplegia, Hemiplegia, Monoplegia
2. Extraparamidal / Diakinetic CP	Choreoathetosis, Dystonia
3. Atonic / Cerebellar CP	Aconic diplegia, Cerebellar ataxia
4. Mixed CP	

Signs & Symptoms

1. Posture & balance problems
2. Loss of control or coordination
3. Abnormal tone, strength, reflexes
4. Persistent motor delay
5. Cognitive deficit
6. Associated handicaps

Muscular dystrophies^[6]

It is a group of diseases that cause progressive weakness and loss of muscle mass. In muscular dystrophy, abnormal genes interfere with the production of proteins needed to form healthy muscle.

There are many different kinds of muscular dystrophy. Symptoms of the most common variety begin in childhood, mostly in boys. There is no cure for muscular dystrophy. But medications and therapy can help symptoms & slow the course of the disease.

b) Erb's paralysis^[7]

Damage to the 5th & 6th cervical roots leads to Erb's palsy. It is characterized by 'tipping position' of the upper extremity where it lies simply adducted with extension of elbow. Along with pronation of the forearm & flexion of the wrist. It is treated by keeping arm abducted, forearm supinated & vertical to the arm either by pinning it to pillow or by splint.

In ayurveda: Group of symptoms including musculoskeletal disorders are

- Jirna Anannabilasha
- Dourbalya
- Karshyata
- Apachana
- Mala-abaddhata
- Kshina mansata
- Dyanendriya / Karmendriya Akarmanyata

Management of musculoskeletal disorders

Ayurveda described various treatment modalities for various diseases. In which various types of Panchakarma, vishesha upakrmas and Shamana Chikitsa includes.

a. Sneha virechana^[8]

Before going to Virechana or any panchakarma; Abhyantara snehapana is necessary. In childrens the snehapana should be 'Accha snehapana'. With this Swedana also given. For virechana;

- Icchabhedi rasa^[9] : ½ tablet – for 2 to 5 years
- During virechana luke mixture of warm water + sugar + salt should be taken.

b. Basti^[10]

Basti procedure can be used very effectively in pediatric age group. But with the same time a fixed dose of sneha or niruha basti can be established. It is advisable to use sneha in increasing order starting from 10 ml. Same is applicable to niruha basti too. It has given from 50 ml upto 250 ml.

c. Nasya^[11]

Shaman/Brimahan nasya is practiced but Pratimarsha nasya is highly recommended.

Ex. Applying Ghrita in both nostrils – 3 or more times per day.

d. Vishesha upakarmas

- Shashtika shali pinda sweda
- Pinda sweda
- Shirodhara
- Udavartana

e. Use of medhya drugs**f. Rasayana therapy^[12]**

With the help of all this management we can manage Musculoskeletal disorders through the help of Ayurveda.

CONCLUSION

Ayurveda is the science of life. The main aim of Ayurveda is prevention from diseases and curing diseased person. Ayurveda has described various treatments for all diseases.

Musculoskeletal disorders are important and increasing day by day. In Ayurveda musculoskeletal diseases can be correlated or included in Vatavyadhi. Various panchakarmas, special therapies, Rasayana therapy and medhya drugs etc. are very useful in the management of Musculoskeletal disorders.

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A CLINICAL CASE STUDY OF AGNIKARMA WITH PANCHADHATU SHALAKA IN TRIGGER FINGER (SNAYUGAT VATA)

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ABSTRACT

Trigger finger also known as Stenosing tenosynovitis is a clinical condition characterized by painful locking of the digit on flexion and extension. Commonly seen in the diabetic population and in women, in the fifth to sixth decade of life. It is caused due to inflammation and hypertrophy of the retinacular sheath which progressively restricts the motion of flexor tendons. The diagnosis is straightforward, as most patients complain of clicking or locking of the finger. According to modern the treatment modalities, includes splinting, corticosteroid injection, or surgical release. Although surgical procedures are effective but the complications that arise out of such procedures are equally fatal and deadly. Now a days, it has been observed that such

diseases can be cured by Agnikarma without undertaking any surgical procedure. Classically trigger finger can be correlated to Snayugata Vata in “sushrut samhita”. Acharya Susruta describes the disease manifestations such as stambha [stiffness], kampa [tremor], soola [pain] and akshepa [convulsions]. He has advised Agnikarma as the specific line of management in diseases pertaining to snayu (ligaments and tendons), asthi (bone), sandhi (joints) etc. This is a single case of trigger finger (snayugata vata) managed with agnikarma using in OPD, Department of Salyatantra, CSMSS Ayurved Mahavidyalaya. The procedure was administered weekly once for 4 weeks at intervals of 7 days giving a complete relief from symptoms.

KEYWORDS: Trigger finger, Snayugata Vata, Agnikarma, panchadhatu shalaka.

INTRODUCTION

Trigger finger is a common finger ailment, caused by inflammation and subsequent narrowing of the A1 pulley, which causes pain, clicking, catching, and loss of motion of the affected finger.^[1] Inflammation and hypertrophy of the retinacular sheath progressively restricts the motion of the flexor tendon.^[2] This sheath normally forms a pulley system comprised of a series of annular and cruciform pulleys in each digit that causes the flexor tendon's force production and efficiency of motion.^[3] (Fig. 1) The first annular pulley (A1) at the metacarpal head is most often affected pulley in trigger finger, though cases of triggering have been reported at the second and third annular pulleys (A2 and A3, respectively), as well as the palmar aponeurosis.^[4]

It is also called as stenosing tenosynovitis, because the inflammatory changes seen at the tendon sheath (tendovagina) and not the tenosynovium.^[5]

In this condition there is an obstacle for voluntary flexion or extension of the finger associated with painful popping or clicking sound.

PREVALENCE

The lifetime risk of trigger finger development is between 2 and 3%, but increases to up to 10% in diabetics.^[6] The ring finger is most commonly affected, followed by the thumb (trigger thumb), long, index, and small fingers in patients with multiple trigger digits.^[7] Commonly seen in the diabetic population and in women, in the fifth to sixth decade of life.

Shalyatantra is the supreme branch among the Ashtangas of Ayurveda. It includes Sastra karma (Surgical procedures) and Anusastra karma (Parasurgical procedures) in addition to medical management. Acharya Susruta explains different methods of management of diseases such as Beshaja, Sastrakarma, Ksharakarma and Agnikarma. Agnikarma refers to application of Agni directly or indirectly by means of different materials to relieve various ailments.^[8]

Acharya Dalhana in his commentary on Susruta Samhitha defines Agnikarma as:

- 1) Agnikritha karma i.e, the action done with the help of agni.
- 2) Agnisambandhi karma i.e, the karma or action which is related to agni.

Agnikarma is mentioned in disorders of skin, muscles, vessels, ligaments, tendons, bones and joints. It is specifically indicated in the management of Arsa, Arbuda, Bhagandara, Sira, Snayu, Asthi, Sandhigata Vatavikaras, Gridhrasi, Etc.^[9]

In Ayurveda health is an equilibrium of tridoshas and diseases are described in accordance with the derangement these doshas, that is Vata, Pitta and Kapha. Classically this condition can be described as a state of deranged Vata with characteristic features like numbness, pain etc.

While Charaka has mentioned in the context of Snayupradoshaja Vikaras^[10] as stambha [stiffness], sankocha [contraction], khalli [neuralgia of the upper extremities] granthi [tumors in ligaments], sphurana [throbbing sensation], supthi [numbness]. Hence we can correlate trigger finger as Hastanguli Snayugata Vikara and appropriate management can be initiated.

Snayugata Vata is developed when the vata dosha aggravates due to atichesta, ativyayama etc and gets localized in snayu here specifically to the flexor tendon. Specifically, vyanvayu among subtypes of vayu, is ultimately unable to carry out the function of MCP and PIP joints smoothly. The features such as pain, stiffness and restricted movements develop in this region. The classical line of management of Snayugata Vikaras includes Snehana, Upanaha and Agnikarma.^[11]

Agnikarma is a supreme mode of parasurgical management. Disease treated by Agnikarma never reoccurs. In Agnikarma therapy part or tissue is burned with the help of various special materials. It can be correlated with modern therapeutic cauterization.

As a pioneer of the Shalya-Tantra Acharya Sushruta gives a well known Agnikarma Chikitsa for Asthi Sandhi Snayuasharita Vyadhi. Pathology of trigger finger also involves Asthi Sandhi Snayuashrita Vikara. Hence Agnikarma Chikitsa serves as an ideal healing mechanism for diseases like trigger finger.

A case study of Agnikarma Chikitsa in management of trigger finger was selected.

CASE REPORT

A 52 yrs old lady came to the CSMSS Shalyatantra OPD having. Her left hand was dominant,

1. Clicking of his left middle finger.
2. Difficulty in folding finger of left hand.

no H/O any trauma.

There was a the surveillance of a private orthopedic surgeon before 4 months. The history also suggested that the patient had received oral analgesic, anti inflammatory, steroids also. But there was no satisfactory relief through the above drugs.



PATHOPHYSIOLOGY

Constant movement and jerks to middle finger causes silent and repeated injury to the muscle resulting into inflammation of flexor tendon. This results in pain at the base of affected finger, especially on trying to extend the finger. As the sheath thickens further, the contained tendon proximal to it swells and this swollen tendon further restricts the sheath to enter in it, ultimately resulting into a condition called Trigger Finger.

As per Ayurvedic concept, this condition may develop due to vitiation of Vata with Anubandha of Kapha dosha, Vata and Kapha dosha have been considered as the important factor for causation of Shotha (swelling), Shoola (pain), Sankocha (restricted movement) in the middle finger.

Routine blood investigation and x-ray examination of affected finger were done and all investigations were found normal. After careful examination patient was diagnosed with recurrent trigger finger, and patient himself was willing for Agnikarma therapy.

Thereafter, Agnikarma was done 4 times in a month at an interval of 7 days. After completion of 4th sitting patient got complete relief from stiffness, locking.

Purvakarma

A written informed consent was obtained from the patient.

Instruments:- Materials such as Triphala kashaya, sterile cotton, panchadhatu shalaka, gas stove, Jatyadi ghrita.



Pradhana Karma

Agnikarma was done over the tender points over middle finger of left hand at multiple sites and MCP joint.

Red hot Panch Dhatu Shalaka was used for making Bindu Dhahan Vishesh and 8-10 Samyak Dagdha Vrana was made. It is to be noted that proper space between two Samyaka Dagdha Vrana should be kept after making Samyaka Dagdha Vrana.

Jatyadi Ghrita should be applied on that to get relief from burning sensation.(application of Jatyadi Ghrit also helps to reduce stiffness).

Paschat Karma

Patient was advised to apply over the Jatyadi Ghrita burnt site for 2 days.

The procedure was repeated every week for consecutive 4 weeks.

Probable Mode of Action of Agnikarma

In the process of Agnikarma transferring of therapeutic heat to twak dhathu (skin) and gradually to deeper structures renders soola.

Scientifically this can be explained by two different theories. Agnikarma acts as a counter irritant which relieves pain as well as by the theory of heat shock protein wherein induction of short episode of hyperthermia to an area of pain lead to stimulation of HSPs which cause release of anti-inflammatory cytokines.

DISCUSSION AND CONCLUSION

The patient got complete relief of symptoms in a period of 4 weeks and thereafter no recurrence was noted during the follow-up period of one month. Hence Agnikarma can be prescribed as an effective procedure in management of Trigger finger.

Agnikarma is also known to be effective in other cases of musculoskeletal disorders such as osteoarthritis, cervical spondylosis, lumbar spondylosis, sciatica, frozen shoulder, calcaneal spur, plantar fasciitis, carpal tunnel syndrome, tennis elbow.

No adverse effects were being observed throughout the entire sitting. To observe any recurrence of symptoms patient was followed up to 3 months but recurrence of symptoms were not observed. Patient was fully satisfied with Agnikarma therapy as compared to previous treatments done with modern modalities.

This heat is Ushna, Tikshna, Laghu, Sukshma, Vyavayi and Vikashi in Guna which is helpful to break the Kaphanubandhathus reducing Shotha which allows the sheath to enter in tendon while clenching and extension. Also Vata gets neutralized so that pain is relived.

CONCLUSION

- 1) Agnikarma is an OPD procedure.
- 2) Case study shows that Agnikarma therapy is helpful in Management of local Pathological diseases.
- 3) Thus from the above study it can be concluded that Agnikarma procedure proves to be an easy, safe, uncomplicated and economical way to reduce the Trigger finger.

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**MANAGEMENT OF URETHRAL STRICTURE (MOOTRAMARG SANKOCHA) BY UTTARBASTI – CASE STUDY****Dr. Sachin Bharat Ban* and Dr. Babasaheb N. Gadve**

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ABSTRACT

Stricture urethra, though a rare condition, still is a rational and troublesome problem in international society. Major complications caused by this disease are obstructed urine stasis leading to urinary tract infection, calculi formation, etc. This condition can Mutramarga Sankocha in Ayurveda. Modern medical science suggests cause bleeding, false passage and fistula formation in few cases. Surgical procedures have their own complications and limitations. Uttarabasti, a para-surgical procedure is the most effective available treatment in Ayurveda for the diseases of Mutravaha Strotas. In this article, I explained results of uttarbasti in urethral stricture patient. A male

patient of 50 years old consulted to OPD, with complaints like hesitancy, intermittency, straining, dribbling, incomplete voiding, and burning micturition was assessed before and after treatment. Retrograde urethrography was done before and after treatment. This case study was treated with Sahachar Taila Uttarabasti. Sushruta Samhita, it becomes evident that urological problems are an important part of medical sciences even during those days.

KEYWORDS: Stricture urethra, Mutramarga sankoch, Uttarabasti, Retrograde urethrography.

INTRODUCTION

Acharya Sushruta – the father of surgery had mentioned excellent procedures for the management of many surgical disorders. Many herbal or mineral drugs are in use for several medical or surgical disorders since ancient times, particularly where modern line of treatment

has limitations either in the form of recurrences or complications. Urethral stricture is a condition where modern surgical or para-surgical procedures pose many difficulties and complications. Acharya Sushruta and Charaka had recommended uttarbasti for the management of many urinary tract disorders. Uttarbasti is defined as the procedure of urethral administration of medicated oil or decoction. It is a Simple, non-invasive & OPD procedure. While working in department of Shalyatantra (Surgery in Ayurveda) a number of patients reported having mutrakrichra (difficulty in urination). Most of them are mainly of mutramarga sankoch. (stricture urethra). Such complaints are increasing mainly due to iatrogenic, traumatic or secondary to disease caused by unsafe sex practice, reinforced by busy life leading to vega-dharana (Suppression of urges to urinate and defecate) and ill nourishment.

In modern surgery, common treatment for urethral stricture is palliative i.e. dilatation of urethra with regular interval. Repeated instrumentation carries the risk of local trauma, false passage formation, and introduction of infection. Long term use of antibiotics and alkalizes change the pH of urine which may in turn lead to bacterial resistant. Apart from dilatation of urethra, there are many modalities of treatment i.e. internal urethrotomy, urethroplasty which are performed at specialized centre only and are out of reach of common man due to high cost of treatment. Moreover the results of these modalities of treatment are variable and commencing.

Recurrence and least encouraging result of urethral dilatation lead to think for procedure, which may prove remedy for mutrakrichra(difficulty in urination) in the form of uttarbasti which is described by Sushruta under of 'shasti upakramas' which is unique treatment of vrana.

मूत्राघाते मूत्रदोषे शुक्रदोषे अश्मरी व्रणे ।

तथैव आर्तवदोषे च बस्तिरपिउत्तरो हितः ॥

-सु.चि. १/११०

WHO is encouraging for research of effective traditional and indigenous medicine and treatment for various diseases. Uttarbasti karma in mutramarga sankoch (Urethral stricture) may prove an effective non-recurring mode of treatment for the same.

Case report

- A 48 yrs old male patient presented *in OPD* with c/o – obstructed **urine flow, straining, dribbling, and prolonged micturition**. The urine stream is thin or bifurcated; since 6 months.

History of present illness

A 48 yrs old patient was apparently alright 6 months back; but due to H/O -Injury from a fall on scrotum, strenuous exercise at gym; leading to **Vata Prakop** – increases dryness in the body tissues, which is a predisposing factor for scar formation, leading to pathology in the urinary tract deformity causing urethral stricture causing pain during micturition and dribbling of urine now, so advised uttarbasti for treatment.

Investigations:- Retrograde urethrogram, CBC, Urine examination.

P/H - k/c systolic hypertension controlled on regular medication.

F/H – not significant.

O/E - GC – fair, morbid obesity +No pallor

P- 74/min,

BP - 130/90

S/E CVS –S1 S2 – NAD,

CNS – Concious, oriented.

RS- Clear.

L/E- Anterior urethral stricture in first 1” to 2” of urethra – posterior stricture??

Ayurvedic pathogenesis of Mutrakruccha

Mutramarga Sankocha is a clinical entity where in **Vata vitiation**, specifically of **Apana Vayu**, sheltered in the Basti and Medhra occurs. **Hetu-Sevana** results in Vikruti of Apana Vayu; consequently, **Chala, Ruksha, Khara Guna** increases resulting into local constriction and hardening of tissues leading to constriction of the urethra. The increase in **Chala Guna** leads to frequent micturition and causes pain. When Vayu is in the stage of Prakopa, it causes

Mutra Sanga, Tod (throbbing pain), Sankoch (stricture), Shosha and Shoola.

Kapha Prakop is manifested with Sthairyra as local stasis, **Gaurav** as heaviness in penis in **Mutrasanga, Uplepa (narrowing of the lumen)** due to hypertrophied scar tissues, bandha (obstruction to normal flow), and **Chirkaritwa (chronicity)**. Hence, the combination of Vata and Kapha is a causative factor behind **Mutramarga Sankoch** (urethral stricture). On the

basis of above observation and history we also diagnosed him as a case of urethral stricture. I decided to go for Uttarbasti (an ayurvedic concept of Enema) and consent for the same was taken after explaining her whole procedure properly.

Instruments and Drugs

Instruments

- Feed tube 8-10-
- 10 ml syringe
- Penile clamp
- Gloves Disposable
- Gauze Piece
- Antiseptic solution
- Sponge Holder

Drugs

- *Sahachara tail*
- Betadine

Procedure of uttarbasti

Uttarbasti was done in 3 phases i.e. *Trividhakarma* viz. *Poorvakarma* (pre-operative), *Pradhana karma* (Operative/main procedure) and *Paschata karma* (post-operative).

Poorvkarma

- Procedure of **Uttarbasti** was explained in detail to the patients and also consent for **Uttarbasti** was obtained.
- Wear the gloves under aseptic precautions.
- Retract the prepuce skin
- Expose the urethra

Pradhankarma

- Clean the glans and surrounded area with antiseptic solution.
- Load the syringe with Sahachar tail.
- Attach it to feed tube.
- Gently push the syringe to fill feed tube – 1-2 drops of tail at glans.
- Gently insert feed tube in urethra

- Pass the tube about 8 cms
- Make sure that you are not in bladder
- Pass the clamp around penis and lock with clamp holder
- Gently push the tail
- Withdraw the tube
- After 45 mins release the lock



Paschatkarma

Post procedure blood pressure and pulse were examined. Patient has been instructed to hold urine unless urgency for next two hours. Patient was observed for any complications. He was asked to come every alternate day for the procedure for 8 days. Follow up was taken on 15 the day after the completion of the treatment course.

RESULTS

- Results of Uttarbasti are assessed clinically and by comparison between pre and post-treatment investigations like Urethrogram and Uroflowmetry.
- Uroflowmetry is done before the commencement of the treatment & is repeated after calibration (on 14th day).
- Urethrogram is recommended after one month, Urethral stricture is clear 70-80% results.
- The results of Uttarbasti are irrespective of site, size, and extent of stricture.
- So, Uttarbasti is proving to be a CURE for urethral stricture.

CONCLUSION

Uttarbasti in urethral stricture

- Can cure urethral stricture of any age group patient

- Non-invasive with minimal or no pain.
- No need of anesthesia
- Urethral catheterization is not required
- Day care treatment
- Proving to be a very promising treatment

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Atrial Septal Defect: A Literary Review of Congenital Heart Disease**Dr.Uzma Tabassum**CSMSS Ayurved Mahavidyalaya,
Kanchanwadi, Aurangabad**Abstract:**

Atrial septal defect is a common congenital abnormality that occurs in the form of ostium secundum, ostium primum, sinus venosus and rarely coronary sinus defects. Atrial septal defects are the third most common type of congenital heart disease. Included in this group of malformations are several types of atrial communications that allow shunting of blood between the systemic and pulmonary circulation. Most children with isolated atrial septal defects are free of symptoms but the rate of exercise intolerance, atrial tachyarrhythmias, right ventricular dysfunction and pulmonary hypertension is increased with advanced age and life expectancy is reduced in adults with untreated defects. Surgical closure is safe and effective and when done before age 25 years is associated with normal life expectancy. An isolated atrial septal defect can occasionally go undiagnosed for decades. It accounts for 25-30 % of congenital heart disease cases diagnosed in adulthood. Transcatheter closure offers a less invasive alternative for patients with a secundum defect who fulfill anatomical and size criteria. Patent foramen ovale is a normal communication during fetal life and is commonly encountered after birth. Abnormalities in genes essential to cardiac septation have been associated with atrial septal defects. Echocardiography is central to diagnosis and also informs the interventional approach. Percutaneous or surgical ASD closure may be indicated in presence of right heart volume overload, paradoxical embolism, orthodeoxia-platypnea or an elevated pulmonary systemic flow ratio.

Keywords : *Ostium primum, Ostium secundum, Septal defects, Transcatheter closure, Echocardiography, Paradoxical embolism, Orthodeoxia platypnea.*

Introduction :

Atrial septal defects belong to a group of congenital cardiac anomalies that allow communication between the left and right sides of the heart. These inter atrial communications include several distinct defects in the cardiac terminations of systemic and pulmonary veins (sinus venosus and coronary sinus defects) and in inter atrial septum (atrial septal defects). Patent foramen ovale is a normal communication during fetal life and is commonly encountered after birth.

Defects of atrial septum are the third most common type of congenital heart disease with an estimated incidence of 56 per 100000 live births [1]. With improved recognition of clinically silent defects by echocardiography, recent estimates are about 100 per 100000 live births [2]. About 65 – 70% of patients with a secundum defect, roughly 50 % of those with a primum atrial septal defect and 40 – 50 % of those with a sinus venosus defect are female.

Most atrial septal defects are sporadic with no identifiable cause. Reports of familial clusters of secundum defects have noted different modes of inheritance, most notably autosomal dominant [3, 4]. Abnormalities in genes essential to cardiac septation have been associated with atrial septal defects [5]. The risk of secundum defect is increased in families with history of congenital heart disease, especially when an atrial septal defect is present in a sibling [3]. In patients with trisomy 21, secundum and primum defects are the more frequent lesions, accounting for 42% and 39% of major congenital heart disease, respectively [6]. Exposure to several substances has been associated with atrial septal defects, including fetal alcohol syndrome [7], first trimester maternal cigarette consumption [8,9], and some anti depressants [10-12]. Other maternal risk factors include diabetes, increased dietary glycemic index in women without diabetes [35,36] and advanced maternal age.(more than or equal to 35 years) [15,16].

Normal development of atrial septum results in formation of fossa ovalis, which include two

anatomical elements: first, muscular boundaries contributed by septum secundum, and second, the valve of fossa ovalis, which attaches on left atrial aspect of septum secundum – septum primum. A patent foramen ovale is seen in almost all newborn babies, but its frequency decreases with advancing age [17-18]. Complete anatomical closure of foramen ovale occurs in 70-75% of adults [20].

Secundum atrial septal defect is a defect within the fossa ovalis usually due to one or several defects within septum primum. With the exception of patent foramen ovale, secundum atrial septal defect is the most common cause of an atrial - level shunt. The size of secundum defects varies from several millimeters to 2-3 cm. Large defects usually associated with substantial deficiency, or even complete absence of septum primum.

Primum atrial septal defect is one of the several variants of common atrio ventricular canal defects (also termed atrio ventricular septal defect) with an inter atrial communication between the anterior inferior margin of fossa ovalis and atrio ventricular valves. The defect is characterized by a common atrio ventricular orifice with two distinct atrio ventricular valve annuli completed by valve tissue adhering to crest of the ventricular septum. In addition to septal defect, the atrio ventricular valve in this anomaly are always almost abnormal, including a cleft in the anterior mitral leaflet. Unlike other types of atrial septal defects, the position and course of conduction axis is abnormal as in complete atrio ventricular canal defect.

In most patients, an atrial septal defect results in left -to- right shunt. The direction and magnitude of blood flow through an atrial communication are determined by the size of the defect and by the relative atrial pressures, which relate to compliances of left and right ventricles. Both the size of the defect and the compliance of the ventricles can change over time [21].

Pathophysiologic consequences of ASDs typically begin in adulthood, and include arrhythmia, paradoxical embolism, cerebral abscess, pulmonary hypertension and right ventricular failure .Two dimensional transthoracic echocardiography with Doppler is a central aspect of the evaluation. This non- invasive imaging modality often establishes

the diagnosis and provide critical information guiding intervention.

Clinical presentation:

Most patients remain asymptomatic throughout most of the childhood. Even those with a large left – to – right shunt might not have overt symptoms until adulthood. Rarely an isolated atrial septal defect is found in an infant with tachypnea, slow weight gain, or recurrent respiratory infections [23, 24].

By contrast, most adult patients with a large defect present with symptoms, including fatigue, exercise intolerance, palpitations, syncope, shortness of breath, peripheral oedema, manifestations of thromboembolism and cyanosis.

Exercise capacity and peak oxygen consumption are decreased in most adults with unpaired secundum defect, often at 50-60% of predicted values in healthy controls [27].

Major arrhythmias are uncommon in children with atrial septal defects. The most common arrhythmias are atrial flutter and fibrillation, incidences of which increase with age. Pulmonary hypertension is uncommon in children with an isolated atrial septal defect. In adults with large defects, mild or moderate pulmonary hypertension is common and tends to increase with age and in those living at high altitude [28-30]. Although uncommon, dyspnea in patients with ASD may be triggered by an upright position in orthodeoxia-platypnea syndrome and linked to arterial desaturation. Late post- operative atrial fibrillation or flutter tends to occur in those who undergo closure after the age of 40 years [2].

On physical examination, most young patients with an isolated secundum atrial septal defect are acyanotic and can have few or no symptoms. Characteristic electrocardiographic features of atrial septal defect include a tall P wave indicative of right atrial enlargement, incomplete right bundle branch block pattern and right axis deviation. Left axis deviation with superior axis is suggestive of primum defect.

Echocardiography :

Transthoracic echocardiography is a primary diagnostic method for determining the presence, location, size and haemodynamic characteristics of atrial septal defects. Contrast echocardiography with

injection of agitated saline through a peripheral venous cannula during imaging of atria and ventricles can assist in the diagnosis of atrial septal defect, especially in patients with restricted acoustic windows [32].

MRI and CT:

Advanced in cardiac and MRI techniques allow anatomical delineation of atrial septal defects and quantitative assessment of their haemodynamic consequences [33,34]. In patients with isolated secundum or primum defects, cardiac MRI is seldom necessary. Exceptions include those in whom the location of defect or its haemodynamic burden is in question. However, the risk of cancer related to ionizing radiation limits its application to only carefully selected patients in whom other modalities are insufficient [35].

Treatment:**Indications and contra indications of defect closure:**

Closure of an atrial septal defect is indicated in the presence of a haemodynamically significant shunt that causes enlargement of right heart structures, irrespective of symptoms [35, 36]. Other indications include suspicion of paradoxical embolism in the absence of other causes or in the rare instance of documented Orthodeoxia – platypnoea (dyspnea and hypoxaemia accompanying a change to a sitting or standing from a recumbent position) irrespective of shunt size.

Timing of defect closure:

A haemodynamically significant atrial septal defect should be closed electively once the diagnosis is confirmed. Although, there is no lower limit of age for defect closure, many clinicians choose to refer asymptomatic children for the procedure at age 3-5 years. At the other end of the age spectrum, evidence indicates that with the exceptions of contraindications noted above, defect closure is safe and effective in improving symptoms, even in elderly patients. [29, 37-39].

Sinus venosus, primum and coronary sinus septal defects need surgical closure. Secundum defects can be closed either by surgery or by percutaneous route using an occluding device delivered by a catheter. Transcatheter closure might not be feasible in some large secundum defects or small infants.

Clinical and haemodynamic results of defect closure:

Patients commonly report subjective improvement in symptoms after closure of atrial septal defects [27, 37]. A younger age at closure and a lesser degree of chamber enlargement before repair are associated with a higher likelihood of normalization of right ventricular size [43].

Studies have shown improvements in symptoms and exercise capacity decrease in right atrial and left ventricular size and improvement in pulmonary hypertension in most but not all patients [29, 30, 45, 50, 51]. Although, these benefits are less pronounced after age 60 years [29, 30], symptomatic improvement and increase in 6 min. walking distance coupled with a low procedural risk provide the rationale for defect closure in elderly patients [29, 37,52].

Maternal complications are uncommon in isolated atrial septal defects not complicated by pulmonary hypertension [55]. Yap and colleagues [56] found similarly low rates of maternal complications in women with repaired and unrepaired defects, including arrhythmias (4%) and transient ischaemic attack (1%). Pre - pregnancy history of arrhythmia and maternal age older than 30 years were risk factors for maternal cardiac complications. The women with an ASD who have severe pulmonary arterial hypertension should be counseled to avoid pregnancy due to excess maternal and fetal mortality [13, 27].

Discussion:

Defects of atrial septum are the third most common type of congenital heart disease with an estimated incidence of 56 per 100000 live births [1]. With improved recognition of clinically silent defects by echocardiography, recent estimates are about 100 per 100000 live births [2]. In most patients, an atrial septal defect results in left -to-right shunt. The direction and magnitude of blood flow through an atrial communication are determined by the size of the defect and by the relative atrial pressures, which relate to compliances of left and right ventricles. Both the size of the defect and the compliance of the ventricles can change over time [21]. Left ventricular systolic dysfunction can develop late in patients with a large atrial septal defect [22].

Surgical closure is safe and effective and when done before age of 25 years is associated with normal life expectancy. Transcatheter closure offers a less invasive alternative for patients with a secundum defect who fulfill anatomical and size criteria. The diagnostic sensitivity of transthoracic echocardiography is excellent in young patients, but lower in those with restricted acoustic windows due to obesity, large body habitus and previous thoracic surgery. Closure of an atrial septal defect is indicated in the presence of a haemodynamically significant shunt that causes enlargement of right heart structures, irrespective of symptoms [35, 36]. The primary indication for ASD closure is right heart volume overload, whether symptoms are present or not. ASD closure may also be reasonable in other contexts, such as paradoxical embolism.

American and European practice guidelines state that an atrial septal defect can be closed if the pulmonary vascular resistance is lower than two-thirds of the systemic vascular resistance and there is evidence of pulmonary-to-systemic flow ratio greater than 1.5. Some studies have shown an increase in exercise capacity in adults after defect closure [40], but in asymptomatic children the change has been minimum or none. Conversely, studies on respiratory symptoms and pulmonary function in children have shown a significant improvement after closure [41, 42]. A younger age at closure and a lesser degree of chamber enlargement before repair are associated with a higher likelihood of normalization of right ventricular size [43]. Atrial flutter and fibrillation are important causes of morbidity, seen in 21% of adults older than 40 years with a rising frequency over time [49].

Studies have shown improvement in symptoms and exercise capacity, decrease in right atrial and right ventricular size, and improvement in pulmonary hypertension in most but not all patients [29, 30, 45, 50, 51]. Pregnancy should be avoided in women with an atrial septal defect and severe pulmonary hypertension. Maternal deaths tended to occur shortly after delivery and were often caused by heart failure, thromboembolism, pulmonary hypertensive crisis and sudden cardiac death.

The 2008 American College of Cardiology and American Heart Association (ACC/AHA) adult

congenital heart disease guidelines provide detailed clinical guidance on ASDs [1]. An interesting association of ASD with Klippel - Feil Syndrome was recently reported, which has the major physical examination features of a short neck, limited range of motion in the neck, and low hair line at the back of the head [64].

Conclusion:

ASDs are a common congenital abnormality that most commonly occurs as an ostium secundum defect. About 65-70% of patients with a secundum defect, roughly 50% of those with a primum atrial septal defect, and 40-50% of those with a sinus venosus defect are female. Exercise intolerance is uncommon in young children with an isolated atrial septal defect. Nonetheless, pulmonary function is often impaired in this age group [26]. Major arrhythmias are uncommon in children with atrial septal defects. Pulmonary hypertension is uncommon in children with an isolated atrial septal defect. Enlargement of right heart structures are evident on chest radiography in patients with haemodynamically significant atrial septal defects. Sinus venosus, Primum and coronary sinus septal defects need surgical closure. Secundum defects can be closed either by surgery or by percutaneous route using an occluding device delivered by a catheter. Transcatheter closure might not be feasible in some large secundum defects or small infants. The risk of atrial tachyarrhythmias, especially atrial flutter and fibrillation, remains high after defect closure in adulthood. Risk factors include atrial arrhythmia before closure and age at closure older than 40 years [53, 54]. By comparison with general population, women with unpaired atrial septal defects had an increased risk of pre-eclampsia, fetal loss and low birth weight. A comprehensive echocardiogram includes evaluation of anatomical ASD characteristics, flow direction, associated abnormalities (e.g. anomalous pulmonary veins), right ventricular anatomy and function, pulmonary pressures and pulmonary or systemic flow ratio. ASD types strictly include ostium secundum (75% of cases), ostium primum (15-20%), while rare coronary sinus defects are closely related [1]. The overall prevalence of diagnosed ASDs has been estimated at 3.89 per 1000 children and 0.88 per 1000 adults, which may be underestimated due to

clinically silent and unidentified cases [3]. Sick sinus syndrome may also develop in ASD patients due to long standing right heart overload [1]. A patent foramen ovale was much more common and present in 81%. Complete heart block is characteristic of familial ASD [15]. Echocardiography is central to diagnosis and also informs the interventional approach. Percutaneous or surgical ASD closure may be indicated in presence of right heart volume overload, paradoxical embolism, orthodeoxia-platypnea, or an elevated pulmonary or systemic flow ratio.

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SCIENTIFIC STUDY OF BALAGRAHA AND ITS MANAGEMENT

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Corresponding Author*Dr. Karuna S.****Ratnaparkhi**HOD and Professor Dept. of
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Aurangabad.**ABSTRACT**

Background:– Graharogas are special topic which constitutes the major portion of Kaumarbhritya. According to Ayurvedic principals ‘Disease can’t exist without a cause’, of course many times it is invisible, as invisible entities are more than visible entities. Invisible causes of disease are termed as Graharoga, Jatharini. Even diseases cannot be attributed to Bhootadi causes, when symptomatology does not match. Hence Graharogas are counted among the invisible causes of disease. **Aim:**– to study the Graharoga and its management principals mentioned in Ayurvedic classics scientifically. **Materials and Methods:**– Materials used for this literature review is obtained from original Ayurvedic classics; Brihatrai and Laghutraisamhitas

along with relevant textbooks of Ayurveda and modern science of medicine. Literature reviewed from classics is analyzed scientifically with deep understanding of the concept putted inside the topic. The analyzed data with scientific contribution of different authors of expertise along with chronological progression of topic with further need to be done inside the study. **Results:**– Balagrahas are the infectious diseases which are caused by unhygienic conditions in the children. **Conclusion:**– Heal the atmosphere and the healed atmosphere will heal you....!!!

INTRODUCTION

Ayurveda amongs its eight branches, also explains a branch by name Graha Chikitsa.^[1] In this branch, various Grahas have been described and its attack lead to various personality and behavioral changes in the patient and ultimately, that patient starts behaving like the actual Graha. But the symptoms are more subjective; hence, it is better to be called as GrahaBadha.

Graharogas are the special topic which constitutes major part of Kaumarbhritya. In the mean

time, it is also the most neglected portion, may be due to excess mythological descriptions, difficulties in its clinical understanding, diagnosis and treatment.^[2]

This universe is combination of visible and invisible entities. Population of invisible entities is more than visible entities. So we are surrounded by invisible microorganisms, around us. Most of the organisms are nature friendly and doesn't cause disease. Fungus, Bacteria's and virus play a significant role in decaying unwanted materials to maintain homeostasis of the environment. Moving around and a continuous effort to invade the human and animal body is a basic tendency of microorganism or Grahas. But intact immune system supported by hygienic lifestyle, food, habits prevents their entry and protects humanbody.

This review study aimed to understand the Blagrahas- what exactly they are? And how the Graharogas are different from other disorders? Symptoms of Balagrahas in Kaumarbhritya are more objective and less subjective.

In Charaka Samhita there is no explanation regarding the balgraha is found. Of course the word explained in relation to Unmada and Apasmaram as Gandharv Raksha sangrah, where personality changes and behavioral changes are more marked are explained and dealt with psychological disturbances rather than physical changes.^[3] The attack of the Grahas episodic and person showing deviation from the abnormal behaviour and personality changes are highlighted that it has been considered as the main cause for such a Grahavesh by Charaka. These Grahas are completely different from Balagrahs explained in Kaumarbhritya. Kashyapasamhita gives more importance to Graharoga.

METHODOLOGY

Three types of infectious diseases are described in ayurveda

1. Janpadodwasnsarogas^[4]
2. Sankramakarogas(Contagiousdiseases)-jwarakusthanetrabhishandya^[5]
3. Graharogas^[6]

Etiology of balagraha- the main reason for grahavesh is failure to follow the principles of hygiene. Unhygienic conduct of mother, frightening of the child or where benedictory rites are not performed the child is attacked by Graha.^[7,8]

To understand the answers of the following questions this review study is designed

1. UnderstandingBalaGrahas: what actually Grahasare?

2. How BalaGraharogas are different from other disorders?
3. Why Grahas are pathological?
4. What are the treatment principles of BalaGraharoga?

Definition of balagraha

ग्रहरपि हि जायन्ते प्रछन्नैर्व्याधय शिशो । कर्मशस्तमस्तेषुः देवयुक्ताश्रयम् सदा ॥ अ.स. सुर/९८

One, which captures and seizes. Indicates the hidden disease. Both psychic and medical treatment is employed.^[9]

Morphology- Grahas are described as some invisible living organisms, seen by divine eyes only. They change their shape and size.^[10]

Habitat and properties- reside near cowsheds, water tank, roots of trees, abandoned houses. They are said to infect milk of the mother and vitiate.^[11] The word seizure (convulsion) has come up probably to indicate their nature of seize to human beings. Thus are described as some living beings with contagious property, residing in unclean places protected from sunlight and have ability to feed on blood and meat.

Mythological concept

पुरा गृहस्य रक्षार्थम् निर्मिता शूलपाणिना । अस

Produced from Shiva and Parvati; Purpose is to protect their son; Grahas are produced for protective purpose.^[12,13]

(Micro organism serves the function of Raksha to the body due to lifelong immunity acquired after infection).

Causes of graha attack

धात्री मात्रो प्राक्प्रदिष्टापचारात् शौचभ्रष्टात् मङ्गलाचारहीनान् ।

त्रस्तान् हृष्टान् तर्जितान् वा पूजाहेतोर्हिन्स्युरेते कुमारान् ॥

Improper and unhygienic behaviour of mother and dhatri; Not following sadavritta and swasthavritta; Fearful conditions for child; Disrespect to saints and teachers; Taking food in broken kasyapatra; Psychologically unwell child; Child carried lonely and inauspicious places.

Nature of graha

आविशन्तश्च लक्ष्यन्ते केवलम् शास्त्रचक्षुषा A.S.

एश्वर्यस्थास्ते न शक्या विशन्तो देहम् द्रष्टुम् मानुषेर्विश्वरूपा। आप्तम् वाक्यम् तत्समीक्ष्याभिधास्ये
लिंगानि एषाम यानि देहे भवन्ति॥

S. U.

Suksma sharer; Microscopic in nature; Attain different shapes; Seen only by divine eyes.

Etio- pathology

Agantuja in nature; No vitiation of Dosha initially; Enter the body just like Suryakirana enter in to earth. Affects the child with three aims-

1. Himsa
2. Rati
3. Archana^[14]

Prodromal features

तेषां ग्रहीष्यतां रुपं प्रततम् रोदनं ज्वरः A.S.

Prodromal features of Balagrahas are- Continuous crying and fever.^[15]

General symptoms

सामान्यम् रुपमत्रासजृम्भाभूक्षेपदीनताः फेनस्रावोर्ध्वं दृष्ट्योष्ठदन्तदंशप्रजागराः ॥

रोदनं कूजनं स्तन्यविद्वेष स्वरवेकृतम्म ॥ A.H.

Acute infection causes fever or some neurological symptoms ending into a seizure attack.

A child attacked by balgraha exhibits a symptom complex of behavioral, neurological, and gastro intestinal disorders, sometimes eruption over the skin.^[16,17]

Classification of Grahas according to different samhitas- Susruta- 9 graha^[18] (Ma. Ni. Bha.pr. Yo.R.^[19])

Table 1: Balagraha.

1. Skandha	2. SkandhaApsmara
3. Shakuni	4. Putana
5. Andhaputana	6. Sheetaputana
7. Mukhamandika	8. Naigamesh
9. Revati	

Vagbhata- 12 (Sha.)

Above 9+ Swagraha, Pitruagraha, Shuskarevati.

Kashyapa

Clearly mentions 10 in no.(Grahastudashakirtitaha)...sutrasthana.^[20]

Given prime importance to Revati and has given 20 synonyms (Kalpasthana) Also explained Vmanasadhya 4 and Virechanassadhya 5 in chikitsastana. **Hareeta**-Explains only Putanagraha and its 8 types.

Charaka has not mentioned Balagraha but explains Graha as innumerable in number.^[21]
(Unmadaapsmarachikitsa)

Prognosis^[22]

Attacking with intention of Himsa	Asadhya
Attacking with intention of Rati	Kasthasadhya
Attacking with intention of Archana	Sadhya

Treatment

1. Daiva Vyapasraya^[23]

- MantaPrayoga
- SwastiVachana
- Bali
- Homa/ Havana

2. Yuktivyapasraya^[24,25,26]

- Oushadhi dharana
- Snana
- Gritaprayoga
- Parisheka
- Lepa

- Dhoopana
- Avagaha

Skanda-Apsmara

संजानाशो मुहुः केशलुंचन कन्धरानतिः ।

विनम्य जृम्भमाणस्य शकृन्मूत्रप्रवर्तनम् ॥ फेनोद्वमनमूर्ध्वेक्षा हस्तपाद नर्तनम् ।

स्तनस्वजिह्वासन्दंश संरम्भज्वरजागरः ॥A. S.

निःसंज्ञो भवति पुनर्भवेत् ससंज्ञः संरब्धः करचरणेश्च नृत्यतीव । विण्मूत्रे सृजति जृम्भमाणः फेनश्च प्रसृजतितत्सखाभिपन्नः ॥ सु.उ.२७/९

Symptoms resemble to Grandmal epilepsy-

The irregular convulsive movements of face and limbs; recurrent attacks of unconsciousness; Tonic clonic spasm of muscles; Urine and stools passes during attack; Biting of tongue or nipple.^[27]

Skandagraha

तत्रैकनयनस्रावी शिरो विक्षिपते मुहुः ।

हतैकपक्ष स्तब्धांग सस्वेदो नतकन्धरः ॥

दन्तखादई स्तनद्वेषी त्र्यस्यन् रोदिति विस्वरः ।

वक्त्रवक्त्रो वमन लालां भृशमूर्ध्व निरिक्षते ॥

वसास्रगन्धिरुद्विग्नो बद्धमुष्टिशकृत् शिशुः ।

चलतैलाक्षिगण्डभ्रु संरक्तोभयलोचनः ॥

स्कन्दार्तस्तेन वैकल्यं मरणं वा भवेद् धृवम् ॥ अ.सं.उ.३/१५-१७

Understanding of skandagraha

Skanda graha resembles infection with polio virus as- Stiffness in the muscles of the body; Paralysis of the muscles of trunk and the extremities. Involvement of cranial nerves is seen in bulbar form of polio.

Polio infection either kills the child or leaves with disability. Facial palsy when there is

bulbar involvement or polio encephalitis.^[28]

Clinical features of poliomyelitis abortive polio- (No CNS involvement)

Fever, sore throat, nausea, vomiting, headache, un localized abdominal pain.

Non –Paralytic poliomyelitis (CNS involvement)

The symptoms are headache, nausea, vomiting, stiffness of neck, trunk, back and legs. (Aseptic meningitis)

Paralytic poliomyelitis- The symptoms are muscle pain, spasm, fever, rapid onset of flaccid paralysis.^[29]

Negamesh

आध्मान पाणिपादस्य स्पंदनं फेनर्वमिः ।

तृणमुष्टिबन्धातीसारस्वरदन्य विवर्णताः।

ओष्ठदंशांससंकोच स्तम्भबस्ताभगन्धता ॥

उर्ध्व निरिक्ष्य हसनं मध्ये विनमन ज्वर ।

मूर्च्छेकनेत्रशोफ च नैगमेष ग्रहाकृति । असं उ.३ १५-१७

The initial constitutional symptoms of fever, cough, recurrent vomiting, Excitability with stiffness of the body, especially of neck, some of the points designate Meshagraha as meningitis.^[30]

Clinical features of meningitis

Newborn - Refusal of feed, fever, decreased activity, shock, decreased tone, weak/absent of neonatal reflexes, stiffness of limbs, focal seizure, projectile vomiting.

Children - Fever, altered behavior, delirium, drowsiness, convulsion, neck stiffness.^[31]

Shwagraha

कम्पो हषितरोमत्वं स्वेदः च चक्षुर्निमीलनम्।

बहिरायामनं जिह्वादंशोऽन्त कण्ठकूजनम् ॥

धावनं विट्सगन्धत्वं क्रोशनं च श्वानवत् शुनि ॥

अ.सं.उ.३/१५-१७

Pharynx and larynx producing throaty cooing or sounds like a dog; Jaw muscles bites the tongue;

Spasm of different group of muscles can occur in tetanus. But the peculiar symptom that the child makes sounds like a dog, Swagraha closure to rabies.^[32]

Pitrugraha

रोमहर्षो मुहुत्रासः सहसा रोदनं ज्वरः ।

कासातिसार वमथु जृम्भा तृश्वग्निधताः ॥

अङ्गेष्वक्षेपशोष स्तम्भविवर्णताः।

मुष्टिबन्धः सुतिश्र्वाक्ष्णोर्बालस्य स्युः पितृग्रहे ॥ अ.सं.उ.३

The initial cough, fever, vomiting and loose motions, this type of infection is quite common in viral diarrhea, irritability, restlessness associated with dehydration and typical symptoms of electrolyte imbalance.^[33]

Pootana

पूतनायां वमिः कम्पस्तन्द्रा रात्रौ प्रजाग

हिध्माध्मानं शकृद्देद् पिपासा मूत्रनिग्रह ॥ स्रस्तहृष्टाङ्गरोमत्वं काकवत् पूतिगन्धिताः ॥ अ.सं.उ.३

The symptoms are vomiting; loose motions; Irritability; restlessness. It resembles to gastroenteritis with dehydration.^[34]

Revati

रेवत्यां श्यावनीलत्वं कर्णनासाक्षिमर्दनम् ।

कासहिध्माक्षिविक्षेप वक्त्र वक्त्रत्वरक्तताः ॥

बस्तगंधो ज्वरः शोषः पुरिषं हरितं द्रवम् ॥ अ.सं.उ.३

The symptoms presented in Revati that of Diarrhea with fever and cough. Viral diarrhea.^[35]

Shakooni

सस्ताङ् गत्वमतीसारो जिह्वातालुगले व्रणाः ।

स्फोटाः सदाहरुक् पाका सन्धिषु स्युः पुनः पुनः ॥

निश्यन्ति प्रविलीयन्ते पाको वक्त्रे गुदेऽपि वा ।

भयं शकुनिगन्धत्वं ज्वरः च शकुनिग्रहे ॥

The symptoms are redness of muco-cutaneous junctions, ulcers in throat and mouth and fever.

The painful crop develops, burning blisters mostly in joints, recurring daily.

The crops come out in the night and get melted away in the day. The common peculiar entero- virus infection is known as hand foot mouth disease having rashes over buttock, hand, foot, and inside mouth. Plague is also kind of sickness in which such skin lesions are seen. Crops of painful blisters recurring daily and leaving ulcerated areas with fever and loose motions are characteristics of pemphigus.^[36]

Different odors of graharoga

A typical smell from the body of graharogi is special finding of graharoga. Each graharoga emits different kinds of smell.

Usually bad odour from the body and urine is a common manifestation of inborn or acquired metabolic disorders. Extreme unhygienic conditions resulting a bad smell. Toxic metabolites impart different colours of the urine as evidenced in DM, Phenyl ketonuria, Maple syrupsyndrome.

Treatment principles of graharoga

Treatment of balgraha includes both Daiva and Yuktivyapashrayachikitsa. Principle followed in graharoga is almost anti-infective treatment.

Bath to a child

Bath is mentioned in all graharoga; Medicated lukewarm bathing water helps to remove bad smell and gives freshness to the patient. This also removes the contamination of the skin by accumulation of unhygienic substances. Bathing should be done with the drugs of kashaya rasa. Bathing with drugs produces aromatic smell. Drugs mentioned for bath are-

Bala, Nimba, Agnimantha, Paribhadra, Jambu, Shonak, Varun, Apamarga, Patol, Shigru, Kapitha and Karanja.

Use of grita

Pharmacologically, grita preparations help the chemical constituents to dissolve in lipid media and fascinating, its easy absorption. Grita is pitta anila hara and increase the rasa, shukra, varna, swara and oja. It is also grahadoshahara.

Dhoopana

This is very useful and effective method for prevention of graharoga.

Present day we use fogging methods for prevention of infection is of similar kind

Most of the dhoopanakalpas explained by Kashyapa are for graharoganashana. If we assume that grahas are microorganisms then its natural anti infective property together with sterilization benefits of dhoopana are justified.

Common drugs used for dhoopana-

Kushta, putikaranja, karpas, vacha, hingu, sarshapa, ajamoda, grita, guggula, bhallataka, laksha, haridra, tagara.

Benefits – living area, cloths, bed, personal belongings, cots and chairs can be fumigated to maintain aseptic measures.

Role of mantra chikitsa

Vedic mantras are considered as best music of those days.

The mantras; when chanted in the rhythmic way creates sound waves of different wavelengths and amplitudes which are able to modulate the electromagnetic wave patterns of the brain.

Belief and faith plays a vital role in attitude. Mantra and Swasti vachana creates a positive environment upon which Yuktivyapashraya (medicine) will work.

Role of music therapy in treatment is a new topic now a days.(in stress disorders, malignancies.

- Daivavyapashrya is Adravayabhutachikitsa which helps to correct disturbedmind.
- Every disorder is psycho-somatic disorder, it has clearly mentioned as manasa is

responsible for happiness and sorrow.

- Hence daivavyapasrayachikitsa should be employed by different methods to stabilize the mind.

DISCUSSION

By considering all the above facts, BalaGrahas are living entities with microscopic nature. Graha could be invisible living entity, which can pass through different phases in its growth and is pathological or antigenic to the body. This points towards understanding of microorganisms with respect to Graha. So, Graha can be microscopic microorganism like virus, bacteria, fungus, yeast, amoeba or larva of different worms which is invisible to naked eyes. Nature of Graha is that which can frequently change their size and shape. This is also witnessed in microorganisms like virus- bacteria's. Micro organism's causes generalized pathological changes in the body with multisystem involvement. The cause of disease according to Ayurveda is Adharma and it refers to faulty methods of living in terms of hygiene, food, regimen, lifestyle, conduct, thinking make human body more vulnerable to invasion to microorganisms. Balagraharogas are different to other disorders because of they are separate entity from other general disorders with respect to different etiological factors, symptoms and management. Certain undefined, uncommon factors are responsible for such disorders. Total manifestation of symptoms, complications, pathology is very fast and severe with difficulties in diagnosis and treatment. These all the elements are freely moving in universe and are invisible due to their microscopic nature. Grahas are produced for protective purpose; microorganism serve the function of Raksha in the form of developing lifelong immunity to the body acquired after infection. Grahas turns pathological due to human errors (pradnyaparadh), unhygienic lifestyle, food and regimen.^[37]

CONCLUSIONS

Graham rogas could be understood as

- Graharogas couldn't is exactly related to any disease.
- Actually it's not disease, these are syndromes.
- The concept of micro organism do well support to relating to all graha with viral etiology
- These are pediatric viruses primarily affecting children only and not to parents.
- Graharogas have extreme severity so they could be considered as acute viral infections.
- Grahas were being made to safeguard the kartikeya; it could be consider as once a child had an infection with a specific enterovirus, the child is typically immune to that

particularvirus.

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ROLE OF AYURVEDA IN THE MANAGEMENT OF DUSHTA VRANA: A CASE STUDY

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ABSTRACT

Ayurveda is not only a system of medicine in the conventional sense of curing disease. It is also a way of life that teaches us how to maintain and protect mental and physical health and achieve longevity.^[1] *Ayurveda* has many unique and important concepts are mentioned. In which in *Ashtanga Ayurveda*; *Shalya Chikitsa* is mentioned. Now a day's which is related with the Surgery in modern science.^[2] There are various unique concepts are described in the *Shalya Chikitsa* of *Ayurveda*. *Vrana* is one of the important concept described in *Ayurveda*. It can be correlated with the Wound or Ulcer in modern science. If *Vrana* is complicated or getting infected then it is converted into the *Dushta Vrana*. *Acharya Sushruta* stated that the treatment for *Dushta Vrana* is like *Prameha & Kushtha Chikitsa*.^[3]

KEYWORDS: *Vrana, Dushta Vrana, Ayurveda.*

INTRODUCTION

In *Ayurveda* the main aim is to maintain health of a healthy person and to cure a sick person and another is to get rid of diseased condition i.e. to cure a sick person and to prevent diseases, to keep a healthy person in healthy condition. *Shalya Tantra / Chikitsa* is important among the *Ashtanga Ayurveda*.

The outer layer of the skin having important value related to the cosmetic issues.

Breakdown in the protective function of the skin or disruption of the epithelium of the skin is

known as 'Wound'. Discontinuation of the skin and its underlying skin tissues is *Vrana*.

Unhealed and complicated *Vrana* is said to be *Dushta Vrana*. *Acharya Sushruta* described that the wound which is appear on the skin will be healed soon but wound which is appear on the other *Dhatu* except skin as *Mamsa* or *Sira* are difficult to treat.^[4] For the management of *Vrana* *Acharya Sushruta* mentioned the 60 treatment protocols for that.^[5]

CASE STUDY

A 60 year old male patient visited in OPD of *Shalya tantra* presenting with complaints of Wound at right calf muscle & itching, pus discharge, blackish discoloration of both the legs & itching at back region since from 5 – 6 months.

Name of patient: ABC, 60 year old, Male

Occupation: Worker

Chief complaints

1. Wound at right calf muscle & itching
2. Pus discharge
3. Blackish discoloration of both the legs
4. Itching at back region

Ashtavidha Pariksha

- | | |
|----------------------------------|------------------------------------|
| a. <i>Nadi</i> = 74 / min | e. <i>Shabda</i> = <i>Prakruta</i> |
| b. <i>Mala</i> = <i>Samyaka</i> | f. <i>Sparsha</i> = <i>Anushna</i> |
| c. <i>Mutra</i> = <i>Samyaka</i> | g. <i>Druka</i> = <i>Prakruta</i> |
| d. <i>Jivha</i> = <i>Sama</i> | h. <i>Akruti</i> = <i>Madhyam</i> |

General examination

PR – 74 / min

BP - 110/70 mm of Hg RS - AE= BE, Clear CVS – S₁ S₂ N

CNS - Conscious, Oriented P/A - Soft, No Tenderness

Past History

No history of any major illness No H/O – DM, HTN

Management

1. **Cleaning and dressing:** Cleaning is done by the help of Betadine ointment and Dressing was done.

2. *Shodhana Chikitsa*

Raktamokshana^[6]: *Jalaukavacharana* was done at the site of wound. In 2 settings of *Jalaukavacharana*, itching and blackish discoloration was reduced.

3. *Shamana Chikitsa*

<i>Kalpa</i>	<i>Matra</i>	<i>Kala</i>	<i>Anupana</i>
a) <i>Arogyavardhini Vati</i> ^[7]	250 mgm	<i>Adhobhakta</i> (2 times a day after food)	<i>Koshna jala</i>
<i>Sukshma Triphala Vati</i> ^[8]	250 mgm	<i>Adhobhakta</i> (2 times a day after food)	<i>Koshna jala</i>
c) <i>Khadirarishta</i> ^[9]	15 ml	<i>Adhobhakta</i> (3 times after meal)	-
d) <i>Mahamanjishthadi Kashaya</i> ^[10]	15 ml	<i>Adhobhakta</i> (3 times after meal)	-

Along with treatment proper *pathya* and *Apathya* had been followed by patient. In *Ahara*, *ghrita*, *taila*, *vasa*, *majja pan*, *godhum*, *masha*, *shashtika shali*, *patola*, *draksha*, etc, *vata shamak dravyas* are given. In *Vihara*, *Vyayam* is Important. Also some *apathyas* was advised that is *vata prakopaka ahara* such as *chanaka*, *vatana*, *mudga*, *jambu*, *shushka mansa*, *karvellaka* etc.

OBSERVATION

Effect of treatment on *Dushta Vrana* are as follows;

Symptoms	Before treatment	After treatment
1. Wound at calf muscle & Itching	Moderate	Mild
2. Pus discharge	++	No discharge
3. Blackish coloration of both legs	++	+
4. Itching at back region	Moderate	Mild

Gradation of Symptoms

+ = Mild, ++ = Moderate, +++ = Sever



DISCUSSION

In this study observations was done before and after treatment based on symptoms.

Raktamokshana - Jalaukavacharana: It is one of the important part of *Panchkarma*. *Jalaukavacharana* is useful in *Rakta dushti* or *Rakta pradoshaj Vikara*. It is highly effective in the treatment of Chronic non – healing ulcer or *Dushta Vrana*. In 2 settings of *Jalaukavacharana*; blackish discoloration, itching, etc was reduced.

Abhyantar Chikitsa

- ***Arogyavardhini Vati:*** It is commonly used drug formulations for the Skin diseases. It contains *Triphala, Shilajatu, Guggulu*, etc drugs.
- ***Sukshma Triphala Vati:*** It acts as a Anti-microbial, *Yogavahi & Sukshma Strotogami* in nature.
- ***Khadirarishta:*** It is a classical *Ayurvedic* polyherbal medicine which is used in various skin diseases. It is an excellent blood purifier. It helps to reduced the itching, discoloration of the skin. It is also beneficial in wounds / *Vrana*.
- ***Mahamanjishthadi Kashaya:*** It is mainly used in conditions and diseases related to the skin. It acts as Blood purifier, improves complexion.

CONCLUSION

In this case all symptoms like Wound at right calf muscle & itching, Pus discharge, Blackish discoloration of both the legs, itching at back region are markedly diminished in 1 month study. In conclusion *Raktamokshana (Jalaukavacharana)* and *Shamana chikitsa* are significantly effective in *Dushta Vrana*, followed by proper *Pathya & Apathya*.

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APPLICATION OF PANCHKARMA MODALITY IN SHALYA TANTRA

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ABSTRACT

Panchakarma is an essential therapy that inhabits all of Ayurveda's eight branches. Broad spectrum of its applicability applies to the field of ancient Indian surgery (*Shalya Tantra*). Abundant acute and chronic surgical situation such as *Vrana* (wound), *Bhagna* (musculoskeletal injuries), *Arsha* (hemorrhoids), *Bhagandara* (fistula in ano), *Arbuda* (tumours), *Shalipada* (filariasis), *Shopha* (swellings), and *Vidradhi* (abscess), etc. need treatment of *Panchakarma* purification therapies consisting of *Vamana* (therapeutic vomiting or emesis), *Virechana* (therapeutic purgation), *Basti* (therapeutic enema), *Nasya* (nose / errheal therapy removal of toxins) and *Raktamokshana Karma* (Bloodletting therapy). An forceful explanation of *Panchakarma* is

obtainable in the classical texts of Ayurveda, with special significance in the management of different surgical pathologies. In this article, an attempt was made to discuss *Panchakarma's* functional concepts in the surgical condition.

KEYWORDS: *Panchakarma*, *Shalya Tantra*, Surgery, Bio-purification, management.

INTRODUCTION

In Ayurveda, it belongs to the specialty of *Kayachikitsa* (Ayurvedic Medicine Discipline). This consists of five particularly devised techniques for interior skin purification via the shortest available paths. *Vamana*, *Virechana*, *Basti*, *Nasya*, and *Raktamokshana Karma* are examples of these therapies.^[1] *Raktamokshana Karma* is inextricably linked to *Shalya Tantra* practise. Surgical instruments such as *Yantra*, *Shastra*, and *Anushastra* are used to perform

the procedure.^[2] These five therapies were identified by Acharya *Charaka* with one exception: instead of *Raktamokshana Karma*, two types of therapeutic enemas (*Niruha basti* and *Anuvasna basti*) were included. *Panchakarma* involves replenishment, degradation, and rejuvenation therapies in addition to bio-purification.^[3] It has a wide range of uses and occupies a special place in the *Shalya Tantra*. *Panchakarma* techniques have been mentioned in multiple texts as a supplemental strategy to surgical intervention.

Effect of *Panchakarma* therapy

Panchakarma is one of the eight branches of Ayurveda. *Panchakarma* surgeries are required due to a series of *Shalya Tantra*-related ailments. *Panchakarma* is an important and adaptable concept in *Shalya Tantra*. Acharya *Sushruta*'s core therapeutic concept is to provide shortage, lessen excessive levels, and maintain *Dosha* equilibrium (Bio-humors- *Vata*, *Pitta*, and *Kapha*).^[4] It becomes more difficult to handle a problem conservatively when it becomes recurring. Advanced illness states frequently necessitate surgery. Gross vitiation of channels (*Srotodushti*), a lack of digestive fire (*Agnimandya*), insufficient tissue nutrition, and decreased immunity (*Ojokshaya*) are all causes of chronic diseases, all of which demand body cleaning. The practise of *Panchakarma* achieves not only the purification goal, but also the facilitation of the intended pharmacokinetic effect of provided therapeutic treatments. It cleans macro and micro Channels, improves nutrition, drug absorption, and metabolism, and helps to minimize dosage and toxicity by removing toxins, stagnant feces, and metabolites from the body.^[5] *Panchakarma* is effective on multiple levels. There are also psychological, somatic, and neuro-endocrine factors to take into account. According to Acharya *Sushruta*, effective use of *Shodhana*, *Shamana*, *Ahara*, and *Achara* can be used to prevent and heal diseases.^[6] There is no recurrence of ailments by adopting *Panchakarma*'s bio-purification methods. *Panchakarma* is claimed to be aggressive therapies, similar to surgical operations, that attack ailments at their source.

Role of *Panchakarma* in *Shalya Tantra*

Acharya *Sushruta* that simulate with the three fold division of *Panchakarma* procedures namely *Poorva Karma*, *Pradhana Karma* and *Pashchata Karma*. Acharya *Dalhan* describes the main pre-operative measures as *Langhana* to *Virechana karma*, which include important *Panchakarma* procedures like *Snehana*, *Svedana*, *Visravana*, *Vamana*, and *Virechana*.^[7] The extraction of different foreign substances from the body is intended in *Shalya tantra*. In *Shalya Tantra*, there is not only the foreign bodies, but all those that cause painful disorders,

such as excessive Accumulation of *mala* and *dosha* (*Vata*, *Pitta*, *Kapha*).^[8] All the way through widespread vitiation and accumulation of *doshas* and *mala*, there is a direct indication of the pathologies of surgical concern for purification procedures. Because of its significance in the management of surgical pathologies, Acharya Sushruta has residential *Panchkarma* measures in *Chikitsa Sthana* as well as preparations, complications and management.^[9]

Surgical Conditions Requiring *Panchakarma* Procedures

Bhagandara (Fistula in Ano)

There have been reports of a numeral of *Swedana karma* and *Virechana karma* to help gets relieve of the vitiated *dosha*. Specifically, mild laxatives like Triphala Churna followed by strong laxatives like Panchasakar Churna were advised to be administered in *Parisravi Bhagandra*.^[10]

Arsha Chikitsa (Hemorrhoids)

Acharya Gayadasa finds *Arsha* to be one of Shalya Tantra's core pathologies.^[11] *Arsha's Nidana-samprapti* includes *Manda-agni* and *Mala-Upchaya*.^[12] *Panchakarma's* bio-purificatory measures are absolute indicators of its effective management. *Snehan*, *swedana*, *virechana*, *anuvasana* and *asthapana basti karma* are suggested in the sense of *Vataja Arsha*. *Virechana karma* was also mentioned as one of the main methods of treatment in *Pittaja Arsha*.^[13]

Parikartika (Anal Fissures)

In *Parikartika*, management with *Pichha basti* and *Anuvasana basti* are indicated. These specially designed medicated enemas 'local soothing, demulcent and healing properties are effective in relieving the condition.^[14]

Ashmari Chikitsa (Urinary Calculus)

The main *Panchakarma* procedures are post-operative *svedana karma*, *uttar basti*, *Asthapana* and *Anuvasna Basti karma*.^[15] These treatments help to prevent and alleviate complications and post-operative discomfort.

Prameha Pidaka (Diabetic Boils)

In addition to surgical intervention, treatment with *Vamana*, *Virechana* and *Sira vedha* was prescribed. Patients with *Madhumeha* are difficult to detox as their body is pervaded

with *medas*. Therefore, it has been recommended for strong purgatives.^[16]

Vidradhi (Abscess)

In addition to the surgical interventions like incision and drainage, *Panchakarma* procedures are also beneficial. The *Shodhana* procedures like *Vamana* and *Virechana* exert curative effects. *Panchakarma* therapies were prescribed by Acharya Sushruta according to the stage and *dosha* involvement.^[17]

Apachi (Scrofula), Granthi, Arbuda (Tumours)

Ghritapana, *Taila pana*, *svedana karma* along with the core procedures of *Panchakarma* form the general management of all these conditions.^[18]

Medicated ghee should be offered to the patient in advanced scrofula in order to remove impurities from both ways. *Shirovirechana karma* was also included in the treatment line.^[19]

Yakridodara (Enlargement of Liver) and Pleehodara (Splenomegaly)

Regarding *Snehana* and *Svedana karma*, *Siravedha karma* was suggested. The seat of *Rakta-vaha srotas* is both *Yakrit* and *Pleeha Rakta's* vitiation is directly corrected by bloodletting. Acharya Sushruta has suggested *vridhhi / Bradhna Raktamokshana karma* by *Siravedha*, although its consequences remain undetermined.^[20] Similarly, in the context of *Bradhna*, *Virechana* and *Niruha Basti* have been described as the main treatment modalities.^[21]

Udara Roga (Abdominal Enlargements)

All forms of *Udara roga* require frequent purgation, having origins in aggravated *Vata* and accumulation of *Mala*. Medicated enemas administration is especially helpful in getting rid of the body's waste /toxic deposits.^[22]

Vrana (Wounds)

Proper wound healing is the result of a successful surgical procedure. *Shalya Tantra's* most vital part of training is *Vrana Chikitsa*. Etiological classification of *vrana* constitutes *Nija/Shareera Vrana* (intrinsic wounds caused by vitiation of *dosha*) or *Agantuja vrana*.^[23] *Panchakarma* procedures have a significant place in the management of these types of wounds. Owing to *Rakta kshyaya* in case of *Chinna*, *Bhinna*, *Vidhha* and *Kshata* wounds, *vata dosha* gets aggravated resulting in severe pain. To alleviate vitiation of *vata dosha*,

Sneha-pana, *Snigdha upnahana*, *Sneha basti* are specifically indicated.^[24] All *Panchakarma* procedures have been included as described by Acharya Sushruta under ‘shashti upakrama’ of wound management.^[25] Specifically, the indications for individual procedures include.

1. Snehana Karma

Intake of *Sneha* treated with drugs has been suggested in patients with complications due to wound that are rough, emaciated and consumptive.^[26] In all these circumstances, there is a severe aggravation of *Vata dosha*, which is easily pacified by *Snehana karma*.

2. Svedana Karma

Inflammatory swellings that are painful, harsh and hard, and in similar wound types, local application of various types of fomentations has been indicated.^[27] *Svedana* exerts a local anodyne effect.

3. Vaman Karma

In the case of wounds with inflammation together with granulation tissue and vitiated dark blood, therapeutic emesis is especially useful in that caused by *Kapha*.^[28] It is the best remedy to relieve vitiated *Kapha dosha*.

4. Virechana Karma

Wound management experts recommend therapeutic purgation in *pitta vata* related condition, and the wound that are chronic in duration.^[29]

5. Basti Karma

In the case of rough, severely vitiated wound in the lower part of the body, enema is indicated.^[30] *Basti karma* has been rendered as the best treatment for vitiation of *vata dosha*. *Uttar Basti Karma*: especially in urine retention, urine and semen disorders, calculus-related wounds and menstrual disorders, *Uttarbasti* administration is helpful.^[31]

6. Shiro-virechana Karma

Experts need to treat *Shiro-virechana karma* with wounds and inflammatory swellings found in the supraclavicular zone.^[32]

7. Raktamokshana Karma

Raktamokshana karma can be effective in relieving pain and avoiding suppuration in acute inflammatory swellings. With swelling, stiffness, dark-red discoloration, pain and uneven

surfaces, it is especially indicated in the wounds. In poisoned wounds, leeches and scarification were prescribed for bloodletting.^[33]

While describing wound management, Acharya Charaka has explained that evacuation with *Vamana*, *Virechana*, *Shastra karma* and *Basti karma* are the main treatment methods that should be adopted; As the wounds tend to be pacified quickly in patients without toxic in body.^[34]

Shopha

Teekshana Vamana, *Virechana*, *Asthapana basti*, *Snehana*, *Svedana*, *Upnahana* and regular *Sira-vedha* are the major signs according to the degree of vitiation of *Doshas*.^[35]

Bhagna

Asthi is said to be one of *Vata dosha's* central seats. Traumatic condition leads to *vata* disturbance.^[36] As an important adjuvant therapy, the *Panchkarma* procedures have a good role to play. Mainly the Practice of *Nasya karma* in fractures and dislocations affecting the sections above the head, *Anuvasna Basti* in *prashakha bhagna*, *Basti karma* in the management of *kati bhagna*, *Svedana* and *Nasya karma* in *Hanu* dislocation may be helpful.^[37]

DISCUSSION

Emergency management is an integral part of the surgical discipline. Acharya Sushruta has suggested *Siravyadha's* treatment to relieve acute conditions. It has been said that *Sira vyadha's Raktamokshana* karma contributes as half of total surgical procedures. It has also been rendered as the last measure to be taken when there is no relief from all other measures.^[38] *Rakta-basti* karma has been identified as an effective means of replenishment in the management of excessive blood loss.^[39] *Vaman karma* and *shirovirechana* karma help to remove the accumulated toxins in the management of *Dhoomapana*.^[40] There was a primary suggestion for *Shirovirechana* karma to handle the condition of '*Bahu-rajju-lata pasha kantha peedana*'.^[41] *Panchkarma* treatment, mainly *vamana* and *virechana* karma, has been described as the treatment of diseases caused by the intake of incompatible food.^[42] The logical management method involves *Panchakarma* procedures even in cases of poisoning.^[43] Acharya Charaka has recommended venepuncture in *Dushi visha* or blood poisons along with all five *Panchakarma* evacuation steps.^[44]

CONCLUSION

Panchakarma has an international recognition in preserving, maintaining and preserving health, along with promoting longevity, as a major, supportive or preparatory therapy. *Panchakarma's* procedures can play an incredible role in the field of *Shalya tantra*. Successful management of many surgical conditions requires *Panchakarma* adjuvant therapies. The need of the topic, is that research has to be conducted to standardization and scientific validation of the effectiveness of these above discussed procedures, along with necessary modifications. Evidence based practice along with the mode of action and target validation should be proved, in order to speak for Ayurvedic concepts and to become much more stronger in front of other branch of medical science. To conclude by adopting this modality, *Shalya tantra* practice will certainly benefit the prognosis.

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CONCEPT OF SATMYA ASATMYA IN AYURVEDA

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ABSTRACT

Ayurveda is the unique system of medicine which considers prevention of diseases and cure of disease. Its holistic approach provides the positive health. It is not only concentrated on the treatment of diseases but has laid proper emphasis on the care of diseased one also. Satmya asatmya is an unique concept in Ayurved. 'Satmya' means certain factors which can easily assimilate in the human body without causing any harm or difficulty. It offer pleasure to the body and help the development process. It is because the strong, moderate or mild medicines are advised according to the superior, medium and inferior strength of the patient as well as disease respectively. Satmya is one of the important considerable issues during application of medicine or diet. One of the significant causes behind different preparations of medicines and diet is Satmya. Diet or medicine which is not Satmya to a person should not be given reason being the substance which is not Satmya (suitable or accustomed) to one's body may cause Asatmyaja-rogas (allergic diseases) to him. Satmya is that which being used constantly has wholesome effects. Ayurveda texts clearly defines that certain diet and its combinations, which interrupts with the metabolism of tissue, which inhibits the process of formation of tissues anas Viruddha Anna or incompatible diet. A physician has to advise the diet or medicine considering all the Satmyas for the rational use. This paper is an attempt to understand the concept of Satmya, Asatmya and its use in clinical practice.

KEYWORDS: Satmya, Asatmya, Wholesome, Unwholesome, Incompatible, Viruddha.

INTRODUCTION

Ayurveda remains one of the most ancient and yet living tradition practiced widely in India and has a sound philosophical and experimental basis.^[1,2] Atharva Veda around 1200 BC, Charak samhita around (1000 - 500 BC) and sushrut Samhita^[3] are main classics that give detail description of over 700 herbs. A scholarly description of the Legacy of charaka in contemporary idiom, best attempted with a commentary from Modern medicine and science viewpoint give some glimpses of ancient wisdom.^[4] Ayurveda advocates to examine the Prakriti (constitution), Vikriti (morbidity), Sar (constitution of the dhatus), Samhanan (compactness), Praman (measurement), Satmya (suitability), Sattwa (psyche), Ahar-shakti (power of intake and digestion of food), Vyayam-shakti (power of exercise) and Vaya (age) of the patient.^[5]

LITERARY REVIEW

The Concept of Satmya: 'Satmya' means certain factors which can easily assimilate in the human body without causing any harm or difficulty. It offer pleasure to the body and help the development process. Some of them are made habitual to the body by constant use they are known to be 'Oak Satmya'. Satmya is of three types, viz.

superior (pravar), inferior (awar) and medicore (Madhya). According to another mode of classification, it is of seven types, depending upon the administration of individual rasas or tastes (six types) and the use of rasas or tastes jointly (seventh type). Use of all the rasas is of the superior type of satmya, use of only one rasas is of an inferior type and in between the superior and inferior type is the medicore type of satmya.^[6] A person having Pravara-Satmya is easier to treat than Avara-Satmya because in Avara-Satmya persons; physician has limited options to prescribe the diets and medicines. All the above mentioned types of Satmya come under okasatmya. The term 'Okasatmya' has been used in the sense of 'Abhyas-Satmya' (suitability due to regular use).^[7]

According to Acharya Sushruta^[8], satmya means the things or regimen which do not cause harm to the body even though they are opposite or different to one's own prakriti, season, diseases physical activities etc. It is used as a synonym of the term 'upashaya'. A physician has to advise the diet or medicine considering all the Satmyas for the rational use. Out of all the Satmyas, Okasatmya is that which is suitable to the person because of regular use either it is diet or regimen. It may be sometime

wholesome entity while sometime unwholesome also. The knowers of satmya defines diet and behaviour opposite to qualities of place (desha) and disorder as satmya for that place and for that disease.^[9] According to Acharya Charak, satmya^[10] is divided into three types, viz. superior(pravar), inferior (avar) and moderate (madhyam). According to another mode of classification, it is of seven types, depending upon the administration of six rasas (six types of tastes) individually and use of all six rasas collectively (seventh type). Use of all the six rasas in diet is of the superior type of Satmya (Pravara-Satmya); use of only one rasa in diet is of an inferior type (Avara- Satmya) and in between the superior and the inferior types is the moderate type of Satmya. Person having all six rasa satmya, ghee, milk and tail(oil) satmya, mamsa-rasa satmya are considered as balwan (having better strength and immunity) can tolerate exertion and have longer life span. Person having only single rasa satmya or ruksha (dry) substances satmya, are generally weak or having less bala, less tolerance to exertion and less life span.^[11] A person having Pravara-Satmya is easier to treat than Avara- Satmya because in Avara Satmya persons, physician has limited options to prescribe medicines and advice diet. All these types of Satmya come under okasatmya. The term 'Okasatmya' has been used in the sense of 'Abhyas-Satmya' (suitability due to regular use). Acharya Charak has described bala enhancing factors and satmya sampat is one of the important bala enhancing factors.^[12]

Concept of Asatmya: A substance which is not conducive to the body is regarded as asatmya or unwholesome and which becomes responsible to provoke all the doshas.

The substance which is not Satmya (suitable or accustomed) to one's body may cause *Asatmyaja-roga* (allergic diseases) to him. *Asatmya* or *Anupashaya* is opposite to the *Satmya*.

According to Ayurveda, the different ways and means by which a substance becomes unwholesome or allergen to an individual is explained under the concept of *Viruddha*, *Asatmya*.

Viruddha Ahar (The unwholesome dietetics): The food articles which derange body tissues in their own state have been stated as *Ahitkar* or unwholesome. They are basically in juxtaposition to *dhatu*.^[13] *Viruddhahara* is said to be the cause of many systemic disorders as per Ayurveda literature. Persons who consume *Viruddha Ahar* are prone to many disorders. It is very important to correlate the mechanism as to how *Viruddha Ahar* is a leading cause of many metabolic disorders. It is also essential to know how some of the food combinations interact with each other and create a disease. *Viruddha Ahar* is clearly defined by Charaka.^[14] Ayurveda literature has described various types of *Viruddha Ahar*^[15] which can be summarized as follows.

Desha (place) *Viruddha*; *Kala* *Viruddha*; *Agni* *Viruddha*; *Matra* (quantity) *Viruddha*; *Satmya* (wholesome) *Viruddha*; *Dosha* *Viruddha*; *Sanskar* (mode of preparation) *Viruddha*; *Veerya* (potency) *Viruddha*; *Koshtha* *Viruddha*; *Avastha* (state of health) *Viruddha*; *Kram* (sequence) *Viruddha*; *Parihar* *Viruddha*; *Upachar* (treatment) *Viruddha*; *Paak* (cooking) *Viruddha*; *Samyoga* (combination) *Viruddha*; *Hriday* *Viruddha*; *Sampad* (richness of quality) *Viruddha*; *Vidhi* (rules for eating) *Viruddha*.

Satmya and asatmya can be classified into eight types, first one is *desha*. It is again divided into two parts *bhumi* and *atur*. *Bhumi* and *atur* are categorized into *samudaya* (whole).

Loss and destruction of all seven *dhatu*s due to intake of poison, this is because *visha* qualities are opposite nature of *dhatu* and *eka deshaja* (a part of body or *dhatu*) Intake of *kshar* leads to destruction of *shukra dhatu* and loss of strength. Second is *jati asatmya* like *gomamsa* and *manushya*. Third is *ritu asatmya* ejection of diet against season (*ritu*) is known as *rituviparita*. Fourth one is *roga asatmya* in which *apathya* are not taken in diseased conditions. Curd taken in *Shotha* is *roga asatmya*. Fifth one is *Vyayama asatmya*. In such conditions, excessive exercise is performed by weak persons. Sixth one is *Udaka asatmya*. In this reference, water of different places is unpalatable. Seventh is *divaswapna asatmya*. Day time sleeping is prohibited in some diseases. In *shvasa* and *timira*, sleeping is *asatmya*.

Eighth is *Rasa asatmya*. *Amla rasa* in *Amlapitta* is contraindicated if person using *amla rasa* enhances *amlapita*.

Diseases due to Viruddha Ahara:- As per Acharya Charaka, *Viruddha Ahar* is responsible for the cause of many diseases. Whole number of diseases occurs as a result of *Viruddha Ahar* viz. infertility, *Bhagandara* (fistula), *Moorchha* (fainting), *Pandu* (anaemia), *Amavisha* (acid eructation), *Grahani roga* (malabsorption syndrome), *Jvara* (fever), *Santana dosha* (genetic disturbances) and even *Mrityu* (death).^[16]

AIM AND OBJECTIVES

AIM: To Study concept of *Satmya* and *Asatmya* in Ayurveda.

OBJECTIVES

- 1) To study *Satmya* and *Asatmya* in detail according to Charak, Sushrut and Vagbhat.
- 2) To study types of *Satmya* and *Asatmya*.
- 3) To study *Pravar*, *Mahyam* and *Avar* *Satmya*.
- 4) To study *Asatmya* and *Viruddha Ahar*.
- 5) To study importance of *Satmya* and *Asatmya* related to Allergy.
- 6) To study *Asatmya ahar* and Food poisoning.
- 7) To study *Asatmya Vihar* and contact poisoning.

MATERIAL AND METHODS

On the basis of Ayurved granthas like Charak Samhita, Sushrut, Vagbhata, Astang Sangraha who described About Satmya and Asatmya it's types, and importance in preserving Swasthya, preventing diseases and treating diseases. The detailed content and references are analysed from available texts.

METHODS: Descriptive and conceptual study.

DISCUSSION

In our Ayurvedic classics there are so many terms which are related to viruddhahara i.e. mithya ahara, adhyashana, vishmashana atyashana these are the terminologies comes under viruddha ahara some acharyas like Charaka has enlisted eighteen type of viruddhahara, while Sushruta has enumerated four types, are some special viruddha as causative factor for particular diseases. Considering "Prevention is better than cure", our responsibility should be more toward prevention of these toxicities in community.

Satmya (suitability) is that substances, which by regular use become suitable or accustomed to body. Making food substances or regimen or physical activities satmya by regular use is called as okasatmya. Okasatmya vary from person to person. It may be for wholesome things or for harmful substances. Physician should examine whether his patient has the Okasatmya of wholesome or unwholesome (Asatmya) things and accordingly manage.

The area and scope of the concept of Satmya is very wide and essential to be considered in clinical practices. Physician must consider all types of Satmya in all the patients because if he consider only the Amaya-Satmya and Dosha-Satmya and ignores the Prakriti-Satmya, Ritu-Satmya, Okasatmya, Vaya-Satmya and Desha-Satmya, definite success will not be assured. One procedure suitable according to Dosha or Vyadhi-Satmya may not be equally applicable in all the age groups, climate and seasons. Here is the need of personalized medicine about which everybody talks and Ayurveda has already discussed and emphasized that treatment vary from person to person.

CONCLUSION

Various factors are described in Ayurveda to improve bala. Satmya-sampat is one of the important factors among it. Satmya (suitability) is that which by regular use becomes suitable or accustomed to body and sampat means richness.

Satmya-sampat means richness of satmya that is suitability to various food types and regimen. One substance which is Satmya to a person may be asatmya to another and vice versa, as the physical and mental constitution, likings of all the persons are not same.

Ayurveda conceives the idea of allergy and intolerance (*asatmya*) is caused by a variety of unwanted

endogenous and exogenous materials and way of life. Concept of *Virudhahar* or unwholesome diet in relation to allergy is very relevant in the present context. *Asatmya* is due to intermixing of disproportionate diet causing long-term toxic effect on body.

One substance which is Satmya to a person may be Asatmya to another and vice versa as the physical and mental constitution, likings and suitability of all the persons are not same. For example, Dugdha (milk) is stated to be the best among Jivaniya-Dravyas (Vitality providing substances) and Satmya to most of the persons but may not suit to some persons ie. Allergic to milk.

Physicians have to consider the Desha (habitat), Prakriti (physical constitution of the body), Kala (time or season), Vaya (age), Okasatmya (acquired suitability), Dosha (Vata, Pitta and Kapha dosha) and Amaya (disease) of the person and then should advise the treatment which will be fruitful.

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**AYURVEDIC MANAGEMENT OF ISCHEMIC HEART DISEASE – A
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Ischemic heart disease is nothing but inadequate supply of blood and oxygen to the myocardium and heart muscles. The most common cause of the IHD is atherosclerosis disease. Atherosclerotic plaque stuck between the arteries like LAD, LMCA, RCA, Circumflex artery and posterior artery etc which causes angina pain, arrhythmia, dyspnea, palpitation and chest tightness etc. other causes include obesity, heart failure, aortic stenosis, severe anemia, hypertension, hyperlipidemia, diabetes mellitus, smoking, renal disease and hereditary. Various modern medicine has been use in the heart disease still patients are suffering with recurrent episode of angina and myocardial infarction. Various panchakarma and drugs have been proved useful for this manifestation. We present case as, which treated the pt. with the combination of antiplatelets drugs as well as ayurvedic drug. In this

case we succeeded to reduce anginal pain and dyspnea. The pt. was considered suffering from ischemic heart disease.^[1]

KEYWORDS:– Ischemic Heart Disease, Hrudrog, Electrocardiogram.**INTRODUCTION**

Ischemic heart disease is classified along with the hrudrog disease. Hrudrog further divided into the vataj, pittaj, kaphaj, sannipayaj and krumij hrudrog. Heart is one of the vital organ which provides oxygenated blood to whole blood. Although heart needs oxygenated blood for itself. Also heart consider as the Rasvah strotas and pranvah strotas mulsthan. Hence it supplies oxygen as well as nourishment.^[2]

In 2015 IHD affected 110 million people and resulted in 8.9 million deaths. It makes 15.6% of all deaths, making it the most common cause of death globally.^[3]

It typically affect the 40 to 75 years. Around % Indians are affected by the IHD. Early diagnosis is the key to successful management. Antiplatelet drugs, antilipidemic drugs use to treat/manage heart this. Still pt. suffering with severe chest pain and recurrent myocardial infarction attack. However, this treatment has limited benefit. While, various panchakarma and ayurvedic drugs have been proved beneficial in the management of IHD.^[4]

CASE STUDY

A 45 Yr old male pt. non alcoholic but chronic smoker with known case of hypertension since last 7 yrs and IHD since last 2 yrs Consulted in out patient department with the complaints of heaviness in the chest, often chest pain and dyspnea on exertion.

Clinical findings

The pt. had several episode of chest pain, uneasiness, chest tightness and dyspnea on exertion. On examination pt. found anxious with disturbed sleep, moderate appetite, body numbness, soft abdomen and normal urine output. His tongue was clear, pt has kapha pitta prakruti.

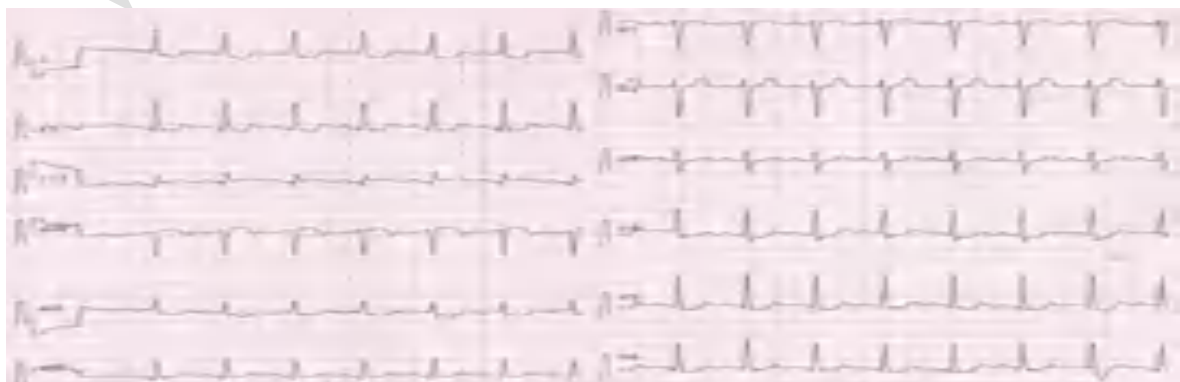
Past history

The pt. has HTN since 7 yrs. Was taken tab. Amlodipine 5mg and he had IHD since last 2 yrs was on tab. Ecosprin 75mg and tab. Xtor 10mg.

Chronic smoker and non alcoholic.

Investigations

ECG shows-



1. Aslanger pattern is representative of acute inferior OMI in the setting of multi vessels disease.
2. The st vector of subendocardial ischemia directs towards aVR, reflecting st depression in v4-v6 and 2nd lead.
3. The st vector of inferior infarction direct towards 2nd, 3rd and Avf,
4. The resultant average st vector directs rightwards, producing ST elevation in lead 3 and aVR, only.

Treatment

The detain of treatment protocol as follows,

1. Haritakyadi ghrit –10 ML– BD.
2. Drakshadi ghrit – 10ml- BD.
3. Katfaladi kashay- 20ml- BD
4. Jesthamadh and kutaki kalk with luke warm water-BD
5. Tab. Ecosprin 75mg- HS
6. Tab. Xtor 10mg – HS
7. Tab. Amlodipine 5mg- OD

This treatment given for 45 days.

Observation

In the treatment period, the patient had not taken anything except these medicines. Assessment criteria were based on the cardiac symptoms as follows-

Symptoms	Before	After
Chest pain	+++	+
Chest discomfort	+++	+
Chest tightness	+++	+
DOE	+++	+

DISCUSSION

Consequently treatment was planned first to remove the ras dushti and doshsang from hrudaya.

CONCLUSION

The ayurvedic diagnosis of “hrudrog” is made for “ischemic heart disease “in present case. Various ayurvedic internal medicines have provided promising result especially in reducing

the pain, decreasing severity of heart disease and improving quality of life within short time and without causing adverse effect in present case.

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CONCEPTUAL STUDY OF *TAMAKA SHWASA* IN *AYURVEDA* W.S.R. TO BRONCHIAL ASTHMA

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ABSTRACT

Ayurveda is the science of life; which mentioned various principles for prevention and treatment of the disease.^[1] *Shwasa* is one of the important disease in *Ayurveda*. In *Ayurveda Shwasa Vyadhi* is divided into 5 types in which the *Tamaka Shwasa* is commonly found.^[2] In modern science it can be correlated with the disease Bronchial asthma. It is the respiratory disease characterized by difficulty in breathing with wheezing. It is due to bronchiolar construction, caused by spastic contraction of smooth muscles in bronchioles, leading to obstruction of air passage.^[3] Various causative factors are mentioned for *Tamaka Shwasa* like *Aaharaj*, *Viharaj*, *Manasika* & *Nidanarthakara Roga / Vyadhi*, etc. According to *Ayurveda*, *Shwasa vyadhi* is formed due to the vitiation of *Vata* and *Kapha doshas* in the body.^[4] In *Tamakshwasa Nidana panchaka* has important role while doing treatment.

Nidanapanchaka plays important role in diagnosis of *Tamakshwasa Vyadhi*. *Snehana*, *Swedana*, *Shodhana* and *Shamana Chikitsa* is indicated in the management of *Tamaka Shwasa*.

KEYWORDS: *Tamaka shwasa*, Bronchial Asthma, *Ayurveda*.

INTRODUCTION

Tamaka shwasa is one of the important and commonly found disease in today's era. It is seasonal disorder. Obstruction to the *Vayu* is called '*Shwasa*'. It can be correlated with Bronchial Asthma in modern science. It is the respiratory disease characterized by difficulty

in breathing with wheezing. It is due to bronchiolar constriction, caused by spastic contraction of smooth muscles in bronchioles, leading to obstruction of air passage. According to *Ayurveda*, *Shwasa vyadhi* is formed due to the vitiation of *Vata* and *Kapha doshas* in the body.^[4]

Due to excessive consumption of *Kapha* aggravating *Aahara – Vihara*, *Kapha dosha* along with the *Vata dosha* goes to *Pittasthana* and develops *Shwasa* disease.^[5]

Hetu (Etiological factors) of Tamaka Shwasa^[6]

In *Ayurveda* the causative factors for the development of *Tamaka Shwasa* is described as follows.

Aaharaja Hetu	Viharaja Hetu	Manasika Hetu	Nidanarthakara Roga
<ul style="list-style-type: none"> ▪ Excessive consumption of cold water ▪ Consumption of dry, cold, heavy, irregular food ▪ Consumption of <i>Tila taila</i>, <i>Nishpava</i>, <i>Masha</i>, <i>Pinyaka</i> ▪ Meat of the aquatic and marshy animals & birds ▪ Consumption of <i>Abhishyandi Aahara</i> 	<ul style="list-style-type: none"> ▪ Exposure to cold climate ▪ Suppression of natural urges ▪ Excessive exercise, sexual activity ▪ Trauma to the Throat, Chest region, etc. ▪ Trauma over <i>Marma</i> region 	<ul style="list-style-type: none"> ▪ Stress ▪ Anxiety 	<ul style="list-style-type: none"> ▪ <i>Atisara</i> ▪ <i>Jwara</i> ▪ <i>Chardi</i> ▪ <i>Kshatakshya</i> ▪ <i>Pandu</i> ▪ <i>Visuchika</i> ▪ <i>Udavarta</i> ▪ <i>Visha</i> (poisoning)

Precipitating Factors

The factors which aggravates the symptoms of *Tamaka Shwasa* (Bronchial Asthma) in patient, which are.

- Inhalation of Allergens: Dust, pollen, mites, etc.
- Environment: Cigarette smoking, Cooking gas fumes, Cold & dry climate, paints, etc.
- Infections: Viral infections, Upper respiratory tract infections.
- Common occupation associated with Asthma: Veterinary medicines & animals handling, bakery, laundry work.
- Drugs: NSAIDS, Aspirine, Beta blockers, etc.
- Psychological factors like Stress, Anxiety.

Types

Tamaka Shwasa is of two types^[7]

- *Pratamka Shwasa* – it is associated with Fever, Distention in abdomen, Fainting.

- *Samtamaka Shwasa* – it is formed due to the Indigestion, Dust and suppressing the natural urges.

Poorvaroopa (Prodromal factors)^[8]

It is the earliest symptoms of the disease, which helps to diagnosing disease. This is the best time to intervene in the process of disease by the administration of medicines or treatment. In *Tamaka Shwasa* the *Poorvaroopa* are explained by *Acharya Sushruta*, which are;

- *Hrutapida*
- *Shoola*
- *Adhmana*
- *Atopa*
- *Asyavairasya*
- *Shankha nistoda*

Lakshanas (Signs & Symptoms)^[9]

Lakshanas or *Roopa* or Sign & Symptoms are important for diagnosis of *Tamaka Shwasa*.

1. Dysnoea along with forcible expiration
2. Cough
3. Wheezing attacks
4. Chest tightness
5. Symptoms tends to be intermittent worst at night & in the early morning
6. Dryness of mouth
7. Sleeplessness
8. Discomfort increases when lied down on bed
9. Patient gets Comfort when in sitting position
10. Thick mucus sputum
11. Fainting during cough attacks
12. Sweating over forehead

Samprapti (Pathogenesis)

The pathogenesis of *Tamaka Shwasa* is developed due to the vitiation of *Vata* and *Kapha dosha*. Further they causes *Strotas dushti* and *Aama* formation. Vitiating *Aama* and *Kapha dosha* forms obstruction in the pathway of *Pranavaha Strotas* and produces wheezing sound, cough etc.

According to Ayurveda ^[10]	According to Modern science ^[11]
<p style="text-align: center;"><i>Hetu sevana</i></p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><i>Vata Prakopa + Annavaaha + Udakavaha + Pranavaha strotas Dushti</i></p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><i>Vata + Kapha prakopa</i></p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><i>Aama formation</i></p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><i>Vikruta Aama + Vata dosha goes to Pranavaha strotas and forms obstruction</i></p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Increase <i>Shwasa vega</i> (specially during night, <i>Tama pravesha</i>)</p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><i>Tamaka Shwasa</i></p>	<p style="text-align: center;">Trigger factors</p> <p style="text-align: center;">Airway narrowing & inflammation Hypersecretion of mucus</p> <p style="text-align: center;">Airway muscle constriction Swelling over bronchial membranes</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Narrowing of airways</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Wheezing, Cough, Shortness of breath, Tightness in chest</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Bronchial asthma</p>

Management

The treatment for *Shwasa Vyadhi* is described according to its etiology, location, & *doshas* involved in their pathogenesis of the disease. *Tamaka Shwasa* is having two *avastha*; one is *Vegavastha* and *Avegavastha*. While management this two *Vegavastha* of the patient should know the physician.

A) *Nidanaparivarjana*^[12]

It is the first line of treatment for any disease. It includes avoidance of the causative factors or *Hetu* that aggravates the disease formation.

B) *Snehana, Swedana*^[13]

In *Tamaka Shwasa* patient *Snehana* is done with the help of *Saindhava* and *Tila taila* over the chest region. After the *Snehana*, with the help of *Snigdha dravya Nadi wedana, Prastara Swedana* should be given.

It helps to remove the obstructed *Kapha* from the chest region. Which helps in breathing properly.

C) *Vamana, Virechana*^[14]

Due to the *Kapha dosha vruddhi*, *Vamana* is given after the consumption of *Snigdha Aahara*. *Virechana* & *Vamana* helps to removes the obstructed *Kapha* from the *Strotas*.

D) Dhoomapana^[14]

After that *Vamana karma*, for proper *leena dosha nirhana* or removal *Dhoomapana* is useful.

E) Aahara – Vihara

Kapha – Vataghna Aahara – Vihara, *Ushna & Vatanulomana Aahara – Vihara* should be given in the patient of *Tamaka Shwasa*.

F) Samshamana Chikitsa

Various *Kalpas* or *Rasa Aushadhis* are used for the *Tamaka Shwasa* are as follows.

- *Shwasa Kuthara Rasa*
- *Abhraka Bhasma*
- *Shwaskasa Chintamani Rasa*
- *Lavangadi Vati*
- *Shrunyadi Churna*
- *Dashamoola Kwatha*
- *Manashiladi Ghrita*
- *Vyaghri Haritaki*
- *Chyavanprasha*

This are the various *kalpas* which are used for the management of *Tamaka Shwasa*. The *dravya* having *Vata Kaphaghna* property, *Ushna*, etc *gunas* are helps to remove *Kapha* and *Vatanulomana*.

CONCLUSION

Tamaka Shwasa is the disease which is developed due to the vitiation of *Vata* and *Kapha dosha* in the body. Therefore the treatment for the *Tamaka Shwasa* is *Vataghna*, *Kaphaghna*, *Anulomaka*, *Ushna gunatmaka dravyas* can be used. The first line of treatment for every disease is *Nidana parivarjana*. It helps to avoid the use or consumption of causative or precipitating factors for the *Tamaka Shwasa*. Also various formulations can be used according to the *Rogi* and *Roga bala & Vegavastha* of *Tamaka Shwasa*. The prevalence of Bronchial asthma is increases due to the exposure of cold climates, dust, pollution etc. Therefore for the prevention of *Tamaka Shwasa Nidana parivarjana* is important line of treatment.

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A CASE STUDY OF TYPHOID FEVER AND ITS AYURVEDIC MANAGEMENT

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ABSTRACT

Although advance in public health and hygiene level led to the virtual disappearance of enteric fever (typhoid fever) for much of the developed world, the disease remains endemic in many developing countries. Typhoid fever is caused by *Salmonella enterica serovar typhi (s typhi)*, a gram negative bacteria. A similar but often less severe is caused by *S Paratyphi A* and less commonly *S Paratyphi B* (schotmulleri) *S Paratyphi C* (hirschfeldii). The common mode of infection by ingestion of an organism, usually through contaminated food or water. Although the source of infection may vary, person to person transmission through poor hygiene and sewage contamination of water supply are the most important.^[1]

KEYWORDS: Typhoid fever, visham jwar, widal test.

INTRODUCTION

Typhoid fever is also called enteric fever. It is a prospectively, multisystemic illness that has been a public health problem, especially in the developing world. Enteric fever is a cumulative term that illustrates both typhoid and paratyphoid fever. Typhoid fever is one of the major causes of mortality and morbidity in overcrowded and unhygienic areas though comprehensive research. Various ayurvedic drug have been proved useful for this manifestation. In present case we treated pt. with an ayurvedic drug and succeeded.^[2]

Typhoid fever is classified along with the visham jwar. Visham jwar further divided into santat, satat, anyedushka, trutiyaak and chaturthak. "muktanubandhitwa vishamatwa" it is another definition of visham jwar.^[3]

CASE STUDY

A 30 yr old male pt. no any chronic illness since last 8 days he is suffering with intermittent fever with cough consulted in out pt. department.

CLINICAL FINDINGS

The pt is suffering from intermittent fever since last 8 days with cough, sore throat, bodyache.

Fever was around 100' F, tongue was yellowish, pt was pale and soft abdomen.

Pt has kapha pitta prakruti.

INVESTIGATION

WIDAL TEST SHOWS

WIDAL TEST REPORT						
Types	1:20	1:40	1:80	1:160	1:320	1:640
<i>S. Typhi</i> (O):	+	+	+	+	-	-
<i>S. Typhi</i> (H):	+	+	+	+	-	-
<i>S.P. Typhi</i> (AO):	+	+	-	-	-	-
<i>S.P. Typhi</i> (AH):	+	-	-	-	-	-
<i>S.P. Typhi</i> (BO):	+	+	+	-	-	-
<i>S.P. Typhi</i> (BH):	+	+	+	-	-	-
Test Result:	Positive					

Electronically Verified Report, No Signature(s) Required.
Lab test values should be interpreted by a physician in the context of clinical picture.

M.Ejaz Khari B.Sc (Phy) M.L.T. Microbiology & Biochemistry	Dr. Ch. Justice Ahmad Anisak MBBS (ph), MRSH(London)	Dr. Zahar Iqbal Anjum MBBS(Ps) FTD(Thy)	Mrs Naila Mehtab B.Sc Nursing(Pb)
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NOTE: All the tests are performed on the most advanced highly sophisticated, approved and state of the art instruments with highly sensitive chemicals under strict conditions and with all care and hygiene. However, the above results are NOT the FINAL/DNB and should be correlated with clinical findings, patient's history, signs and symptoms and other diagnostic tests. Lab to lab variation may occur. This document is NEVER interchangeable at any PLACE/COUNTRY and at any CURRENCY.

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Widal test measures the capacity of antibodies against LPS and flagella in the serum of individuals with suspected typhoid fever to agglutinate cells of S Typhi.

TREATMENT

The detail of treatment protocol as follows,

1. Sanshamni vati – 2 tabs – BD
2. Nishottar churna- anupan – tup or madh – BD
3. Trifala kwath- anupan- tup or madh- 10 ML BD
4. Langhan

This treatment given for 7 days.

OBSERVATION

SYMPTOMS	BEFORE	AFTER
FEVER	+++	-
BODYACHE	+++	-
COUGH	+++	+
SORE THROAT	+++	-

DISCUSSION

LANGHAN and above drugs help to reduced AAM in our body which eventually open the strotorodh. Rasvah strotas, swedvah strotas and ambuvah strotas get open which help to process agnisandhushan. Aamjanit heaviness suppressed and appetite increases. Cough and sore throat also reduced.^[4]

CONCLUSION

The ayurvedic diagnosis of “visham jwar” is made for “typhoid fever” in present case. Various ayurvedic internal medicines have provided promising result especially in reducing fever without causing adverse effect.

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Transient ischemic attack: A literary review of cerebral ischemia

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ABSTRACT:

A transient ischemic attack (TIA) is a medical emergency. It is defined as a transient episode of neurologic dysfunction due to focal brain, spinal cord or retinal ischemia without acute infarction or tissue injury. Up to a 10% risk of recurrent stroke exists after a TIA, and up to 80% of this risk is preventable with urgent assessment and treatment. Imaging of brain and intracranial and extra cranial blood vessels using CT, CT angiography, Carotid Doppler Ultrasound, and MRI is an important part of the diagnostic assessment. Treatment options include anticoagulation for atrial fibrillation, carotid revascularization for symptomatic carotid artery stenosis, antiplatelet therapy, and vascular risk factor reduction strategies. Sudden neurologic dysfunction caused by focal brain ischemia with imaging evidence of acute infarction defines acute ischemic stroke (AIS), while an ischemic stroke with neurologic deficits but without acute infarction defines transient ischemic attack (TIA). TIAs are at high risk of early stroke, and their risk may be stratified by clinical scale, vessel imaging and diffusion magnetic resonance imaging. However, recent findings suggest that having a TIA correlates with deficits that can persist beyond the resolution of clinical symptom even in the absence of imaging evidence of ischemic tissue injury. These deficits may be result of subtle perturbations to brain structure and/or function that are not easily appreciated using the standard clinical and imaging tools that are currently employed in practice. An estimated 7.5% to 17.4% of patients with TIA will have a stroke in the next 3 months. Patients presenting with non disabling AIS or high risk TIA, who do not have severe carotid stenosis or atrial fibrillation, should receive dual antiplatelet therapy with aspirin and clopidogrel within 24 hours of presentation.

Keywords: Spinal cord, CT angiography, Anticoagulation, Revascularization, Ischemic stroke, Antiplatelet therapy.

I. INTRODUCTION:

Transient ischemic attack (TIA) was originally defined as self-resolving focal cerebral ischemia with symptoms lasting less than 24 hours. The newer definition added the limitation that there

should be no evidence of acute brain tissue infarction, to recognize that the acute injury to brain can result from ischemia of less than 24 hours duration. A transient ischemic attack is a medical emergency. It is defined as a transient episode of neurologic dysfunction due to the focal brain, spinal cord or retinal ischemia, without acute infarction or tissue injury. The definition of a TIA has moved from time based to tissue-based. A TIA typically lasts less than an hour, more often minutes. TIA can be considered as a serious warning for an impending ischemic stroke; the risk is highest in the first 48 hours following a transient ischemic attack. The subsequent risk of TIA or ischemic stroke can be stratified with a simple clinical measure. Immediate multimodality therapeutic interventions should be initiated. These will include aggressive treatment of blood pressure, high dose statin, antiplatelet therapy, blood sugar control, diet and exercises. This treatment scheme may substantially reduce the risk of recurrent strokes or future TIA by at least 80%. [1] [2]

A transient ischemic attack (TIA), also known as a mini stroke, occurs when blood supply to the brain temporarily stops. The reduced blood supply does not usually last for longer than 5 min., but a TIA is still a medical emergency. It may be a warning of a major stroke to come. Many people do not seek help for a TIA because the symptoms pass quickly. However, the Center for Disease Control and Prevention (CDC) note that more than One third of people who do not receive treatment for a TIA have a major stroke within a year. Currently it can be argued that approach to investigate transient ischemic attack and minor stroke is a compromise between timeliness of investigation and accuracy of diagnosis. While the new definitions of TIA and stroke are much more accurate regarding the biological consequences of cerebral ischemia [80] [81] [83].

The advanced newer, neuroimaging informed operational definitions of TIA such as “a brief episode of neurological dysfunction caused by focal brain or retinal ischemia, with clinical symptoms typically lasting less than one hour, and without evidence of acute infarction” [43]. However, with rare exceptions [44], the newer definitions have not yet been formally considered

for endorsement or rejection by authoritative organizations.

Transient ischemic attack and minor ischemic stroke are associated with brain dysfunction in a circumscribed area caused by a regional reduction in blood flow (i.e. ischemia), resulting in either transient or minor observable clinical symptoms. Identification of ischemia is important as 20% of patients with ischemic stroke presents with a TIA in a hours to days preceding the stroke. [20] [21]. Up to 80% of strokes after TIA are preventable; thus early diagnosis and treatment is the key. The clinical definitions of TIA and ischemic stroke are based on focal neurologic signs or symptoms are referable to known cerebral arterial distribution without direct measurement of blood flow or cerebral infarction. This is important to note that TIA and stroke represent different ends of ischemic continuum from the physiologic perspective, but clinical management is similar. The historical time based definition of TIA was based on full resolution of all symptoms within 24 hours of onset. It is also relevant that the diagnosis of TIA and minor stroke are commonly used interchangeably and recorded as such in medical records. Treatment to prevent ischemic stroke following TIA and treatment to prevent recurrent stroke following minor ischemic stroke are also similar. Very early assessment of these patients also makes the distinction between TIA and minor ischemic stroke difficult. A limitation of clinical definition of stroke and TIA is that they rely on presumed cause of symptoms: ischemia. Because patients vary in reporting the events they have experienced, even an astute physician may find it challenging to make a certain diagnosis based on the history and physical examination alone. Even experts do not agree about which clinical events are in fact TIAs. [22] [23] [24].

Symptoms:

The symptoms of TIA will depend on which part of the brain is not receiving adequate blood flow. As with a major stroke, the acronym FAST (face, arms, speech, time) can help people remember the symptoms to look for:

F = Face: The eye or mouth may droop on one side, and the person may be unable to smile properly.

A = Arms: Arm weakness or numbness might make it hard to raise one or both arms or keep them raised.

S = Speech: The person's speech may be slurred or garbled.

T = Time: Someone should call the emergency services at once if a person has one or more of these symptoms.

The person may also have:

- Numbness or weakness, especially on one side of the body
- Sudden confusion
- Difficulty understanding what others are talking about
- Vision problem
- Dizziness
- Problem with coordination
- Difficulty walking
- A very bad headache
- A loss of consciousness, in some cases.

TIA symptoms are temporary. They can last for a few minutes to a few hours, and they usually disappear completely after 24 hours. The same factors that lead to temporary insufficiency of blood flow in a TIA can cause a stroke due to longer lasting blood flow reduction, which can lead to permanent brain damage.

TIA subtypes, classified according to the pathophysiological mechanisms are similar to ischemic stroke subtypes. They include large artery atherothrombosis, cardiac embolism, small vessel (lacunar), cryptogenic and uncommon subtypes such as vascular dissection, vasculitis etc. The common risk factor for all TIA include diabetes, hypertension, age, smoking, obesity, alcoholism, unhealthy diet, psychosocial stress, and lack of regular physical activity. A previous history of TIA or stroke will increase substantially the subsequent risk of recurrent stroke or TIA. [4] [5]. Among all risk factors, hypertension is the most important one for an individual as well as in a population. A TIA is a clinical syndrome characterized by the sudden onset of focal neurologic deficit presumed to be on a vascular basis. Imaging can support the diagnosis, but TIA is primarily a clinical diagnosis. Descriptors such as “numb”, “dead”, “heavy” or “weak” may have different meanings for different patients and require clarification, similar to the different meanings patients may have for “dizzy”. The most important clinical determination is whether the neurologic symptoms are focal or non focal. Focal neurologic symptoms usually affect one side of the body. Non focal neurologic symptoms include generalized weakness, light headedness, fainting, blackouts and bladder or bowel symptoms. Loss of consciousness is only very rarely a symptom of stroke or TIA.

TIA symptoms are often resolved by the time the patient presented to the doctor or

emergency department. The history of present illness should include onset, duration, timing, complete neurological symptoms, associating symptoms or any aggravating or relieving factors. Some have indeed an ischemic event but others have had symptoms related to a stroke or TIA mimic, such as migraine, epilepsy, multiple sclerosis or peripheral nerve entrapment. Motor and speech symptoms may have a higher likelihood of brain ischemia as the cause of the symptoms because the differential diagnosis for such clinical presentations is much narrower, and patients who present with motor or speech symptoms are known to be at high risk for recurrent stroke [25]. However, patients who present with symptoms other than motor and speech symptoms (e.g. sensory symptoms and dizziness) have a more uncertain etiology [26]. Posterior circulation ischemia can pose an additional diagnostic challenge as symptoms are more variable than those that occur with hemispheric ischemia [27]. Although the proportion of patients with true ischemia is lower in those without motor or speech symptoms, it is important not to miss patients with true TIAs and minor ischemic strokes [27] [28]. The diagnosis of TIA remains largely clinical and based on taking an accurate history. This contributes to the variability in the diagnosis of TIA, with high rates of disagreement seen even between neurologists [22]. The clinician should also try to identify the associated risk factors such as coronary artery disease, smoking, drunk abuse, obesity, diabetes mellitus, dyslipidemia and hypertension, as well as personal family history of hypercoagulability disorder, stroke or TIA. Physical examination should focus on identifying focal neurological deficit, and speech disturbances which are the most common presenting symptoms in patients with TIA. Cranial nerve examination can yield findings of monocular blindness, disconjugate gaze, facial droop, hemianopia, diplopia, abnormal tongue movement, difficulty swallowing, and auditory dysfunction. Cardiac examination and carotid auscultation for a carotid bruit are very important. Fundoscopy is important to look for any fundoscopic evidence of vascular changes as result of hypertension or diabetes. It may also show a Hollenhurst plaque which will indicate an underlying internal carotid artery disease.

In candidates for carotid endarterectomy, carotid imaging should be performed within 1 week of onset of symptoms. Cardiac assessment should be done with ECG, Echocardiogram/TEE to find a

cardioembolic source and the presence of patent foramen ovale, valvular disease, cardiac thrombus and atherosclerosis. Routine blood tests including complete blood count (CBC), PT/INR, CMP, FBS, lipid panel, urine drug screen, and ESR should be considered.[6][7][5].

The ABCD2 score was derived from providing a more robust prediction standard. The ABCD2 score includes factor including age, blood pressure, clinical symptoms, duration and diabetes.

Age: older than 60 years (1 point)

Blood pressure greater than or equal to 140/90 mmHg on first evaluation. (1 point)

Clinical symptoms: a focal weakness with the spell (2 points) or speech impairment without weakness (1 point)

Duration greater than 60 min (2 points) or 10 min to 59 min (1 point)

Diabetes mellitus (1 point)

The 2-day risk of stroke was 0% for scores of 0 or 1, 1.3% for 2 or 3, 4.1% for 4 or 5, and 8.1% for 6 or 7. Most stroke centers will admit patients with TIA to the hospital for expedited management and observation if score is 4 or 5 or higher. This expedited approach has been proven to improve the outcome. [9]

Causes:

- Atherosclerosis
- Blood clots due to heart disease, cardiovascular disease or an irregular heart rhythm
- Blood clots due to a blood condition, such as sickle cell disease
- An air bubble in blood stream

Risk factors:

The risk factors for a TIA are similar to those for a stroke.

- Having a family history of stroke or TIA
- Being 55 years or above
- Being assigned male at birth
- Having high blood pressure
- Having cardiovascular disease, diabetes, high cholesterol levels
- Smoking tobacco
- Eating a diet that is high in unhealthy fats and salts
- Having high homocysteine levels
- Having over weight or obesity
- Having a type of heart beat known as atrial fibrillation

Investigations:

A full neurologic and cardiac examination should be completed on all patients with suspected TIA. CT was the first tool to identify acute ischemic structural injury to brain after transient symptoms lasting less than 24 hours [82]. Blood pressure, pulse rate and oxygen saturation should be obtained, and ECG should be performed to evaluate for arterial fibrillation. Many patients will also require an echocardiogram and some form of extended cardiac monitoring if no definitive cause is found for the TIA. Over the last decade, substantial new diagnostic advances have occurred, including the widespread availability of MR angiography (MRA) and Computed Tomography (CT) angiography (CTA), the recognition that diffusion MR frequently shows abnormalities in classic TIA patients and the development and the validation of risk stratification algorithms that identify TIA patients at higher and lower risk of early stroke. Numerous studies also have shown that the short term risk of stroke is particularly high, with most studies finding risks exceeding 10% in 90 days [45] [48] [50] [53-62]. Ischemic stroke appears to carry a lower short-term risk of subsequent ischemic stroke than TIA, with reported 3-month risks generally ranging from 4% to 8% [57-59] [61] [63-76].

Prognosis:

About 10% of patients present with TIAs or minor strokes will have a stroke within the next 90 days [25] [31] [32] with the highest risk period being the first 24 hours [33]. Wide consensus exists that TIA and minor ischemic stroke are medical emergencies that necessitate immediate management [34]. For instance, the cardiovascular health study estimated a prevalence of TIA in men of 2.7% for 65 to 69 years of age and 3.6% for 75 to 79 years of age. For women, TIA prevalence was 1.6% for 65 to 69 years of age and 4.1% for 75 to 79 years of age [46]. The percentage varies, depending on such factors as how TIA is defined, which stroke subtype is evaluated, and whether the study is a population based series [48] [49].

Clinical /Event features and scores:

Certain clinical features have been associated with recurrent stroke after TIA. These include diabetes mellitus [25], hypertension [35] [36], symptoms duration, and weakness or speech disturbance [25] [36]. The Rotterdam Study [37] followed patients with transient neurologic attacks for 10 years and found an increased risk of stroke not only in patients with focal symptoms (i.e. possible TIAs) but also in patients who had

transient episodes of non specific symptoms. Posterior circulation events, in particular, can cause non specific symptoms [38]. Evidence of an acute infarct on a non contrast CT alone has been shown to be predictive of recurrent stroke in patients with TIA (i.e. patients whose symptoms had resolved), although the proportion of patients with evidence of acute infarcts was small (4%). [39].

Rapid advances in imaging technology in the past 25 years have contributed significantly to our understanding of pathophysiology of TIAs. MRI is not as widely available as CT and is generally more expensive. In study of TIAs evaluated in emergency departments in Ontario, Canada, from May to December 2000, only 3% received MRI within 30 days. With respect to frequency of identifying brain infarcts in patients with TIAs, one needs to analyze whether the infarcts reported are new or old, whether they are in a clinically relevant vascular territory or not, and whether infarcts are cortical or in a perforator territory. Across various studies, MRI has shown at least 1 infarct somewhere in cerebrum in 46% to 81% of TIA patients [77] [78]. The prevalence of intracranial disease is much higher in nonwhite populations. Reports found that 51% to 77% of Asian patients with TIA had intracranial stenosis or occlusion [79] [80].

Patients with minor ischemic stroke and TIA who are at the highest risk of recurrent events and disability can be identified using non invasive CT angiography (CTA) [40]. Evidence of 50% or greater stenosis or occlusion in a symptom relevant vessel in the intracranial or extra cranial circulation puts a patient at high risk of a recurrent stroke [40]. Brain imaging using MRI is very sensitive way of assessing for brain ischemia. Diffusion-weighted imaging (DWI), which shows the abnormal diffusion of water in the setting of focal brain ischemia, is the most helpful sequence. Most studies of recurrent stroke after TIA have shown an increased risk of short-term recurrent stroke in the presence of a lesion seen on DWI. Most stroke neurologists would agree that patients who have a negative DWI but have truly had TIAs clearly exist, and thus they will treat patients for TIA even with a negative DWI. DWI has better sensitivity than CT for identifying ischemic injury to brain [85] [86] [87], and it can detect relevant ischemic lesions in approximately 50% of individuals who have transient neurological symptoms lasting <24 hours [88] many of whom are CT negative. Unfortunately, up to two-thirds of individuals who are acutely DWI-positive will no longer show

evidence of infarction at 21 days [89]. Individuals who had lesion free TIAs may also have an increased chance of experiencing fatigue [90].

Treatment/Management:

Stroke and TIA are on a spectrum of serious conditions involving brain ischemia. Both are markers of reduced cerebral blood flow and an increased risk of disability and death. However, TIAs offer an opportunity to initiate treatment that can forestall the onset of permanently disabling injury [51] [52].

The recognition and management of TIA offers the greatest opportunity to prevent disabling stroke. Studies have shown up to an 80% reduction in the risk of stroke after TIA with the early implementation of secondary stroke prevention strategies [28] [29], including revascularization of patients with symptomatic carotid artery stenosis, anticoagulation of patients with atrial fibrillation, treatment with antiplatelet agents, treatment with statins for most patients management of hypertension, and lifestyle interventions, such as smoking cessation or weight loss. Another recent study identified that gait may be abnormal in people who have TIA or minor stroke for up to 5 months after the index event. Deep neural networks are starting to be used with some success to identify individuals at risk of tissue injury after stroke and to predict treatment effects.

The main aim of treatment of TIA is to decrease the risk of subsequent stroke or TIA. Early treatment after a TIA can significantly reduce the risk of stroke within 3 months has been reported to be around 20%, with approximately 50% of these strokes occurring within the first 2 days after initial presentation. It is extremely important to evaluate the vessel status and look for atrial fibrillation when a patient comes with TIA. This will significantly reduce future strokes. Management of TIAs should focus on treating underlying etiologies. [10] [11] [12]. The express study in the UK has shown the importance of early intervention versus regular treatment by reducing 80% of the stroke risk. [13] More recent studies in China (CHANCE trial) and the multinational POINTE trial also confirmed dual antiplatelet with aspirin and clopidogrel for 3 weeks to 1 month followed by a single antiplatelet agent is the best scheme for antiplatelet therapy. [15] [16] Revascularization is a recommended for symptomatic cervical internal carotid artery stenosis of 70% or higher. Whether to operate on patient with 50-69% stenosis will depend more on surgeon's complication rates given

the vast improvement in efficacy of aggressive medical therapy. Wingspan stenting of intracranial major arterial stenosis of 70-99% stenosis is not better than aggressive medical therapy alone. [17]

For most patients, it will be a single antiplatelet agent, usually aspirin mono therapy (81mg/d to 325mg/d). Other options include 75mg/d clopidogrel or a combination of 25mg aspirin and 200 mg extended-release dipyridamole 2 times a day [41]. The Fast Assessment of Stroke and Transient Ischemic Attack to prevent Early Recurrence (FASTER) trial compared the effectiveness of 3 months of treatment with 81mg aspirin and 75mg clopidogrel commenced within 24 hours of onset versus aspirin alone in patients with minor strokes/TIAs [42].

In some cases, a doctor may recommend surgery to remove a blockage or part of damaged artery.

Diagnosis:

Anyone experiencing signs or symptoms of a TIA needs an immediate medical assessment to find out why it happened and how to prevent recurrence or more severe event.

Differential diagnosis of TIA includes but is not limited to vertigo, dizziness, seizures, headaches, bell's palsy, drug withdrawal, dementia, electrolyte disorder, acute infections, syncope and alcoholism. The early risk of stroke varies from 4-9% within 90 days and without treatment, the risk of stroke within 5 years varies from 20-30%. At the same time, these patients also have the same risk factors for adverse cardiac events. Once the TIA has been diagnosed, the patient must be referred to a neurologist. At the same time, the patient should be educated about the importance of the blood pressure control, discontinuing smoking and eating a healthy diet. Finally the patient should be educated about the symptoms of the stroke and when to seek immediate medical assistance. [18] [19] (level V)

Possible tests include:

- Blood tests to check blood pressure, cholesterol levels and clotting ability
- An electrocardiogram to measure electrical activity and rhythms of heart
- An echocardiogram to check the pumping activity of heart
- A CT scan to reveal any sign of an aneurysm, bleeding or changes to blood vessels in the brain
- A MRI scan to help identify damage to the brain

II. DISCUSSION:

TIA offers the greatest opportunity to prevent stroke that physicians encounter. A TIA should be treated as a medical emergency, as up to 80% of strokes after TIA as preventable. Differentiating transient ischemic attack from other mimicking condition is important. Symptoms of TIA include weakness and numbness on one side of the body, drooping on one side of the face, and difficulty speaking. Transient ischemic attacks are usually associated with a focal neurologic deficit and / or speech disturbance in a vascular disease. Among all risk factors, hypertension is the most important one for an individual as well as in a population. The estimated overall prevalence of TIA among adults in the United States is approximately 2%. Few studies have shown that the majority of people who presented with initial stroke had prior TIA symptoms [4]. The 2009 AHA/ASA guidelines include “neuroimaging within 24 hours of symptoms onset and further recommend MRI and diffusion-weighted MR imaging as preferred modalities.” Brain MRI with diffusion-weighted imaging has a greater sensitivity than CT for detecting small infarcts in patients with TIA. The ABCD2 score is very important for predicting subsequent risks of TIA or stroke. Early treatment after a TIA can significantly reduce the risk of stroke within 3 months has been reported to be around 20%, with approximately 50% of these strokes occurring within the first 2 days after initial presentation. Hackam et al did a meta-analysis in 2007 showing that combination of diet, exercise, antiplatelet, statin and antihypertensive therapy may reduce the subsequent stroke by 80-90% [14]. Stroke is the fifth leading cause of death and a leading cause of disability in the United States, affecting nearly 800000 individuals.

The early risk of stroke varies from 4-9% within 5 years varies from 20-30%. At the same time, these patients also have the same risk factors for adverse cardiac events. As many as 60% of patients referred to a TIA clinic will not have a final diagnosis of TIA [29] [30]. Identification of possible TIA mimics is an important stage in the assessment of patients with transient neurologic symptoms. Many stroke neurologists find MRI particularly helpful in cases in which the diagnosis is not 100% clear based on the history. MRI and DWI have become the methods of choice in TIA and minor stroke diagnosis however, DWI has key limitations that make it problematic to rely upon it as a sole diagnostic tool. Recurrent stroke was seen in 8.2% of patients in the clopidogrel-aspirin group,

as compared with 11.7% of those in the aspirin-only group. The risk of hemorrhage was not different in the two groups. Combined aspirin and clopidogrel for 3 weeks followed by single antiplatelet therapy reduces stroke risk from 7.8% to 5.2%.

Additional statistics suggest that 20% of those have a TIA have a stroke within 3 months, and half of these will happen within 2 days of the TIA. Diagnostic recommendations include: TIA patient should undergo neuroimaging evaluation within 24 hours of symptom onset, preferably with magnetic resonance imaging, including diffusion sequences, non-invasive imaging of cervical vessels should be performed and non-invasive imaging of intracranial vessels is reasonable; electrocardiography should occur as soon as possible after TIA. MRI, including diffusion sequences, should now be considered a preferred diagnostic test in investigation of the patient with potential TIAs.

Ideally, patients with TIA should be evaluated expeditiously with tests assessing the extra cranial and intracranial circulation. The prevalence of intracranial disease is much higher in non-white populations. Reports found that 51% to 77% of Asian patients with TIA had intracranial stenosis or occlusion [79] [80]. Robotics provide a means by which to investigate behaviors in a more sensitive way than is possible with standard clinical tools and allows the behavioral correlates of neurological injury to be investigated.

III. CONCLUSION:

The assessment of TIA is all about making the correct diagnosis, and taking the good history is the key. Once the TIA diagnosis has been made, cardiac and neurovascular imaging can help inform the potential etiology and guide initiation of evidence based secondary stroke preventive strategies. Ideally, obtaining the history, imaging, and identifying the etiology occur on the same day as presentation to reduce risk of recurrent cerebral ischemia. Across various studies, MRI has shown at least 1 infarct somewhere in the cerebrum in 46% to 81% of TIA patients. Unfortunately, up to two-thirds of individuals who are acutely DWI-positive will no longer show evidence of infarction at 21 days.

TIA incidence in a population is difficult to estimate due to other mimicking disorders, but TIA incidence in the United States could be around half a million per year, and estimates are about 1.1 per 1000 in the United States population. Presence

of any cortical symptom such as language disturbance or visual field loss will point to a cortical TIA rather than a lacunar syndrome. The 2-day risk of stroke was 0% for scores of 0 or 1, 1.3% for 2 or 3, 4.1% for 4 or 5, and 8.1% for 6 or 7. Early treatment after a TIA can significantly reduce the risk of stroke within 3 months has been reported to be around 20%, with approximately 50% of these strokes occurring within the first 2 days after initial presentation. Patients with an ABCD2 score of 6-7 have an 8% risk of stroke within 48 hours. Patients with an ABCD2 score of less than 4, have a 1% risk of stroke within 48 hours. Even though, scales are important in the evaluation of TIA, be aware that patients with critical carotid artery stenosis may sometimes present with a very low ABCD2 score. The main criteria used for TIA are the clinical history and objective findings on neurologic examination consistent with focal neurologic dysfunction at some point of evaluation and imaging of the brain.

Evidence of 50% or greater stenosis or occlusion in a symptom relevant vessel in the intracranial or extra cranial circulation puts a patient at high risk of a recurrent stroke. Atrial fibrillation is a common cause of transient ischemic attack and ischemic stroke. Finding out why a transient ischemic attack occurred, is the key to prevent a recurrent stroke. Among patients who present with stroke, the prevalence of prior TIA has been reported to range from 7% to 40%. Recognition and management of transient ischemic attack offers the greatest opportunity to prevent disabling stroke. In patients presenting with acute ischemic stroke (AIS) and disabling deficits interfering with activities of daily living, intravenous alteplase improves the likelihood of minimal or no disability by 39% with intravenous recombinant tissue plasminogen activator Vs 26% with placebo when administered within 3 hours of presentation and by 35.3% with IV right PA VS 30.1% with placebo when administered within 3 to 4.5 hours of presentation. Statistics suggest that TIAs affect around 2% of the population of the United States.

The current approach to TIA and minor stroke investigation is focused appropriately on immediate threats to health such as recurrent stroke. Additionally the ability to identify tissue injury rapidly remains incomplete. Research on tools such as MEG, EEG, robotics, and various MRI based tools to study brain function after TIA and minor stroke is still a work in progress and presently has no prognostic value. Importantly,

there is increasing recognition that there are other consequences to TIA and minor stroke beyond the presence or absence of DWI lesions.

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**SIRAVEDHA (RAKTAMOKSHANA) IN RAKTADUSHTIJANYA
VIKARA- TODAYS ERA.****Dr. Prasanna Rajenda Pawar*¹, Dr. Uday K. Neralkar² and Dr. Sanjay J. Dahake³**

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ABSTRACT

Ayurveda is a science of life. As per Charaka Samhita sutrasthana adhyaya 30, *Swasthasya swasthya rakshanam aturasya*.^[1], it is an ancient system to prevent and maintain health as well as treating diseases. In the present era, lifestyle is very fast, everyone is struggling for existence and to make fame (position) in the society. For this purpose, people suffering from struggle and stressful life. So these people are following improper rutucharya, doing night jobs, long time heavy work, travelling jobs and following improper diet patterns like junk food, fast food, etc. and some people also have various types of addictions like alcohol consumption, smoking, tobacco chewing, etc. along with today's environmental changes are also affecting human-built. So in the present situation, we found several diseases. Out of them, Raktadushtijanya vikaras are very common. Considering the importance of Raktadhatu in sharira Acharya Sushruta assumes Raktadhatu as a fourth dosha. While, people are suffering from

Raktadushtijanya vikaras (characterized by shoola, shopha, daha, etc.) like kushtha, visarpa, pidaka, vyanga, pleeharoga, etc. as the treatment concern the concept of Raktavaha strotodushti, Raktamokshana is an important line of treatment. The peculiarity of Acharya Sushruta in Ayurveda is Raktamokshana chikitsa. There are various types of Raktamokshana mentioned in Ayurveda classics like Jalaukavacharana, Shruna, Alabu, Ghati, Prachhana,

Siravedha, etc. which are distributed into Shastrakruta and Ashastrakruta Raktamokshana. Out of these types of Raktamokshana, Siravedha is an important panchakarma treatment for sarvadehika shuddhi and this type of Raktamokshana is currently needed to cure various Raktadushtijanya vikaras. The present study enlightens the scientific practice of Siravedha Raktamokshana according to Ayurveda classics as well as according to modern technological advances applied for their use.

KEYWORDS: *Raktavaha strotasa, Raktadushti hetus, Raktadushtilakshanas, Raktamokshana, Siravedha.*

INTRODUCTION

The main factors which contribute to the Raktadushtijanya vikaras include bad food habits (like ushna-tikshna aahara atisevana), disturbed sleep, continuous work near heat, alcohol addiction, smoking, disturbed biological clock, etc. Commonly occurring Raktapradoshaj vikara includes daha, sparshasahatva, joint pain, early degenerative changes, gouty arthritis & gynaecological disorders. All of them can be traced back to improper diet & nutrition.

Ayurvedic approach is based on individual prakruti i.e. vataj, pittaj, kaphaj, dvidoshaj, tridoshaj, etc. Any management of disease considers every extra environmental & other impact's on the human body. Ayurveda emphasizes three folds of therapeutic management of the disease i.e. samshodhana (purification), samshamana (pacification) & nidana parivarjana (avoiding causative factors). Panchakarma or samshodhana is one of the important therapies of Ayurveda which includes Vamana, Virechana, Basti, Nasya & Raktamokshana. Out of this panchakarma, Acharya Sushruta gave more importance to Raktamokshana according to him Siravedha (type of Raktamokshana) is Chikitsardha.^[2]

Raktamokshana is important therapy that deals with the elimination of vitiated Rakta (pitta too) from the body. Raktamokshana is not merely a samshodhana therapy as it is understood but also a broad spectrum of therapeutics process of elimination of disease-causing toxins along with this revitalization of the tissues. It is one of the functional modalities of treatment in preserving and promoting perfect health.

In today's world, people are suffering from stress, anxiety & Raktaja vikara which lead to diseases like visarpa, kushtha, allergies, some heart and skin diseases, metabolic disorders like cancer, diabetes mellitus and certain degenerative diseases like osteoporosis,

osteoarthritis etc. These diseases are mainly due to deep-seated vitiated doshas (metabolic toxins). Raktamokshana eliminates these toxins from the body by improving cellular architecture and healing of tissues & channels. This Siravedha (Raktamokshana) karma hampers the disease patho-physiology and stops the progress of disease to some extent.

Hence, decided to study the need for Raktamokshana karma (Siravedha) in Raktadushtijanya vyadhi in today's era.

AIM

To study Siravedha (Raktamokshana) in Raktadushtijanya vikara.

OBJECTIVE

- To evaluate the Raktadushtijanya vikara.
- To evaluate the hetus of Raktadushtijanya vikara.
- To assess the benefits of Siravedha in Raktadushtijanya vikara in today's era.

MATERIAL AND METHODS

Literature Review

A thorough review of the literature regarding the Raktadushtijanya vikara has been done from Ayurvedic Classics i.e. Charaka Samhita, Sushruta Samhita, and Vagbhata Samhita, also the research work carried out by other scholars or previous work done in a related subject.

A) Hetus of Raktadushti

According to Charaka Samhita, sutrasthana, vidhishonitiya adhyaya, the hetus of Raktaushti are Ati-madyapana, lavana-kshara-amla-katu anna atisevana, kulattha, masha, tiltel, green shaka atisevana, anup mansa atisevana, dadhi (curd), shukta anna, viruddhanna, divaswapa after the consumption of heavy food, krodha(anger), ati-aatapa sevana(continuous work near heat), chhardi veg vidharana, avoiding Raktamokshana in sharad rutu, shrama (heavy exertion), abhigata (injury), ajirna, adhyashan, sharad-rutu (naturally Raktadushti occurs) etc.^[3]

Krodha, shoka, bhaya, aayasa, upavasa vitiates pitta & Rakta according to Acharya Sushruta.^[4]

Acharya Vagbhata said that more consumption of pittakar and kaphakar aahara vitiates Rakta.^[5]

Hetus of Raktadushti in today's era

As mentioned in Charaka Samhita, Vimanasthana, Adhyaya 5, Strotovimana, Raktavaha strotodushti hetu are.

1. *Vidahi annapanani snigdhnani dravani cha*

Raktavahini dushyanti bhajatam ch atapanalau || - Ch. Vi. 5/14

2. *Pradushta bahutikshno ushnaihi madyahi anayshch ...*

.....*shonitam sampradushyati* || - Ch. Su. 24/5-10

Table no. 1: Raktadushti hetus in today's era.^[6]

S.N.	Raktadushti Hetu	Examples of dietary products and activities
1.	<i>Vidahi annapana</i>	Spicy food, fast food, Chinese food, junk food, anup mansa, panipuri, pav bhaji, vada pav, etc.
2.	<i>Snigdha bhojana</i>	Pedha, burfi, milk products, ice cream, cheese, paneer etc.
3.	<i>Drav-dravya</i>	Cold drinks, alcohol, different spicy soups, tea, coffee, milkshake, juices etc.
4.	<i>Ushna-tikshna anna</i>	Green chilli, garam masala, different types of spices, chutneys, pickles, papad etc.
5.	<i>Shukta anna</i>	Curd, idli-dosa-utappa, dhokala etc.
6.	<i>Viruddha aahara</i>	Sanyog viruddha, sankar viruddha, desh viruddha, kala viruddha, matra viruddha.
7.	<i>Vihara</i>	Divaswap, night duties, continuous work near heat, travelling, sitting job, stressful work etc.
8.	<i>Addictions</i>	Alcohol, tobacco, gutkha, pan masala, smoking, drug addiction etc.

As per samanya hetus mentioned by Charakacharya,

Aharashch viharashch yah syad doshgunaihi samaha

Dhatubhi vigunashchapi strotasam sa pradushakah || - Ch. Vi. 5/23

The aahara and vihara same as doshguna hampers dhatus. So gunas like tikshna, ushna, vidahi, drava, snigdha, sara etc, vitiates and aggravate the pittadosha so today's lifestyle, aahara-vihara and somewhat kala aggravates pittadosha and it vitiates Raktadhatu.

Raktadushti Lakshana

According to Sushruta, shopha, daha, paka, raga, ruja is the lakshana of dushita Rakta. Vatadushta Rakta shows aruna varna, fenila, krushna, parusha, shyava, tanu, shighraskandi lakshana whereas pittadushta Rakta shows pita, nila, harita, shyava varnata, vistrata, askandi lakshana. Kaphadushta Rakta shows panduvarna, gairikodak pratikasham, snigdha, sheeta, bahala, pichchhila lakshana. Tridosha dushta Rakta shows kanjivarnata.^[7,8]

Raktadushtijanya vikara

Raktadushtijanya vikara mentioned by Acharya Charaka are Kustha, Visarpa, Pidaka, Raktapitta, Asrugdara, Guda-Medhra-Asyapaka, Pleeharoga, Gulma, Vidradhi, Nilika, Kamala, Vyanga, Piplava, Tilakalaka, Dadru, Charmadala, Pama, Kotha, Asramandala etc.^[9]

Likewise Acharya Sushruta gives Raktadushtijanya vikara are Kustha, Visarpa, Pidaka, Raktapitta, Asrugdara, Pleeharoga, Gulma, Vidradhi, Vyanga, Tilakalaka, Masaka, Nyachha, Indralupta, Vatasonita, Arsa, Arbuda, Angamarda etc.^[10]

Raktadushti in today's era

Nowadays many people are suffering from various diseases which are caused due to vitiated pitta and Rakta because of improper diet, rutucharya, ratricharya, food habits and behavioural changes. Most common pitta and Raktadushti in today's era are seen in the diseases like ardhavbhedaka (migraine), nidranasha (disturbed sleep), anxiety, heart diseases (like acute pericarditis, chronic heart disease, etc.), acute-pulmonary oedema, acute-lobar pneumonia, uraemia, brain haemorrhage, cerebral infarct, daha (burning sensation in body), hyperacidity, skin diseases (like acne, psoriasis, vyanga, sheetapitta), mukhpaka (mouth ulcers), raktapradara, cancer, vatarakta, hair problems, raktarsha (bleeding piles) etc.^[11]

B) Treatment of Raktadushtijanya vikara

Raktadushti and Raktadushti vikaras have a special status in the field of Ayurveda. It does not necessarily mean these diseases manifested only at the skin level. During the manifestation of a disease, where there is vitiation of 'Rakta dhatu' caused by the Doshas, it is called "Raktapradoshaja vikaras".

Kuryat shonitrogeshu raktapittaharim kriyam |

Virekamupavasam cha stravanam shonitasya cha || - Ch. Su. 24/18

Acharya Charaka said that vitiated Rakta should be treated by Raktapittahari chikitsa, virechana, upavasa, Raktamokshana.^[12] Whereas, Acharya Vagbhata mentioned Siravedha to manage Raktadushtijanya vikara.^[13]

Types of Raktamokshana-

There are two main types of Raktamokshana.^[14]

1) Shastrakruta: It is the process that is done by the surgical instruments.

2) Anushastrakruta (Ashastrakruta): It is for delicate persons because they are not made by surgical instruments etc.

Again there are two subtypes of Shastrakruta Raktamokshana

- a) Prachchhanna karma
- b) Siravedha karma

And Anushastrakrut Raktamokshana has four subtypes

- a) Jalaukavacharana
- b) Shrung-avacharana
- c) Alabu-avacharana
- d) Ghati yantra

Out of these types of Raktamokshana, Siravedha is said 'Chikitsardha' & sarvadehika Raktamokshana by Acharya Sushruta.

Siravedha Indications

Visarpa, pleeharoga, gulma, vidradhi, agnisada, jwara, mukh-netra-shiroroga, mada, trushna, lavana-aasyata, kushta, vatarakta, raktapitta, katu-amla udgara, bhrama, also the diseases which are not decreased by sheeta-ushna-snigdha-rukshadi chikitsa.^[15]

Siravedha Contraindications

Sira should not be punctured in children, old aged, persons who are ruksha, wounded, debilitated, fearful, fatigued, consumed wine, exhausted by a long walk or woman copulation, who have had vomiting or purgations, who have been administered decoction and oil enemas, who have kept awake at night, the impotent, emaciated, the pregnant, who are suffering from cough, dyspnoea, high fever, convulsions, partial paralysis, starvation, thirst and fainting.^[16]

As different types of Raktamokshana are very necessary for the above-mentioned diseases, Siravedha is the best choice. Even in those who are prohibited from other types of Raktamokshana, when they are affected by poisons or are in an emergency, Siravedha can be done. Siravedha should not be done on days which are very cold, very hot, with a heavy breeze and very cloudy and never in the healthy persons (except Sharada rutu). Also, those who have swelling all over the body, who are emaciated due to intake of sour food (for a long time), who are suffering from a disease such anaemia, haemorrhoids, abdominal enlargement.

METHOD

Siravedha Procedure^[17]

Necessary equipment

- Sphygmomanometer (BP Apparatus)
- Scalp vein set no.20 / needle no.18
- Kidney tray/ glass beaker
- Tourniquet
- Cotton
- Spirit
- Bandage

1) Purva Karma

- The Siravedha (Raktamokshana) room should be well equipped with all the Agropaharaniyani required for the Siravedha procedure.
- The patient was advised for taken Yavagu or a light liquid diet before 1-2 hours of the Siravedha procedure.
- Local Snehana and Swedana should be carried out on the affected part.
- Paint the portion with spirit where Siravedha has to be carried out.

2) Pradhana Karma

- Siravedha procedure should be done in a comfortable position of a patient either in lying down or in a sitting position.
- Tie the nearest muscles of the affected part with a tourniquet to increase the venous pressure.
- Try to protrude the superficial vein or cubital vein.
- Siravedha should be done with the help of needle (no. 18) / scalp vein (no.20), as of today's modern manufactured equipment.
- The vitiated blood is let out and has to be collected in a glass beaker/ kidney tray.
- After expected blood-letting, remove the needle/ scalp vein set.
- The tight dressing should be applied with all the aseptic precautions upon the punctured site.

3) Pashchat Karma

- The patient has to be relaxed in a comfort zone.

- After Siravedha, the patient should be advised to take laghu, snigdha, ushna, bruhana aahara at the proper time and tarpana should be done.
- After Siravedha, the patient should be advised to avoid exercises, copulation, anger, cold bath, cold breeze, divaswapa, use of alkalies, sour and pungent substances in food, grief, too much conversation and indigestion till he/she attains good strength.
- Pain relief, lightness of the body, retardation of the disease process, calmness of mind are the signs of proper Siravedha.

Benefits of Raktamokshana

Raktamokshana karma is 'Aashukari chikitsa' as compared to snehana, swedana, vamanadi and shamana chikitsa according to Acharya Sushruta¹⁸. Raktamokshana gives instant relief of sign and symptoms like pain, shopha, daha of Raktadushtijanya vikara. Raktamokshana prohibits Raktadushtijanya vikara like skin diseases, granthi, shopha etc in the human body.^[19] After Raktamokshana, bala-varna-indriya prasadana/prasannata and diptagni occurs.^[20] Siravedha is said 'Chikitsardha' & sarvadehika Raktamokshana by Acharya Sushruta.

DISCUSSION

All Samhita have given detailed descriptions of Raktamokshana and Siravedha. Charaka has enumerated Raktaja Roga and their treatment by Shonitavasechana and various techniques of Raktamokshana is also mentioned. Sushruta has given detail of Raktamokshana.

The purpose of the present study is to evaluate the effectiveness of Siravedha in the management of Raktadushtijanya vikara in modern times. Siravedha karma has a significant role in the management of sarvadehika Raktadushti to relieve the sign and symptoms of doshgunas which vitiates pittadosha and Raktadhatu.

It reduces all these symptoms by relieving venous congestion, increasing venous drainage and increasing the oxygenated blood supply in the body. The role of Siravedha is already highlighted by Acharya Sushruta in the treatment principle of Raktadushtijanya vikara. It is highly effective in Raktadushtijanya vikara with the anubandha of pitta dosha and it also induces anulomana of vata by removing the avarana of pitta and kapha dosha.

In Siravedha, the expulsion of vitiated doshas accumulated due to inflammatory reactions which induce relief of pain immediately, due to its vata shamana (vatanulomana) effect.

Considering the variation in the quality of blood in different methods of Raktamokshana should be decided based on the requirement of a grade of purification, pathology of the disease along with mental and physical strength of the patient.

CONCLUSION

In the modern world, there is a lot of hetus of Raktadushti as mentioned in the article. So, the cases of Raktadushtijanya vikaras are increasing in the Ayurveda OPD. Raktamokshana is one of the initial line of treatment in the management of Raktadushtijanya vikaras i.e. shophya, raga, ruja etc.

Siravedha is used in the sarvadehika dushti of dosha. It can play an important role in the management of Raktadushtijanya vikara which are caused by the vitiation of Rakta and pitta. Therefore, in Ayurveda Siravedha is called Ardhachikitsa (that can be applicable in today's situation too).

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A Critical Review on Drug Induced Cardiotoxicity and its Treatment Modalities in Perspective of Ayurveda

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ABSTRACT

Hriday is one of the important marma among *Trimaramas*, which may leads to fatal consequences even on the slight injury. There is not any direct reference of *Aushadhijanyahridroga* in our ancient textsbut our ancient Acharyas explained the cardiac disturbances as the side effect of medicines which are not prepared properly. This shows that they were well known about the drug induced cardiotoxicity. In Agadtantra, *Garavisha* is explained as a one of unique concept which artificially prepared by the mixture of various substances responsible for various disorders. Itis the vast aspect mentioned in our ancient literature, which can be compared with various sources of exposure of toxins through our daily life activities in which we can include various drugs and chemicals used in modern medical science are also produced toxic effects like Paracetamol, aspirin, erythromycin, oral contraceptives etc. Such a way Cardiotoxicity occurs due to many chemotherapeutic agents and other drugs can also be understood under the concept of *Garavisha*. The aim of this article is to review contemporary aspect of cardiotoxicity induced by drugs and classical aspect of *Garavisha*. It is an attempt to find correlation between them. This will be helpful in exploring the different treatment modalities associated with of drug induced cardiotoxicity.

Key Words *Garavisha, Hridroga, Cardiotoxicity*

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INTRODUCTION

Cardiotoxicity is also described as the harmful effect on the heart mediated by various toxins (drugs) which leads to weakness of heart. Thus heart becomes inefficient in the pumping and circulation of blood. In Cardiotoxicity there is electrophysiology dysfunction of heart or damage of heart muscle. National Cancer Institute defines

Cardiotoxicity as ‘toxicity that affects the heart’ this definition limits the direct effect of drugs on the heart. Chemotherapeutic agents leads to harmful effect on both vascular system and heart¹. These agents responsible for cardiac complications like variation in blood pressure, arrhythmias, pericarditis, electrophysiological changes in heart muscles, myocarditis,

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cardiomyopathy, left ventricular dysfunction or heart failure². Some of the common drug categories which are responsible cardiotoxicity includes monoclonal, antihypertensive, antidepressants, anticancer agents, etc. Due to cardiotoxicity, heart becomes unable to pump blood effectively throughout the body. Other symptoms like shortness of breath, fatigue, and anemia are also seen in these cases. These signal that the heart is having difficulty in maintaining its essential functions. If there is symptoms like chronic coughing, swelling of the ankles and feet, and weight gain, indicates the risk of cardiotoxicity. These signal shows that the heart is not beating correctly. The cardiac events like slight change in blood pressure, arrhythmias, thrombosis, pericarditis, myocardial infarction, myocarditis, cardiac failure (left ventricular failure) and electrocardiographic changes and even the congestive heart failure may be occurs³. However, chronic administration of drugs is the major problem because cardiotoxicity is generally seen after the accumulation of the drug or its metabolites since long duration.

Garavisha is one of the unique concept explained in our classics and traditional books of Ayurveda. It is artificially prepared by the mixture of various substances and leads to various diseases. Since it does not cause instantaneous death but takes some time to metabolize such type of poison and after that these produce their harmful effects. In the current scenario of fast lifestyle, due to the influence of environmental pollutants, fast foods, adulteration, pesticides, etc. Improper use of all

these resources cause endogenous or exogenous toxicity. Most of causative factors that are responsible for *garavisha* mentioned in ancient texts can be correlated to our daily used resources. The alarming increase of severe diseases like cancer, stroke, heart attack etc can also be attributed to the toxic effect due to toxic components present in our daily goods like food, drinks, medicines, cosmetics, etc. The substances that cause a toxic effect may be pesticides, insecticides or drugs like Steroids, NSAIDs, or any chemical substance that is present in the environment of an individual can be included in it. It is the vast aspect mentioned in our ancient literature, which can be compared with various sources of exposure of toxins through our daily life activities in which we can include various modern drugs. Thus cardiotoxicity due to modern medications can also be correlated with the ancient concept of *garavisha*.

OBJECTIVES:

- 1) To elaborate concept of cardiotoxicity due to modern medications on the basis of their mechanism of toxicity, risk factors and diagnostic criteria.
- 2) To discuss the concept of *garavisha* in ayurveda classics.
- 3) To elaborate the correlation between drug induced cardiotoxicity and *garavisha* and suggest the possible management protocol in perspective of ancient toxicology.

METHODOLOGY

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A) CONCEPT OF “HRIDAYA” IN AYURVEDA:⁴

1) Anatomy:

As per our ancient texts “*Hridaya*” is most important *pranayatana* (vital organ) of our body and also one of the most important marma among the *trimarma* (*Hridaya*, *Basti*, *Nabhi*) explained in ayurveda. As per modern medical science, heart is important organ of both respiratory and circulatory system. It’s important to know anatomy and physiology of heart in modern terms for understanding of pathology of heart diseases and then we can provide the ayurvedic treatment for heart diseases in today’s era. According to ancient ayurvedic texts, myocardium can be correlated with *mamsadhatu* and rhythmic heart contraction are due to *vayu*.

The word “*Hridaya*” is derived from “*hru*” i.e. *Harati* (to receive from) and “*da*” i.e. *Dadati* (to give) and “*ya*” i.e. *Yagati* (to control). The normal functioning of heart perform in the body continuously due to *Vayu*, especially *Pran* and *Vyanvayu*. *Vatadosha* in *prakrut* condition is responsible for normal *vatagati*, due to *chalguna*. Along with this *hridaya* is considered as *sthana* of *Sadhak pitta*, *Avalambak kapha*, *Oja* and *Mana*.

2) Physiology

According to Ayurveda, *Samanvayu* takes *saahar rasa* towards *shridaya* and then *vyanvayu* circulate this to all over body in all *dhatu* and finally brings back to the heart. On the other hand *Sadhak pitta* present in heart is responsible for normal functioning of body’s important

constituents *Buddhi*, *Medha*, *Prana* and *agni*. Also, *Avalambak Kaphain* heart plays the important role of *Dharan* (holding) and *Avalambana* (lubricating and Shock absorption) property. According to *ayurveda Hruday-utpatti* is from *Prasad-ansha* of *Rakta* and *Kaphadhatu* and hence considered as “*siramarma*” because *sira* are the considered as *upadhatu* of *Raktadhatu*.

3) Pathology

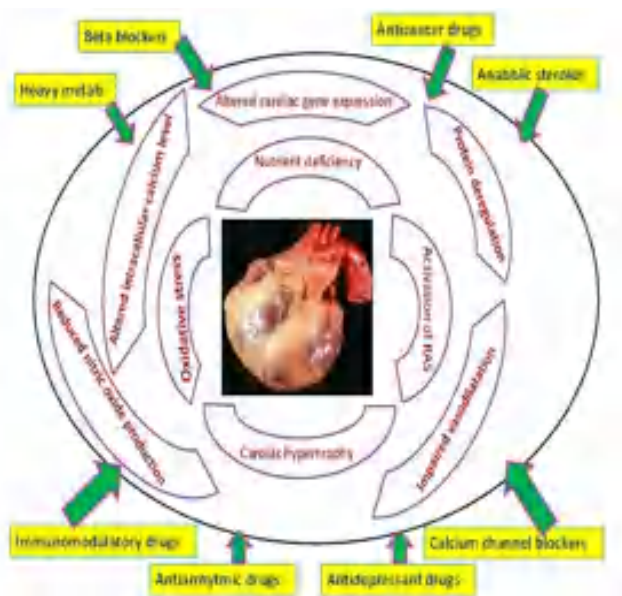
All of the coronary artery diseases can be classified under *Siradushti* which is *Raktavikruti* because *sira* and *kandara* are the *upadhatu* of *rakta*. If there is any *Raktavikruti* due to *pitta dosha*, the permeability of *sira* increases due to *laghu*, *ushna*, *visraguna* then hemorrhagic disorders occurs. If there is any *Raktavikruti* caused due to *kaphadosha*, it leads to increase in coagulability of blood while due to *guru*, *manda* and *sthir* property of *kapha* atherosclerotic diseases occurs. While if *Raktavikruti* is caused due to *vatadosha*, then it mainly affected the rhythm of heart. So there is development of cardiac arrhythmia or impulse conduction disorders like BBB, heart block, etc. *Vatadosha* can also causes congenital heart diseases like VSD, ASD, PDA or Tetralogy of fallot, Coarctation of Aorta due to *vibhajana* is karma of *vata* and defective *vibhajana*.

B) MODERN ASPECT OF “CARDIOTOXICITY”

Cardiotoxicity is commonly seen as a side effect of many drugs like anticancer drugs, specifically severe cardiotoxicity seen as side

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effect of drugs belongs to class anthracycline. Other drugs like amphetamine, zidovudine, mitomycin, and paclitaxel also leads to cardiotoxicity. The common mechanism which causing cardiotoxicity are oxidative stress, generation of free radicals and hypoxia. Long-term exposure to such cardio-toxic drugs further leads to apoptosis & deregulation of myocontractility. Cardiotoxicity of drugs occurs in two ways i.e. (1) Affecting the cardiac muscles performance which leads to cardiac injury OR (2) by altering the ion channels and pump (voltage-gated Na^+ and K^+ channel and $\text{Na}^+ - \text{K}^+$ ATPase pump). Exposure to such drugs can leads to prolonged cardiac repolarization (increased QT interval) and also causes arrhythmia (Torsades de pointes)⁵.



Cardiotoxicity can be mainly classified into 2 Types:

- 1) Type I: irreversible damage caused due to the cumulative doses and
- 2) Type II: reversible damage which is not related with cumulative doses.

Clinically cardiotoxicity is of various types e.g. Cardiomyopathy, CHF, LVEF, Cell damage etc. In these LVEF (left ventricular ejection fraction) reduction is the most frequent symptom of such cardiotoxicity, in which there is dysfunction of left ventricle and leads to congestive heart failure. Arrhythmias, changes in blood pressure or cardiomyopathy are also the symptoms of cardiotoxicity⁶.

The chemotherapeutic agents in cancer treatment and psychiatric drugs are the major causes of cardiotoxicity. As per the data of National Health and Nutrition Examination, 33% long cancer survivors die due to cardiac diseases. Along with this, about 6.6% of patients of breast and hematological cancer which are on chemotherapy has developed heart failure⁷. Patients of psychiatric illness, taking specific antipsychotic and antidepressants drugs responsible for extensive chances of cardiovascular mortality. These drugs leads to cardiovascular complications, especially cardiac arrhythmias. For example, Clozapine which is commonly used and most popularly known as a most effective drug for resistant schizophrenia is responsible for life-threatening complications like cardiomyopathy and myocarditis. Myocarditis caused due to clozapine leads to the mortality in 24% of individuals. If there is already coexistence of a heart disease in these patients, then it leads to complications in the management of mental illness and worsens the course of illness. The co-occurrence of psychiatric disorders in the patients with cardiac disorders

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might affect the clinical outcome and morbidity. Cardiotoxicity induced by drugs is generally seen in the form of cardiac muscle dysfunction that may lead to heart failure which represents as an important adverse effect of some common traditional antineoplastic agents like cyclophosphamide, taxanes, anthracyclines, 5-fluorouracil and also newer agents such as biological monoclonal antibodies, e.g., nivolumab, bevacizumab, trastuzumab; tyrosine kinase inhibitors, e.g.,

nilotinib, sunitinib; antiretroviral drugs, e.g., zidovudine; antidiabetics, e.g., rosiglitazone; as well as some illicit drugs such as cocaine, methamphetamine, alcohol, and synthetic cannabinoids.

1) Cardiotoxic Drugs.

The various agents responsible for cardiac complications like variation in blood pressure, arrhythmias, pericarditis, physiological changes in heart muscles, myocarditis, cardiomyopathy, left ventricular dysfunction or heart failure, etc are given in **Table 1** and **Table 2**

Table 1 Cardiotoxic Chemotherapeutic Agents⁸

Sr. No.	Class	Drug	Cardiotoxic effects
1	Anthracyclines/ Anthraquinolones	Doxorubicin/ daunorubicin	LV dysfunction Myopericarditis
		Epirubicin	LV dysfunction, Supraventricular tachycardia
		Mitoxantrone	LV dysfunction Arrhythmias
2	Alkylating agents	Cisplatin	LV dysfunction, Myocardial ischemia Heart blocks
		Cyclophosphamide	Hemorrhagic myopericarditis, Acute heart failure, Arrhythmias
3	Antimetabolites	Cytarabine	Pericarditis, Angina
		5-Fluorouracil	Myocardial spasm, Ischemia Ventricular arrhythmias
4	Antimicrotubules	Paclitaxel	Ventricular tachycardia, AV block and bradycardia
		Vinca alkaloids	Myocardial ischemia, Myocardial infarction
5	Biologic response modifiers	Interferons	Hypotension/LV dysfunction
6	Topoisomerase inhibitors	Etoposide	Hypotension, Myocardial ischemia
7	Differentiation agents	All-trans-retinoic acid	Pericardial effusion, Pulmonary edema
		Arsenic trioxide	Prolonged QT, Torsades de pointes
8	Monoclonal antibodies	Trastuzumab	LV dysfunction
		Rituximab	Hypotension, Arrhythmias

Table 2 Some other Cardiotoxic drugs⁹

Sr. No.	Class	Drug	Cardiotoxic effects
1	Antidepressant	(1) tricyclic antidepressant (TCA) (more common) e.g. amitriptyline, amoxapine, desipramine, doxepin, imipramine	postural hypotension, altering atrioventricular conduction, prolongation of the duration of QRS interval, altered cardiac rhythm and myocardium contractility, Sudden death
		(2) selective serotonin reuptake inhibitor (SSRIs)	
		(3) monoamine oxidase inhibitor (MAO inhibitors)	
2	Calcium Channel	(1) benzothiazepines e.g. diltiazem	negative inotropic effect, rennin-angiotensin

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	Blockers	(2) dihydropyridines e.g..nifedipine, and (3) Phenylethylamine like.verapamil.	system activation and alteration of membrane Ca ²⁺ transport while in patients of Chronic heart failurecauses hemodynamic alteration
3	Antiarrhythmic drugs		increased risk of CHF
4	Signaling Protein	Interferon	cardiomyopathy and cardiac ischemia
5	CNS stimulant	Amphetamines Methamphetamines	/ acute coronary syndrome, cardiomyopathy, cardiac hypertrophy, necrosis, myocarditis, inflammation, left ventricular dysfunction and left ventricular dilatation
6		Cocaine	tachycardia and increased blood pressure, Chronic use: myocardial ischemia Acute administration: arrhythmia, prolongation of PR, QRS and QT duration that result into arterial fibrillation and tachycardia
7	Anabolic Androgenic Steroids	- testosterone and its derivatives	hypertension, atherosclerosis and impaired contraction-relaxation, myocardial necrosis, cardiac steatosis, coagulation and coronary atheroma
8	Addictive psychoactive	Alcohol	left ventricular dysfunction and cardiomyopathy, affects the myocardial contractility and abnormal rhythm
9	heavy metals	lead, cobalt and cadmium,	altered myocardial contraction, cardiac cells changes structurally and deregulation of some essential enzymes in heart muscles

2) Signs and Symptoms:¹⁰

In cardiotoxicity heart is not able to pump blood efficiently throughout the whole body and shows symptoms like shortness of breath, fatigue, and anemia. These symptoms shows that, heart has difficulty in maintaining its essential functions. If there is risk of cardiotoxicity, it leads to the symptoms like chronic coughing, swelling of the ankles and feet, and weight gain. These signal that the heart is not beating in a proper way and failing cardiac events. It produces mild changes in blood pressure, arrhythmias, myocardial infarction, myocarditis, changes in electrocardiograph, pericarditis, thrombosis, left ventricular failure and congestive heart failure. These may occur during or after treatment or within some days or weeks or months or sometimes years after the completion of chemotherapy.

3) Diagnosis:¹¹

The most sensitive & specific method for diagnosis of the drug induced cardiotoxicity is Endomyocardial biopsy which describes the structural alterations in microscopic level to the myocardial tissue. But its use is limited because of its high invasiveness of the procedure. Electrocardiographic (ECG) changes are also seen during the treatment with cancer drugs. These changes include decrease in QRS voltage and also changes in ST-T wave. The commonest finding is the prolongation of QT corrected (QTc) interval. It measures the complete time duration of the myocardial depolarization and repolarization. Prolonged QT indicates the increased risk of ventricular arrhythmias, particularly torsades de pointes, and sudden death.

Imaging methods like echocardiography are more often used to determine CICM (chemotherapy-
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induced cardiomyopathy). Left ventricular ejection fraction (LVEF) evaluated by two-dimensional echocardiography (2D-ECHO) is the standard parameter to assess the cardiotoxic effect of chemotherapy. According to Cardiac Review and Evaluation Committee (CREC), for diagnosis of such toxicity, least one of the following criteria must be present:

- 1) In cardiomyopathy, there is decrease in Left ventricular ejection fraction (LVEF) of heart which was either global or more severe in the septum;
- 2) Symptoms of congestive cardiac failure;
- 3) Associated signs of congestive cardiac failure, including but not limited to S3 gallop, tachycardia, or both; and
- 4) Decline in LVEF of at least 5% to less than 55% with accompanying signs or symptoms of congestive cardiac failure, or a decline in LVEF of at least 10% to below 55% without accompanying signs or symptoms.

4) Risk factors for drug-induced cardiotoxicity: ¹²

- Age at time of exposure (less than 4 years and old age are more prone)
- Female gender
- Physical inactivity
- Smoking
- Genetic predisposition
- Black ethnicity
- History of cardiac disorders or left ventricular dysfunction
- Hypertension

- Obesity
- Diabetes
- Dyslipidemia
- Chemotherapeutic agent category
- Total cumulative dose
- Concomitant radiotherapy/cardiac irradiation
- Abnormal biomarkers levels or cardiac imaging

5) General management of cardiovascular toxicity

As per the modern medical science, the management of various symptoms like Cardiac failure, IHD, Hypertension, arrhythmia, etc arises due to cardiotoxicity are given in **Table 3**

Table 3: Management of cardiovascular toxicity

Toxicity	Management
Cardiac failure	Avoid risk factors Diuretics, MRA, BB, ARBs or ACEIs ICD or CRT
Ischemic heart disease (IHD)	nitroglycerine or Nitrate CCB, BB, ARBs or ACEIs Antiplatelet agent, anticoagulation Lipid-lowering agents Coronary revascularization (intervention or surgery)
Hypertension	Diuretics, BB, DHP-CCB, ARBs or ACEIs
Arrhythmia	
QT prolongation	Avoid risk factors, ICD in cases of VT or VF
Atrial fibrillation	Rhythm control: cardioversion Rate control: BB, digoxin, non-DHP-CCB
Acute pericarditis	Aspirin, NSAID, colchicine
Pericardial effusion	Pericardiocentesis, pericardiectomy
Pulmonary hypertension	Iloprost, Ambrisentan
Venous thromboembolism	Anticoagulation

C) “GARAVISHA” & DRUG INDUCED CARDIOTOXICITY

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1) Ancient Aspect

The word *gara* derived from गृ (Root Word) and अच् (Suffix) which means to dilute or in liquid form¹³. It is classified under *kritrimaor samyogajavishaby* Acharyas.

“Garasamyogajamvishamgarasamjamgadaprad amkaalantaravipakitwatnatadaasuharatyasoon”

¹⁴.

Garavishais one of unique concept explained in our ancient Ayurvedic texts. It is artificially prepared by the combination of various substances and responsible for various disorders. But as it takes some time for its metabolizing inside the body, it does not cause instantaneous death of an individual. Now a days, due lifestyle changes, adulteration, fast foods, environmental pollutants, increased use of pesticides, peoples gets exposed to various toxins from many, which one day become intolerable as far as health is concerned. Such non-systematic use of these resources further leads to exogenous or endogenous toxicity. Incompatible drugs in a medicinal formulations and those *vishayogas* which are having lower potency can also be incorporated into *garavisha*.

Garavishacan be classified into 2 main types:¹⁵

- 1) *Nirvishadravyasamyogakrtam*: These are combination of two nonpoisonous substances. eg: *virudhahara* which can be considered as *gara*.
- 2) *Savishadravyasamyogakrtam*: Combination of poisonous materials also known as *kritrimavisha*.

According to *Acharya Charaka*, *Gara* is the toxic combination of substances which exerts toxic effects after the interval of sometimes and which does not cause the death of the patient instantly¹⁶. According to *Acharya Vagbhata*, *Garavish* is included in *krutrimvisha* (Artificial poison) formed by the combinations of various drugs. Its action may be acute or chronic and produces the disorders like *Shopha* (edema), *Pandu* (anaemia), *Udera* (ascites) etc.¹⁷. In *Garavisha* due to the impairment of *Agni*, *bysrotorodhadue* to accumulation of toxins as it cannot be properly metabolized and eliminated from the body, improper metabolism, accumulation of toxins at different tissue level, impairment of organs¹⁸.

2) Correlation between *Garavisha* and Drug Induced Cardiotoxicity:

Now a days, the chemical induced diseases are increasing paradoxically and in recent years to become a major health problem. As per the Ayurvedic perspective we can incorporate these chemicals as a concept of *garavisha*. In today's world there are ample references of *garavisha*. Thus it has got contemporary relevance. In recent years everything has undergone a change – life style, habits of people, diseases and its manifestations etc. In case of *garavisha* also, whatever have been described in our ancient classics are not exactly the same in today's society but it relevant in most of the cases of toxicities. *Gara* is toxic combination of substances which are non-poisonous in nature or

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which exerts toxic effects after interval of time and such does not kill the patient instantly. *Garavisha* is formulation of different organs of insects or their waste products, *Viruddhaushadhi* (incompatible drugs), *Bhasmas* (ashes) and less potent poisons¹⁹. According to Charak samhita, *Garavisha* (Artificial poisons) causes disorders like *Pandu*, *Krushata*, *Alpagni*, *Hridpradhaman*, *Aadhmana*, *HastapadaShotha*, *Udara*, *Grahani*, *Rajyakshma*, *Kshaya*, *Jwara* and *Gulma*^[20]. Here the symptom *Hridpradhamana* can be associated with the concept of cardiotoxicity in the current scenario of drug induced toxicity due to *garavisha*.

Garavisha can be any food material which mixed with the substances that are harmful to the body i.e. insects body parts, wastes etc. The substances that causes a toxic effect may be pesticides, insecticides or drugs like Quinine, NSAIDs, Steroids or any other chemical substances which are present in the environment of an individual can be included in it. The exposure of these toxins through our daily life responsible for harmful effects in the body. For example, aspirin can cause acute and chronic overdose effects. Here the acute effects of aspirin may be accidental or intentional while chronic effects may occurs in day normal daily dose build up in the body. Use of Aspirin in viral illness inhibit the fat metabolism which may further increase the risk if Reys syndrome. Similarly, Paracetamol overdose causes liver and kidney damage. In this way Cardiotoxicity occurs due to many

chemotherapeutic agents and other drugs can also be understood under the concept of *Garavisha*.

3) *Samprapti* (Pathophysiology)

Visha enters into body



Vitiates *Rasa-Raktadhatu*



Enters into the heart



Imbalance in the function of heart



Vishaha has *Guna* opposite to that of *Oja*



VishajanyaHidroga

4) *SamhitoktaChikitsa* (Treatment)

Direct reference of *VishajanyaHidroga* are not available in any of our ancient texts. But still pathophysiology and manifestation of drug induced toxicology can be correlated with the concept of in ayurveda. So the fundamental treatment modalities for management of *garavisha* can be useful in treatment of drug induced cardiotoxicity. The specific treatment modalities mentioned in *Samhitas* for *Garavisha* are as follows:

Shodhana:

Instantaneously, the patient of *garavisha* (Concocted poison) should be given *Vamana* (Emesis). He should be given the fine powder of *Tamra* (copper) along with honey for cleansing the heart (here it means stomach). After the heart is cleansed, the patient should be given *one Shana* quantity of the *SwarnaBhasma* (fine
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powder of gold) ²¹. When poisoning due to *Garavishais* diagnosed in any person, it should be treated immediately.

After the patient treated with *Vamana* (Emesis) & *Virechana* (Purgation), he should be given fine powder of *Tamra* (copper) mixed with honey, at the right time (i.e. after *Samsarjana karma*) which helps in detoxification process of *Hridaya* (here it means the stomach) ²². After this detoxification of *Hridaya*, the individual to be administrated with one *Shana* of gold powder (1 *Shana* i.e. 4 *Masha* i.e. 24 *Ratti* (about 3gm approximately), But this dose is practically too large and should not employed on patient. So, the *Swarnabhasma* should be preferably used in therapeutic dose i.e. 1/8 ratti to 1/4 ratti (which is about 15-30 mg approximately) ²³. The gold powder responsible to reduce the effect of poison and also act as a *Hridya* ²⁴. *Vagbhata* also describe the use of *dipan-pachan* treatment for *mandagnica* caused by *Garavisha* (Concocted poison). ^[25]

Sukshma Tamra-rajā chūrṇa (fine powdered copper) suggested that it should not be *Shodhita* (the purified and calcined one). It is because, if we use *Shodhita Tamrabhasma*, it does not cause emesis which is intended here for cleansing the heart ²⁶. *Nirmalikrita* (Filtered) *Sukshma Tamra-rajā* can also be used here for emesis as it also possesses emetic property. As its use is also safe over *Ashodhita Tamrabhasma* ²⁷.

Properties of *Tamra* ²⁸

Tamra is widely used from the ancient period in various Ayurvedic formulations in the *bhasma* form. The action of *tamra* due to its *rasa*, *guna*, *virya*, *vipaka* and *prabhava* known as *rasapanchaka* given in Table 4

Table 4: Rasapanchaka of *Tamra*

Rasa	<i>Tikta, Kashaya, Madhura & Amla</i>
Guna	<i>Snigdha</i>
Virya	<i>Ushna</i>
Vipaka	<i>Katu</i>
Karma	<i>Vishahara, Saraka, Lekhana, Dipana, Rochaka, Aayurvedhaka, Vamak & Virechaka</i>
Doshagnata	<i>Pittaja, Kaphaja & Pitta-Kaphaja</i>
Rogagnata	<i>Krimihara, Kushtha, Kasa, Shvasa, Kshaya, Pandu, Arsha, Grahani, Sthaulya, Jvara, Vrana, Garavisha, Shula, Yakrutpliha, Visuchika, Akshepa, Amlapitta, Chardi, Udara, Agnimandya, Parinamshula, Khalliantrashosha, Apasmara</i>

TREATMENT (as per ancient texts):

As the modern medication for the cardiotoxicity has harmful effects on the other organs along with the general complication. So it is need of time to find the possible alternatives for the cardiotoxicities arises in current scenario of lifestyle. So in ancient Ayurvedic texts, there are various treatment modalities explained for such toxicities. The collection of treatment protocol as per Acharya *Charaka*, *Vagbhata* and *Yogratnakara* are given in **Table 5**

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Table 5 Treatment modalities as per different acharyas

Acharya Charaka ²⁹	Acharya Vagbhata ³⁰	Yogratnakar ³¹
<p>1. Vamana (Emesis): administration of fine powder of copper along with honey for cleansing the heart. (<i>hrudayashuddhi</i>)</p> <p>2. Swarnaprashana: one shanaof the powder of swarna[gold]. Swarnacontrols all poisons and poisonous combinations. Poison does not stay in the body on taking suvarnalike water on lotus leaf.</p> <p>3. Agadpana- buffalo ghee cooked with <i>magdanti</i>, <i>trivittit</i>, <i>dantidravanti</i>, milk latex of <i>snuhi</i> and <i>madanfala</i> along with one <i>adaka</i> of cow's urine is useful incurring patients suffering from the poisons of snake's bite, insects and from <i>gara</i>.</p> <p>AgadKalpa in Charak Samhita: <i>MrutsanjivanAgada</i> (C.Chi.23/54-60) <i>KsharaAgad</i> (C.Chi.23/101-104) <i>NagdantyadiGhrita</i> (C.Chi.23/241-242) <i>AmrutGhrita</i>No.1 <i>AmrutGhrita</i>No.2 (C.Chi.23/242-249) <i>Hemachura Prayoga</i> (C.Chi.23/239) <i>Narayan Churna</i> (C. Chi.13/125-132)</p>	<p>1.Vaman</p> <p>2. Sharkarasuwarnadileha</p> <p>3. Suwarnamakshika and<i>suwarnabhasma</i>when given with sugar and honey cure <i>garvisha</i>.</p> <p>4. Treatment of mandagni The powder of <i>murva</i>, <i>amruta</i>, <i>tagar</i>, <i>pipli</i>, <i>patol</i>, <i>chavya</i>, <i>chitrak</i>, <i>vacha</i>, <i>musta</i>, <i>vidanga</i> mixed with either butter milk, warm water, water of curds, meat soup or sour liquid should be consuming by the patient having <i>Mandagni</i>, destroyed by artificial poisoning.</p> <p>5. Treatment of pain, <i>trishna</i>, <i>kas</i>, <i>shwas</i>, <i>hikka</i>, <i>jwarupdrava-ghrita</i> and <i>trifalaj</i> juice with <i>makoys</i> shake-<i>shwas kasnashak</i>. -decoction prepared from the meat of the pigeon, <i>shathi</i> and <i>pushkarmul</i> cooled and consume.³¹</p> <p>6. Treatment in damaged skin Apply <i>lepa</i> of <i>frenuka</i>, <i>chandan</i>, <i>priyangu</i>, <i>khason</i> skin.</p> <p>7. Treatment of ojkshaya <i>Ubtan</i> of <i>manjishta</i>, <i>apamarg</i>, <i>neem</i>, <i>haldi</i>, <i>papal</i> and <i>chandan</i>.</p> <p>8. Milk and ghee is supposed to be the best diet in <i>garavisha</i>.</p> <p>9. Nagdantyadighrit</p> <p>AgadKalpa in AshtangSamgraha: <i>JivanAgad</i> (AS.Su.8/29) <i>AjeyaGhrita</i> (AS.Ut.40/165-168) <i>NagdantyadiGhrita</i> (AS.Ut.40/164) <i>HaridraGhrita</i> (AS.Ut.40/162) <i>JatiGhrita</i> (AS.Ut.40/162) <i>NakuliGhrita</i> (AS.Ut.40/162) <i>TanduliyakamuladiGhrita</i> (AS.Ut.40/163) <i>Vrushyanimbadi Yoga</i> (AS.Ut.40/161) <i>PalashKshara Yoga</i> (AS.Ut.40/189-193) <i>Mantra prayoga</i> (AS.Ut. 40/194-196) <i>Tapyasuvarna Yoga</i> (AS.Ut.40/154) <i>Kiratatiaktadi Yoga</i> (AS.Ut.46/40-41)</p> <p>AgadKalpa in AshtangHridya: <i>Vajra Agad</i> (AH.Ut.36/82-83) <i>TiktakGhrita</i> (AH.Chi.19/2-7) <i>MahatiktakGhrita</i> (AH.Chi.19/8-11) <i>Tapyasuvarna Yoga</i> (AH.Ut.35/56) <i>Dantiharitaki Yoga</i> (AH.Chi.14/92-97) <i>Abhayarishta</i> (AH.Chi.8/64-68)</p>	<p>1. sharkarasuwarnadileha.</p> <p>2. PutrajivmajjaYog.</p> <p>3. Grihdhumadigrita.</p> <p>4. Paravatadihima.</p> <p>5. Garnashanras.</p>

DISCUSSION

In current scenario of modern medications, cardiac complications are increasing day by day. Polypharmacy approach of these medications usually leads to occurrence of various secondary diseases like arrhythmia, hypertension, etc. There

are so much drugs which are co-administered along with the existing therapy which may be responsible for the worsening of the cardiac complications. Now a days, generally all the physicians commonly uses calcium channel blockers, beta-blockers, anti-arrhythmic

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drugs, anticancer drugs, and immunomodulatory drugs in their practice, thus there must be proper monitoring for the use of such drugs. Especially in patients who are having left ventricular dysfunction, all extensive precautions must be taken to prescribe medicines for cardiac toxicity. There are about 10% of drugs which have been withdrawn from the worldwide market in the last 40 years due to cardiovascular safety issues, e.g., sibutramine, rofecoxib, and tegaserod. In such drugs, there is great effort has been taken to reveal cardiotoxicity of these drugs in the preclinical trial phase of development of medicinal products, still cardiotoxicity is still greatest safety concerns mainly due to the lack of sufficient knowledge of the mechanisms of cardiotoxicity. Also even if cardiotoxicity occurs by these drugs, there is no specific established antidote treatment for such toxicity and it is treated symptomatically by using general treatment protocol.

According to Ayurveda, *Hridroga* is the condition which disturbs the functions of heart. As *Hriday* is one of the marma among *Trimaramas*, explained in ancient Ayurvedic texts, Therefore even the slight injury responsible for fatal consequences. General causative factors explained in Ancient Ayurvedic texts does not shows direct explanation of *Aushadhijanyahridrog* about there is explanation about cardiac disturbances which produced as a side effect of medicines which are not prepared properly. This shows our ancient acharyas were well known about the cardiotoxicity due to drugs.

In *GaraVisha*, *Hridpradhmanis* one of the manifestations and can be correlated with manifestations of drug induced cardiotoxicity. This shows association between *garavisha* and drug induced cardiotoxicity. Hence treatment protocol of *garavisha* can be applicable for the management of drug induced cardiotoxicity. In Ayurveda, there is treatment modalities including both *Shodhan* and *Shaman Chikitsa* should be use for *Garavisha*. Out of these treatment modalities *Narayana Churna*, *Mahatiktak Ghrita*, *Tiktak Ghrita*, *Tapyasuvana Yoga*, *Abhayarishtha*, *Dantiharitaki* and *Patha* are indicated in the management of both *Garavishachikitsa* and *Hridroga Chikitsa*. Still there is scope of further clinical trials to be conducted for validation of such medication at global level.

CONCLUSION

From the given article, it is finally concluded that there is positive correlation between drugs induced cardiotoxicity and *garavisha*. Thus various treatment modalities can be useful in *garavishachikitsa* can be effective in drug induced cardiotoxicity in the current scenario. Thus it is helpful for researchers to explore different dimensions of treatment of drug induced cardiotoxicity. Further preclinical and clinical trials should be required to bring these product into market and global acceptance.

RESEARCH OUTCOME:

In last few a years, the demands of Indian traditional medicines has been increased in the

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medical world. Ayurveda is although highly effective in the various disorders in the today's world also but there is not proper exploration of pharmacology, pharmacodynamics, pharmacokinetics and pharmacovigilance of various Ayurvedic drugs. Therefore, advancements in the current situation of ongoing research methodology is need of time for the promotion of Ayurveda at the global platform. In the current article the ancient concept of *Garavisha* along with its relation with cardiotoxicity due to modern medications. Thus it helps for reestablishing the fact that, the treatment modalities used by our ancient acharyas can also be used in current scenario of cardiotoxicity. This helps the researchers to conduct preclinical and then clinical trials for the validation of results of Ayurvedic medications and gives the confidence to clinicians to prescribe these treatment modalities in drug induced cardiotoxicity. It also helps industries to look forward for manufacturing of formulation prescribed under the *Garavisha* concept in our ancient texts and this brings evolution for the globalization of Ayurvedic medications in drug induced toxicities due to modern drugs.

SCOPE OF FUTURE RESEARCH:

As the given article is review contemporary aspect of drug induced cardiotoxicity and classical aspect of *Garavisha*. It is an attempt to find correlation between them. This will be helpful in exploring the different dimensions of treatment of drug induced cardiotoxicity. Further clinical trials should be needed in this

context. After preclinical as well as clinical research of these treatment modalities validate their efficacy and acceptance of our ancient medications in the global platform.

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**CONSERVATIVE MANAGEMENT OF *PARIKARTIKA* W.S.R. TO
FISSURE IN ANO A CASE STUDY****¹Dr. B. N. Gadve, ¹M. S. Shalya Tantra and ²Dr. Surekha Dnyandeo Sase**¹Prof. & HOD Dept. of Shalya Tantra. CSMSS Ayurved Mahavidyalaya, Kanchanwadi,
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Corresponding Author*Dr. B. N. Gadve**Prof. & HOD Dept. of
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Kanchanwadi, Aurangabad,
Maharashtra.**ABSTRACT**

Ayurveda is a science of life, which mentioned various principles for maintaining proper health. Prevention is better than cure is one of the important Aim of *Ayurveda*.^[1] Fissure-in-ano is a very common and painful condition. Fissures occurs most commonly in the midline posteriorly, the least protected part of the anal canal.^[2] In *Ayurveda*, Fissure-in-ano can be correlated with the disease *Parikartika*. It is not mentioned as one of the separate disease in *Ayurveda* text. *Parikartika* described as one of the complication of *Basti karma*,^[3] also a *Garbhini vyapada*,^[4] and *Vamana-Virechana Vyapada*.^[5] It is also explained as one of the *poorva roopa* of *Arsha vyadhi*. *Parikartika* presented with pain, burning sensation, constipation, etc. *Ayurveda* is an ancient

medical science in which various treatment modalities are explained for *Parikartika* and other Anal disorders.

KEYWORDS: *Parikartika*, Fissure-in-Ano, *Ayurveda*.**INTRODUCTION**

Parikartika is one of the most common disease and common cause of pain in the anal region. Now a day's it is commonly found in young women / men, pregnant women, etc. *parikartika* is a painful condition which affects the anal region. Fissure-in-ano is a very common and painful condition. Fissures occurs most commonly in the midline posteriorly, the least protected part of the anal canal. In males, fissures usually occur in the midline posteriorly

(90%) and much less commonly anteriorly (10%). In females fissures on the midline posteriorly are slightly commoner than anteriorly (60:40).

Fissures starts proximally at the dentate line. So whole of the anal fissure lies in the sensitive skin of the anal canal and that is why pain is the most prominent symptom. There are two types of fissure-in-ano – acute & chronic. Acute fissure-in-ano is a tear of the skin of the lower half of the anal canal. There is hardly any inflammatory induration or oedema of its edges. Anal sphincter muscle spasm is also present. Chronic fissure-in-ano is a deep canoe-shaped ulcer with thick oedematous margins. At the upper end of the ulcer there is hypertrophied papilla. At the lower end of the ulcer there is a skin tag known as ‘Sentinel pile’. There is characteristic inflammation and indurations at the margins.^[6]

According to *Acharya Sushruta*, *Parikartika* is a condition in which there is cutting type of pain around or in *Guda* region, *Nabhi* region and its surrounding area. Acute ulcers with short history usually heals with conservative treatment. It includes; Oral pain medications, Stool softener may be used to make the stool soft enough to be passed without anal spasm, soothing ointments, injections, etc.^[7]

CASE STUDY

A 35 year old male patient visited in OPD of *Shalya tantra* presenting with the complaints of Pain & burning sensation in anal region, Constipation (On & off) since from 8 – 10 days.

Name of patient: ABC, 35 year old, Male.

Chief complaints

1. Pain & burning sensation in anal region
2. Constipation (on & off)

Ashtavidha Pariksha

- | | |
|----------------------------------|------------------------------------|
| a. <i>Nadi</i> = 74 / min | e. <i>Shabda</i> = <i>Prakruta</i> |
| b. <i>Mala</i> = <i>Samyaka</i> | f. <i>Sparsha</i> = <i>Anushna</i> |
| c. <i>Mutra</i> = <i>Samyaka</i> | g. <i>Druka</i> = <i>Prakruta</i> |
| d. <i>Jivha</i> = <i>Sama</i> | h. <i>Akruti</i> = <i>Madhyam</i> |

General examination

PR – 80 / min

BP - 130/80 mm of Hg

RS - AE= BE, Clear

CVS – S₁ S₂ N

CNS - Conscious, Oriented

P/A - Soft, No Tenderness

P/R – Anal spasm ++

Fissure-in-Ano at 5 ‘o’ clock

Past History

No history of any major illness

No H/O – DM, HTN

Management

In *Parikartika*, the conservative management works by softening the stool, reducing the anal pain, muscle spasm and swelling.

1. *Avagaha swedana* [Hot sitz bath]

It is given with the help of *Triphala Churna Kwatha*.^[8]

It is one of the type of *Swedana*,^[9] It is a warm and shallow bath which helps to cleanse the perineum & rectum. *Triphala Churna* contains 3 main drugs which are *Haritaki*, *Bibhitaki* and *Aamalaki*. It is of antibacterial, anti-inflammatory, *Kandughna*, etc. properties. Which helps to relieve spasm, pain and itching around the anal region.

2. *Erandabhrushtha Haritaki*^[10]

Erandabhrushtha Haritaki tablet contains *Eranda taila* and *Haritaki* drugs. It helps to soften the stool and enhances the intestinal motility. It helps to relieve acute, chronic type of constipation, indigestion, gastritis, etc.

3. *Arshakuthara Rasa Vati*^[11]

This tablet is a combination of *Kajjali*, *Lauha bhasma*, *Shunthi*, *Tamra bhasma*, *Danti moola*, *Pippali*, *Marich*, *Shuddha Tanka*, etc. It helps to improve digestion power, relieves swelling, pain around the anal region. It is very effective medicine for *Arsha* (Hemorrhoids).

4. *Triphala Guggulu Vati*^[12]

It contains *Triphala* (*Haritaki*, *Bibhitaki*, *Aamalaki*), *Guggulu*, *Pippali* drugs. It is one of the best remedy for Ano-rectal conditions, Hemorrhoids and Fistula. It helps to ease the bowel

movements, and acts as a mild laxative. *Triphala* helps to soothes the inflamed mucous layer and further infection. *Guggulu* is one of the best herbal which is having anti-inflammatory action.

Local treatment for *Parikartika*

The drug used for the local treatment is having properties like *Vata-shamaka*, *Vrana shodhaka*, *Vrana ropaka*, *Pitta shamaka*. Therefore *Jatyadi taila*^[13] *matrabasti* is given in the *matra* of 15 ml BD. It helps to relieve constipation, and very effective.

Pathya – Apathya for *Parikartika*

<i>Pathya</i>	<i>Apathya</i>
<i>Madhura, Ushna, laghu Aahara, Vata anulomaka Aahara & Vihara, Green leafy vegetables, etc.</i>	<i>Ati ruksha Aahara, Ati lavana Aahara, Vega dharana, sitting on Hard objects, etc.</i>

OBSERVATIONS

The effect of treatment on Pain & Burning sensation in anal region & constipation is as follows;

	Symptoms	Before treatment	After treatment
VAS Scale	Pain in anal region	10	5
	Burning sensation in anal region	8	5
	Constipation	7	1

Gradation of Symptoms

1 - 3 = Mild; 4 - 6 = Moderate; 7 - 10 = Severe

DISCUSSION

In this case study observations of was done before and after treatment based on symptoms.

- *Triphala Churna Kwatha Avagaha Swedana* - was given which helps to relieve pain, spasm, & helps to cleanse the perineum & rectum. *Triphala* acts as anti-inflammatory, anti-bacterial.
- *Erandabhrushtha Haritaki* – it is one of the important drug formulation, which contains *Haritaki* & *Eranda taila* drugs helps to softens the stool & helps to relieve constipation.
- *Arsha Kuthara Rasa Vati* – It is useful for the treatment of Anal disorders, Hemorrhoids, Fissure-in-ano, Fistula etc. Also it helps to improve digestion.
- *Triphala Guggulu Vati* – it is having anti-inflammatory property, relieves constipation, it helps to cure *Parikartika* (fissure-in-ano).

CONCLUSION

Fissure-in-ano i.e. *Parikartika* is one of the common disorders Now a day's. In *Ayurveda*, there are various treatments described for *Parikartika* and other anal disorders. The management of *Parikartika* is done with the help of oral medications having properties like *Deepana*, *Pachana* which helps to improve *Agni* (digestive power). Local treatments like *Matrabasti* helps in the healing of fissure-in-ano.

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A CRITICAL REVIEW ON INTERPRETATION OF SEAFOOD (FISH) IN GARBHINI (PREGNANT WOMEN)

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ABSTRACT

To rely on *Ayurveda* is the best way to ensure a safe and natural childbirth. *Ayurveda* understand all the factors which related to beneficial or dangerous to childbirth. By following proper *Garbhini Paricharya*, the pregnant woman is prepared for a natural delivery and healthy child. *Ayurveda* considers food to be the best source of nourishment as well as medication for the pregnant women. Seafood consumption during pregnancy is considered to be beneficial for neurocognitive development of the fetus. But, now a day's seafood are radiated and added with other preservatives such as ascorbic acid, erythorbate and formalin to maintain their quality. On consuming such types of sea foods excessively during pregnancy causes congenital anomalies, growth restriction and Intra uterine death of the fetus. This paper is an attempt to explore the pros and cons of seafood

consumption during pregnancy.

KEYWORD: *Garbhini, Guru, Ushna, Garbhini Paricharya, Garbhoupaghatakar- Bhava, Matsya.*

• INTRODUCTION

The woman is said to be complete when she becomes a mother, pregnancy is a climax of fruitful life which every married couple expect in due to course of life. *Ayurveda* ideally gave prime importance to *Garbhini* (pregnant woman).

पूर्णमिव तैलपात्रमसङ्क्षोभयताऽन्तर्वत्नी भवत्युपचर्या॥ (च. शा. 8/22)^[1]

Ayurveda compared the condition of *Garbhini* with that of a pot filled with oil up to brim. When the pot becomes unstable, the oil spills. So, if proper care is not taken during antenatal period, hers & the fetus's health becomes deteriorated. Also, *Acharya's* explained regimen for *Garbhini*, which helps to maintain the health called as '*Garbhini Paricharya*' (*Paricharya* = *Aahara*+*Vihara*+*Pathya*). *Aahara* (food) is considered as the best nourishment as well as panacea (medicament) for both mother's health and fetus's growth and development. In present era, every woman is much aware about the importance of antenatal care & the daily routine which has to be followed during pregnancy. There is lack of knowledge and some confusion about the consumption of seafood in pregnancy.

Ayurveda explained the importance of the consumption of *Jala Mansa* as *Mastyā*, *Rohita mastyā* etc. They provide *Bruhana*, *Vrushya*, *Balavardhana* and *Upachaya* to the body. But when it consumed in excess, result in vitiated *Tridosha*.

गुरूष्णामधुराबल्याबृंहणाःपवनापहाः॥८१॥

मत्स्याःस्निग्धाश्चवृष्याश्चबहुदोषाः प्रकीर्तिताः॥(च. सू. 27/81-82)^[2]

Seafood are the primary dietary sources of omega -3(n-3), polyunsaturated fatty acids, DHA- Docosahexanoic acid & rich in minerals such as zinc, iron, iodine. In particular, DHA is essential for optimal fetal neurological development & may also protect against other adverse perinatal & long term outcomes. According to Food and Agriculture Organization of United Nation, worldwide fish consumption is 23 million MT & 20.5 kg per capita consumption.^[3]

The severe side effects occur because of mercury toxicity & exposure to different pathogens & plastics. Sea-foods especially fishes are contaminated with methyl mercury, a neurotoxin to which the fetal brain is highly sensitive. Even preservatives added for seafood preservation such as ascorbic acid, erythorbate, sodium metabisulphide & the pollutants present in the water bodies cause increased risk to pregnancy & fetal development.

This paper is an attempt to collect and compile the information which gives information about benefits as well as risks of seafood consumption during pregnancy.

AIMS AND OBJECTIVE

- 1) To study interpretation of seafood in pregnancy (*Garbhini*) according to *Ayurveda*.
- 2) To study interpretation of seafood in pregnancy according to modern science.

MATERIALS AND METHODS

1) Classical textbooks of Ayurveda such as

Ashtanga Hridaya, *Ashtanga Sangraha*, *Charak Samhita*, *Sushruta Samhita*, *Kashyapa Samhita* were reviewed to analyze the information about *Jalaj Mansa* intake in *Garbhini Avastha*.

2) Different databases such as

Research gate, Pub Med, Google, Google Scholar, Handbook on Fisheries Statistics were searches to conclude effects (positive and negative) of seafood consumption during pregnancy.

METHODOLOGY

✚ Ayurvedic view

▪ *Matsya Guna*

गुरुष्णामधुराबल्याबृंहणाःपवनापहाः॥८१॥

मत्स्याःस्निग्धाश्चवृष्याश्चबहुदोषाः प्रकीर्तिताः ॥^[2]

▪ *Garbhopaghatkar Bhava*

गर्भोपघातकरास्त्वमे भावा भवन्तिः;

तद्यथासर्वमतिगुरुष्णतीक्ष्णं दारुणाश्च चेष्टाः--- ॥ (च. शा. 4/18)^[4]

▪ In *Garbhini -Varja Guna*

गर्भिणी तीक्ष्णौषधव्यवायव्यायामवर्जनीयानां-- ॥ (च. सू. 25/40)^[5]

<i>Gunas</i>	<i>Matsya guna</i>	<i>Garbhopaghatkar bhava</i>	<i>In Garbhini -varja guna</i>
<i>Guru</i>	+	+	+
<i>Ushna</i>	+	+	+
<i>Tikshna</i>	+	+	+

When we compare the *Matsya Guna* and *Garbhopaghatkar Bhava, Guru, Ushna* and *Tikshna Guna* are same in both. *Acharyas* have said that in *Garbhini, Ushna, Tikshna* and *Guru Guna Ahara* is contraindicated. So, it can be concluded that *Matsya* is contraindicated in pregnancy because of its harmful effect on *Garbhini* as well as *Garbha*.

🌈 Modern view

Modern science has mentioned that, excessive seafood consumption during pregnancy has harmful effects on fetus growth and development.

Reasons

- 1) Seafood contain methyl mercury
- 2) Preservatives and its side effects
- 3) Effects of irradiated sea food
- 4) Effects of pollutants

RESULT

From the articles and databases reviewed it is found that both *Ayurveda* and Modern Science does not support to take seafood consumption during pregnancy.

DISCUSSION

➤ Ayurvedic view

○ MATSYA GUNA

गुरुष्णामधुराबल्याबृंहणाःपवनापहाः॥८१॥

मत्स्याःस्निग्धाश्चवृष्याश्चबहुदोषाः प्रकीर्तिताः ॥^[2]

The flesh of the fish in general is heavy to digest, hot in potency, sweet in taste, strengthening, nourishing, is effective in treating *vata*, unctuous and an aphrodisiac. It however has many hazardous properties as well.

When *Matsya* or *Jala Mansa* intake are excessive in *Garbhini Avastha*, its effect seen on *Garbhini* and its foetus also.

○ EFFECT OF SEAFOOD IN PREGNANCY

--मत्स्यमांसनित्या चिरनिमेषं स्तब्धाक्षं वा, ॥ (च. शा. 8/21)^[6]

A woman used to consume fish excessively would give birth to a child with lagophthalmos and related eye disorders.

--एभिर्गर्भः स्त्रवेदामः कुक्षौ शुष्येन्प्रियेत वा ॥ ४७ ॥ (अ. ह. शा. 1/47)^[7]

Due to *Tikshna*, *Ushna* and *Guru Ahara* seven, the embryo will be either expelled premature, dries up inside or even dies.

➤ Modern science view

1) Methyl mercury (MeHg) toxicity

Mercury occurs naturally in the environment and accumulates in the aquatic food chain, including fish as methyl mercury.^[8]

Methylmercury (MeHg) is an organic form of mercury that can damage the developing brains of human foetus. Women who consume methylmercury during pregnancy can bear children who have neurological issue because methylmercury has toxic effect on the nervous system during embryonic development.^[9]

MECHANISM OF MeHg toxicity

When pregnant women consumes excessive seafood which contain MeHg



Reaches GIT and get absorbed into her blood stream



Via blood stream crosses placenta barrier and reaches Fetus (MeHg level in umbilical cord blood are about 1.7 times as high as the mother's blood levels).



Prenatal exposure to MeHg results in cognitive deficits, motor skill effects, attention deficits, language skill deficiencies & decrease learning capacity & memory.

--The cadmium, polychlorinated biphenyls, selenium present in seafood causes skin lesions, acne, allergic reactions, and hepatic toxicity & increase the risk of cancer.

2) Preservatives and its side effects^[10]

Fish is extremely perishable because of the rapid microbial growth naturally present in fish and by contamination. So preservatives are highly used in fish storage to extend shelf life and to maintain its quality. The preservatives used in fishes are categorized into two types which are natural and chemical preservatives methods. The natural methods are Freezing, Drying,

Salting, Smoking, Scanning and chemicals such as Ascorbic, Benzoic, Erythorbate Acids and Ionizing Radiation also causes severe illness.

Preservatives & Side effects

1. Ascorbic acid (E-300) - Nausea, vomiting, head ache, Joint pain.
2. Erythorbic acid (E-315) - Allergic reactions
3. Sodium erythorbate (316) - headache, lethargy, dizziness.
4. Sulphordioxide (E-220) - affects respiratory system
5. Sorbic acid (E-213) - skin rashes, itching
6. Sodium metabisulphite-(E-200) - urticaria, hypotension.
7. Formalin - burning sensation in eyes, nose, throat & watery eyes.
8. Benzoic acid - Eye damage, coughing, skin irritation.
9. Ammonia - Coma, convulsions, on severe exposure.

3) Effects of irradiated sea food

In present era, fishes are preserved by developing modern technologies such as ionizing radiation method which using cobalt, radio isotopes & cesium 137. Irradiation forms volatile toxic chemicals such as benzene and toluene, chemicals known or suspected to cause cancer & birth defect.¹¹ Depending on the stage of fetal development, the health consequences of exposure of radiation at doses greater than 0.5 Gy can be severe, even if such a dose is too low to cause an immediate effect for the mother and foetus also.^{12]}

When the radiated food are ingested, they get absorbed into blood stream from maternal blood they reach foetus body by crossing the placental barriers. They brings vascular changes in the uterus and brings risks to foetus's normal growth and development. The health consequences can include growth restriction, malformation, impaired brain function and cancer.

4) Effects of pollutants

Increase the rate of water pollution due to developing industries. Such developing industries release large amount of heavy toxins into water bodies and this affects aquatic animals severely. The metals get into the tissues of aquatic animals mainly via their food. In fish, metals can also come via mechanical capture of suspended particles of hydroxides in gills, and chemical absorption of ions on the mucous membrane. This deteriorates fish's nature quality and results in the formation of odorous compounds such as ammonia and hydrogen

supplied gas. On consuming such type of fishes in pregnancy causes birth defects and heavy metal toxicity.

Also, pollutant water contain microorganism such as Coli, Salmonella and Vibrio can contaminated sea food like oysters, mussels and clam etc., causing food poisoning. Severe food poisoning can affect the foetus in following ways: IUD, birth defect, premature birth.^[13]

- Effect of Pollutant according to *Ayurveda*:

- मत्स्याः परं कफकराश्चिलिचीमस्त्रिदोषकृत् । (अ. ह. सू. 6/67)^[14]

Ayurveda classics quoted that generally fish consumption aggravates *Kapha dosha* predominantly.

- तत्र शुष्कपूतिव्याधितविषसर्पहतदिग्धविद्धजीर्णकृशबालानामसात्म्यचारिणां च मांसान्यभक्ष्याणि, यस्माद्विगतव्यापन्नापहतपरिणताल्पासम्पूर्णवीर्यत्वाद्दोषकराणि भवन्ति । एभ्योऽन्येषा मुपादेयं मांसमिति ॥ (सु. सू. 46/126)^[15]

Our *Acharya Sushruta* says seafoods which are very dry, old, emaciated, putrid, dead from disease, poisoned; underdeveloped, polluted should not be used for consumption.

- अरोचकं प्रतिश्यायं गुरु शुष्कं प्रकीर्तितम् । विषव्याधिहतं मृत्युं बालं छर्दि च कोपयेत् ॥ कासश्वासकरं वृद्धं त्रिदोषं व्याधिदूषितम् । क्लिन्नमुत्क्लेशजननं कृशं वातप्रकोपणम् ॥

(सु. सू. 46/127)^[16]

But when it is used for consumption it will cause *Tridosha* aggravation and also causes *Kasa*, *Swasa*, *Arochaka* and *Chhardi*.

Ashtanga sangraha, *Charaka samhitha*, *Bhavaprakasha*, *Harita samhita* quoted as follows; “मत्स्यमांसनित्या चिरनिमेषं स्तब्धाक्षं वा, ॥”. All the *Brihatrayees* in *Ayurveda* quoted *Uttama Jalaja Mamsa* as *Rohitaka matsya* (red striped fish). And *Chilichima* is considered as inferior one than other types of *Jalaja mamsa* as it causes incompatibility and allergy.

❖ Guidelines –ACOG^[17]

The AMERICAN COLLEGE OF OBSTETRICS AND GYNECOLOGY (ACOG) – reviewed EPA and FDA scheduled dietics of 2015 -2020 and quoted guidelines of seafood consumption during pregnancy:

1. Pregnant women should eat at maximum 8 to 12 ounces /week around 350gms. Only choose low level mercury.
2. Avoid large predatory fishes such as Swords, Shark, Dolphins, King Mackerel, and Tuna.
3. If sensitized to sea food, should avoid consumption.
4. For e.g. Best choice (low Hg content) – E.g. Anchovy, Catfish, redfish.

Good choice (medium mercury content) – E.g. Carps, Rockfish.

At the end of this elaborative study, it is found that seafood consumption give immense benefits. At the same time excessive seafood consumption during pregnancy causes methyl-mercury toxicity in the mother & neurocognitive impairment in foetus.

CONCLUSION

For maintain the seafood quality, there is added chemical preservative and radiation also. On consuming such types of sea foods excessively during pregnancy causes congenital anomalies, growth retardation and IUD of foetus.

Ayurveda emphasize that wholesome and unwholesome foods are responsible for happiness and sorrow respectively. By the great vision of our *Acharya* the importance of diet and regimen are to be followed during pregnancy and it's explained in detail in our *Shashtra's*. If these are followed by pregnant women, then she will give birth to healthy child and if not then according to *Sushruta* it will be *Jalmabalapravruta vyadhi* and according to *Vagbhata* it will be *Garbhajanya vyadhi*.

Recent researches and studies show that when a pregnant woman consumes seafoods it helps in neurocognitive development. But, these can be achieved only when sea food consumption is in proper dose.

आहारसम्भवं वस्तु रोगाश्चाहारसम्भवाः।

हिताहितविशेषाच्च विशेषः सुखदुःखयोः ॥ (च. सू.28/45)^[18]

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COCEPTUAL STUDY OF VIRUDDHA AHARA WITH RESPECT TO GARA VISHA

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ABSTRACT

According to Ayurveda, Aahar (food) is life of human being. Aahar (food), Nidra(sleep), Brahmcharya (celibacy) are the three pillars of human body. Diet plays an important role in our life. Ayurveda emphasise on consuming appropriate food, rightly processed, on right time, in right combination, in right quantity, in right season. *Viruddha Ahara* is a peerless concept described in Ayurveda. The diet which disturbs the balance among the body elements is called *Viruddha Ahara*.^[1] Many times a physically balanced diet can also disturb the homeostasis. Food taken in proper method nourishes the person physically and mentally both and it is the food through which person attains positive health and growth of body. Food taken in improper (Unbalanced) methods can cause various types of diseases. Therefore Ayurveda have given keen attention on concept of wholesome *ahara* and unwholesome *ahara*. Even incompatible diet should be considered

similar to Gara Visha. This article is an attempt to study the concept of *Viruddha ahara* w.r.t. *Gara Visha*.

KEYWORDS: Ayurveda, *Gara Visha*, Unwholesome diet, *Viruddha ahara*.

INTRODUCTION

Ayurveda remains one of the most ancient and yet living tradition practiced widely in India and has a sound philosophical and experimental basis.^[2,3] Ayurveda gives prime importance to the prevention of diseases by elaborating the appropriate lifestyle in terms of *Dinacharya* and *Rutucharya*. *Ahara* is very much essential for the sustainment of life of all living beings.^[4] It is stated to be responsible for both *Arogya* (health) and *Vyadhi* (disease). *Hita Ahara* (wholesome food) if consumed according to rules, they provide fuel to the fire of digestion; they promote mental as well as physical strength and complexion.^[5] Ayurveda emphasise on consuming appropriate food, rightly processed, on right time, in right combination, in right quantity, in right season.

AIM AND OBJECTIVES

Aim:- To study the Concept of *Viruddha ahar* w.r.t. *Gara Visha* as per ayurvedic classics & samhitas.

Objectives

- 1) To study *Viruddha Ahara* in detail according to Charak, Sushrut and Vagbhat
- 2) To study types of *Viruddha Ahara*.
- 3) To study effect of *Viruddha Ahara* on Human body and diseases caused.
- 4) To study *Gara Visha* according to samhitas.
- 5) To find correlation between *Gara Visha* and *Viruddha Ahara*.

MATERIAL AND METHODS

Materials - Ayurvedic Grantha– 1. Charaka Samhita- 2. Sushruta Samhita 3. Ashtanga Sangraha, Astang Hridaya Samhita, Ayurvedic text books and internet.

Method – Descriptive and conceptual study.

Literary Riview

CONCEPT OF VIRUDDHA AHARA

Viruddha Ahara is defined by Charaka. According to Acharya Charaka all kinds of foods which aggravate (Increase) the doshas but do not expel them out of the body and all of them become unsuitable or unhealthy for body is called as *Viruddha*.^[6]

The food articles by which the doshas are going to be provoked and spread or diffused from their place but these doshas are not eliminated from the body. So these food articles become

unwholesome. According to Acharya Sushruta *Viruddha Ahara* not only provokes the doshas but that also aggravate the *Dhatus*.^[7]

Types of *Viruddha Ahara*^[8]

Ayurvedic literature has described various types of *Viruddha Ahara*, which can be summarized as follows

1. *Desha Viruddha* - Consumption of those substances which are against place or land region - For example – To have *Ruksha* (Dry) and *Tikshna* (Acute) substances in arid region (*Maru desha*)
2. *Kala Viruddha* - Consumption of those substances which are against time or season – For example – Intake of *Katu* (Pungent) and *Ushna* (hot) substances in *Ushna kala* (*Grishma, Sharada Ritus*)
3. *Agni Viruddha* - Consumption of those substances which are against digestive power – For example – Intake of *Guru* food (foods which are heavy to digest) when there is *Mandagni* (low digestion power)
4. *Matra Viruddha* –Consumption of those substances which are against quantity – For example – Intake of *Madhu* (Honey) and *Ghrita* (Ghee) in equal quantity.
5. *Satmya Viruddha* - Consumption of those substances which are unwholesome – For example - Intake of *Madhur* (sweet) and *Sheet* (Cold) substance by person accustomed to *Katu* (Pungent) and *Ushna* (hot) substance.
6. *Dosha Viruddha* - For example – Utilization of drugs, diets and regimen having similar qualities with *Dosha*, but at variance with the habit of the individual.
7. *Sanskara Viruddha* - Consumption of those substances which are against mode of preparation. Drugs and diets which, when prepared in a particular way produced poisonous effects. For example – Heated *Madhu* (Honey)
8. *Veerya Viruddha* - Consumption of those substances which are against Potency Substances having *Ushna* (hot) potency in combination with those of *Sheet* (cold) potency substances. For example – Fish + Milk.
9. *Koshtha Viruddha* – Consumption of those substances which are against nature of bowels. For example – Administration of less quantity with mild potency purgative drug to a person of *Krura koshta* (Constipated bowel).
10. *Avastha Viruddha* - Consumption of those substances which are against States or condition. For example – Intake of *Vata* aggravating food by a person after exertion, sexual act or physical exertion.

11. *Kram Viruddha* - Consumption of those substances which are against sequence. For example – a. Consuming curd at night.
12. *Parihar Viruddha* - Consumption of those substances which are against things which relieve the symptoms. For example – Intake of hot potency food after taking meat of boar etc.
13. *Upachar Viruddha* - Consumption of those substances which are against treatment. For example – Intake of cold things after taking ghee.
14. *Paaka Viruddha* - Consumption of those substances which are against cooking. Preparation of food with bad or rotten fuel etc.
15. *Sanyoga Viruddha* - Consumption of those substances which are against combination. Or intake of two such substances which on combination have poisonous effects. For example a. Intake of sour substances with milk.
16. *Hriday Viruddha* – Consumption of intake of unpleasant food.
17. *Sampad Viruddha* – Consumption of those substances which are not having their proper qualities. For example – Intake of substance those are not mature, over matured or putrefied.
18. *Vidhi Viruddha* – This type includes the diet which is not according with the rules of eating. For example – Eating food in public place or open place.

Diseases due to *Viruddha Ahara*

Agnimandya is source of several diseases. *Viruddha ahara* causes the vitiation of *Agni* by *Abhojana*, *Ajirnatibhojana*, *Vishamashana*, *Asatmya*, *Ati Ruksha* and *Sheeta*, *Sansrusta Bhojana*. Thus the *Agni* mostly gets vitiated by *Viruddha Ahara*. This vitiated *Jatharagni* does not digest even the lightest of food substances, resulting in indigestion (*Ajirna*). This undigested food material turns sour and acts like a poison, which is called *Ama visha* in Ayurvedic terminology. Following are the diseases mentioned in Ayurved texts as a result of *Viruddha Ahara*^[9,10] *Klaibya* (Impotency), Blindness, *Visarpa* (Erysipelas), *Jalodara* (Ascitis), *Unmada* (Insanity), *Bhagandara* (Fistula in ano), *Murcha* (Coma/fainting), *Aadhmana* (Abdominal distention), *Galgraha* (Obstruction in throat), *Pandu roga* (Anemia), *Ama* (Endogenous toxin), *Kilasa* (Leucoderma), *Kushtha* (Various skin disorders), *Grahani* (Sprue), *Shotha* (Swelling or oedema), *Amlapitta* (Acidity), *Jwara* (Fever), *Pinas* (Allergic Rhinitis), *Santana Dosh*a (Infertility problem), *Mrutyu* (Death).

CONCEPT OF GARA VISHA

Paribhasha (Definition)

Charak Samhita : *Gara* is a toxic combination of poisonous or non- poisonous substance and which exerts toxic effect after interval of some time and as such does not kill the patient instantly.^[11] In addition to *sthavar* and *jangamvisha* there is one another type of poisons *samyogajavisha* which is called *Gara Visha*.^[12] It creates many disease, *Gara Visha* are not to digested they take long time to digest hence they are not fatal.

Sushrut Samhita : The pulverized bodies of insect poisoning, as they do, the characteristic features of *Dushivisha* or enfeebled poison[laying inherent in human system] is turned into a *Gara* or chemical poison if administrated internally with any medicine or externally with any plaster/*lepa*.^[13]

According to Laghutry Bhavprakash, Yogratnakar, Sharangdhar Samhita, *kritrim visha* is two; one which is prepared by combination of two poisonous substances called *dushi visha*. Another one which is prepared by combination of two non-poisonous substances called as *Gara Visha*.^[14,15,16] Chakrapani, Kashyap Samhita and Madhav Nidana described the *samyogaj visha* is one of two types one which is prepared by non-poisonous substance called as *Gara visha* and another one which is prepared by poisonous substance called as *kritrim visha*.^[17,18,19]

Gara Visha Adhithana (Mode of administration)^[20]

Describe in sushrut samhita as the method is given to poison may be considered as *Gara visha Adhithana*, these are *Anna* (food), *Pana* (drinks), *Dantakastha* (tooth brush), *Kasaya* (decoction), *Nasya* (nasal drops), *Dhuma* (fumigation), *Abharana* (ornaments), *Anulepana* (application), *Ustadana* (massage), *Parisheka* (bath), *Anjana* (eye lid application), *Vastra* (clothes), *Shayya* (beds), *Paduka* (foot-wears).

Diseases due to *Gara Visha*

Acharya Charak described following diseases caused by *Gara Visha*^[21] *Pandu*, *Krishna*, *Agnimandya*, Flatulence, *Udarrog*, Edema on hands and feet, *Grahani*, *Rajyakshma*, *Gulma*, Wasting, Fever.

DISCUSSION

The concept of *Gara visha* explained in Agadtantra and it has wide application. Today's lifestyle is changed, prolonged uses of adulterated food or incompatible food and people who are following bad habits are effected by *Gara visha*. It is mainly classified two types, 1. *Nirviṣha dravya samayogaja viṣha*- which is combination of two non-poisonous substance, 2. *Saviṣha dravya samayogaja viṣha*- it is combination of two or more than two poisonous substance. Hence *Gara visha* is mixture of various artificial substances which produces toxic effect on human body.

Viruddha Ahara is the origin of most of the ailments. Regular consumption of incompatible food can lead to inflammation at a molecular level; ending in creation of arachidonic acid which will finally results in to increased level of prostaglandin-2 and thromboxane. This inflammatory consequence lies behind basic pathologies that create *Agni Mandya*, *Ama*, and a number of metabolic disorders.^[22]

CONCLUSION

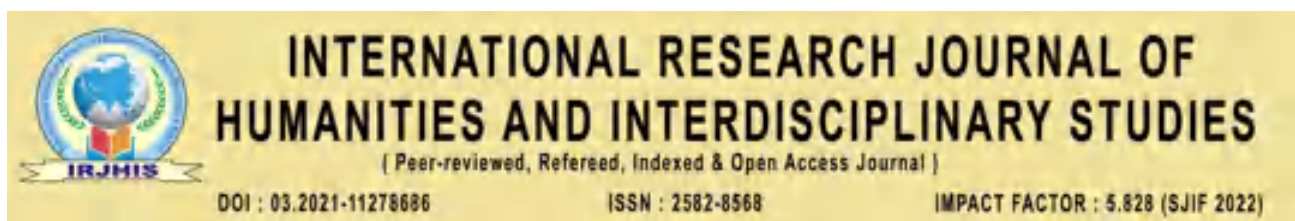
Everything is toxic but its toxicity depends upon its dose, even water is also toxic if it is consumed in large amounts in relatively short time. According to Ayurveda *Ahara* also acts as poison if not taken properly. Some toxins cannot be removed from food as these toxins are present naturally and others may be created during processing or cooking. Consumption of all these toxins are hazardous for our health. By knowing these toxins we will live a healthy life. *Gara visha* in Ayurveda is an artificial poison. *Anna*(Food) is one of the *Adhishtan* of *Gara visha*. It is a combination of two or more products that lead to the formation of toxins which after intake deteriorate the health of consumer. *Viruddha Ahara* also acts as *Visha* and causes diseases. The diseases caused by *Gara Visha* and *Virruddha Ahara* are pretty common. *Gara Visha* is often ingested unknowingly we as like *Viruddha Ahara* and we have to be very alert in consuming food as in case of *Gara Visha*.

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A Study for the Assessment of Post Operative Pain Management in Hydrocele

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Abstract:

Post operative management starts from the day the surgery when performed till the time the patient is mentally as well as physically fit to perform his normal daily activities. A complete and effective post operative pain management is very much need of every ayurvedic surgeon.

There are many well studied drugs in post operative pain management but they are not enough. Also, the Oral administration has some limitation in post operative period. So Bala Taila matrabasti is tried as an addition in the study to establish a complete ayurvedic pain management combination in post operative phase of Hydrocele.

Twenty patients underwent elective surgery for Hydrocele were selected for the study. Patients were randomly grouped in 2 groups. with 10 patients. In the A group Balataila Matra Basti given on previous night of surgery. same Bala Tail Matra Basti administrated once daily after the surgery till sutures removal. The patients of B group received Triphala guggulu, Gandhak rasayana and Asnaadi kwatha everyday after surgery till the sutures removal.

The results in both the groups showed that administration of balataila matrabasti along with internal medication reduces the episodes of pain, tenderness in post operative cases of hydrocele in their hospital stay and the results are statistically significant. So, it can be concluded that pain in post operative cases of hydrocele can be effectively managed by combination treatment protocol including Triphala guggulu, Gandhak Rasayana, Asanaadi kwatha along with balataila matrabasti. It can also conclude that if the above said combination is followed then administration of any kind of analgesics not required for pain management in cases of hydrocele.

Keywords: Pain management; Hydrocele; Balataila matrabasti.

INTRODUCTION:

Aim of ayurved Science is to provide better health to every human so as to have a healthy

tomorrow. Different Medical Sciences with various principles and fundamentals are trying their best for the common goal which is Health for all.

In this current age everyone is expecting miracle therapies for ailments. these miracle therapies will come at the cost of affecting the other parts of body and thus a vicious cycle of curing one part and afflicting other is started. To break this circle, one needs wisdom and guidance. This is the place where Ayurveda comes to the rescue by providing treatment with minimal adverse effects and also preventing an individual from getting diseased in the future.

Ayurvedic approach towards the disease is holistic. many therapeutic modalities have been mentioned by our Acharyas in the management of each and every disease. But the efficacy needs to reestablish by means of thorough and intensive researches. Sushrutacharya – the father of Indian surgery has classified the modalities, in a very systemic manner, a wealth of clinical material and the principles of management those are valid even today too.

Classification of traumatic wounds, their prognostic evaluation and management, avoidance of sepsis, insistence on primary suturing in clean wounds, and excision of extruded omentum and careful suturing of intestinal perforation in the management of perforating abdominal wounds, these are remarkable for their modern outlook. he was the first to recognize this similar basic pathology of all thermogenic injuries-hot or cold; he used the word ‘Shita Dagdha’ (cold burn), a term which has come in modern surgery recently.

For Sushruta health was not only a freedom from disease, but a normal state of mind, body as well as soul. He advocated total management of the disease from the very early stage of vitiation of humors to total recovery in which he insisted on bringing back the site of lesion to normalcy in all respects. Thus it may well be said that Management of Sushruta was more thorough than what is practiced today. Today wound is said healed when epithelization is complete. But Sushruta would employ ‘Vaikritapaham’ measures which will bring back the normal color and surface and even hairs, thus he can be rightfully called the originator of plastic surgery.

In surgical practice the post operative management begins from the day the surgery is performed till the time the patient is mentally as well as physically fit to resume his daily activities. A complete and effective post operative pain management is the need of every surgeon.

Pain has been involved with surgery since time of Acharya Sushruta. Acharya has mentioned the use of tikshna madya before undergoing surgery to overcome the pain which reflects the importance given to relief from pain associated with surgery since that time. sushrutacharya has also recommended many procedures like Dhoopana, Swedana, Raktamokshana, Nirvapana, Seka, Lepa as well as Basti in different chapters. Eventhough the procedures have been explained they are not practiced in the post operative cases now. Taking into account these principles and post operative pain parameters in ayurvedic surgical practice this study is planned.

Bala Taila matrabasti is tried as an additional management in this study to establish a complete ayurvedic pain management combination in post operative period of Hydrocele.

OBJECTIVE OF THE STUDY:

To find out the efficacy of Balataila matra basti in the post-operative pain management of cases of Hydrocele.

MATERIALS AND METHODS:

Source of Data:

- 20 patients undergoing elective surgery for Hydrocele from Ayurved College selected for the study.

Methods of collection of data:

- Operated Patients for hydrocele were randomly selected and grouped in 2 groups i.e. Control and Trial.

➤ **In the control group:**

- Tab Triphala guggulu 450mg t.d.s.,
- Tab Gandhak rasayana 250mg t.d.s.,
- Asanaadi kwatha 40ml b.d.

➤ **In the trial group:**

- Tab Triphala guggulu 450mg t.d.s.,
- Tab Gandhak rasayana 250mg t.d.s.,
- Asanaadi kwatha 40ml b.d.,
- Bala taila matra basti was given on previous night of surgery and repeated once daily till sutures removal.

Duration of Treatment:

7 days in both groups.

Observation period:

- The patients will be observed and assessed daily for a week in the post-operative period till sutures removal.
- Assessment of pain was done once per day.
- Follow up of the patient was carried out on the 7th day after the removal of sutures.

Inclusion criteria:

- Operated Patients for hydrocele (uncomplicated and elective cases, unilateral or bilateral).
- Age between 20 to 65 years.

Exclusion criteria:

- Patients suffering from systemic diseases like Diabete, Hepatitis, Tuberculosis and HIV infections etc.

Assessment criteria:

- The patient's response will be assessed on subjective, objective parameters.

Subjective:

- Pain.

Objective:

- Tenderness.

The criteria's were graded arbitrarily as –

A. Pain: [Patients response]

- 0 – No pain
- 1 – Patients complains of pain only on movement
- 2 – Pain during resting position
- 3 – More severe pain & require analgesics Intervention

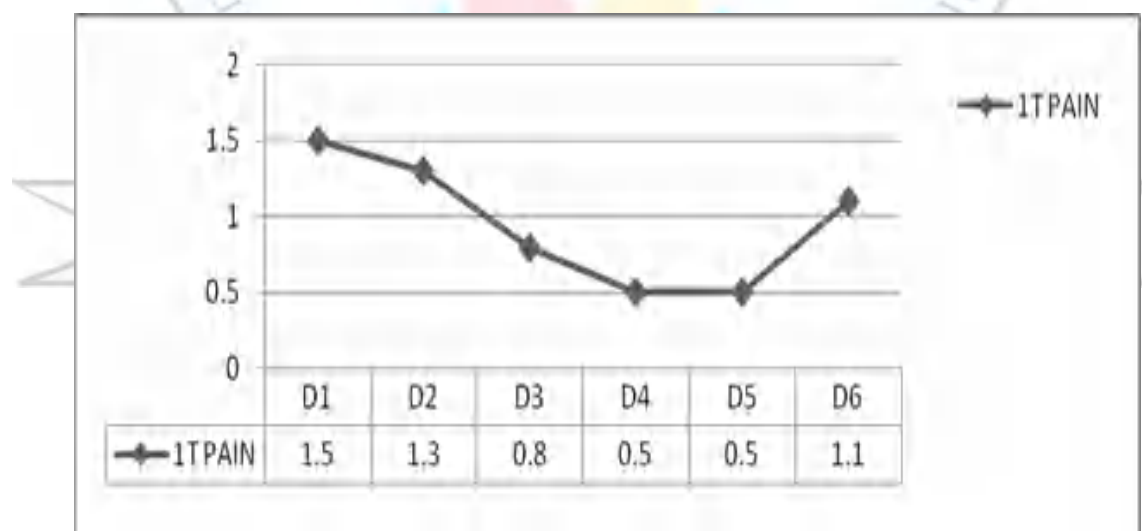
B. Tenderness:

- 0– No tenderness
- 1– Tenderness on deep palpation
- 2– Tenderness on moderate pressure
- 3– Tenderness even on touch.

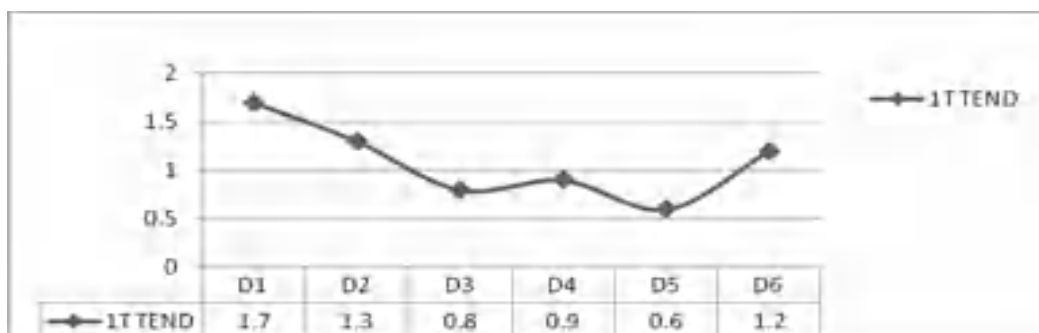
RESULTS:

All the 20 patients who were registered for the study were assessed according to a standard proforma. The details recorded are being put forth here.

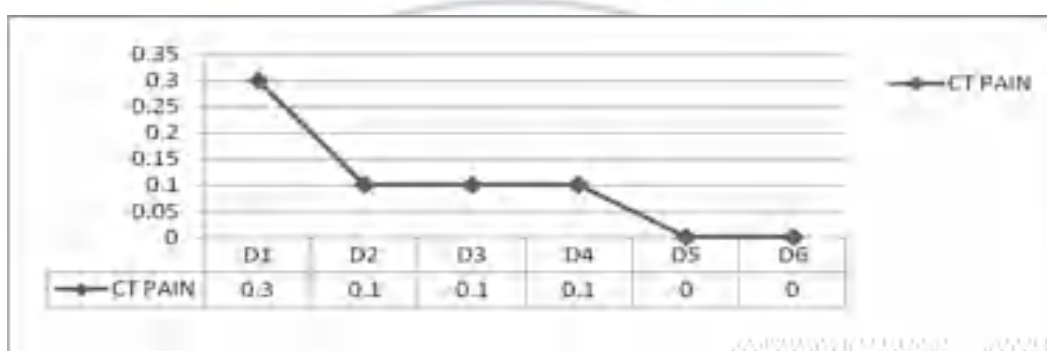
Intensity of Pain in 1st/ Contol Group:-



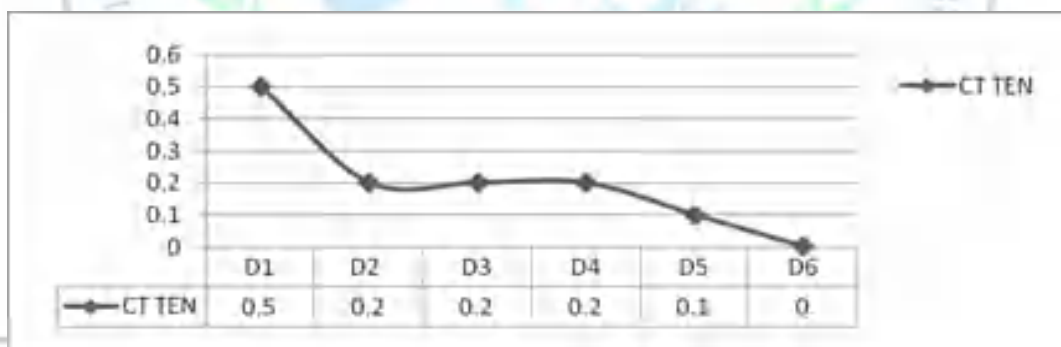
Intensity of Tenderness In 1st / Control Group:-



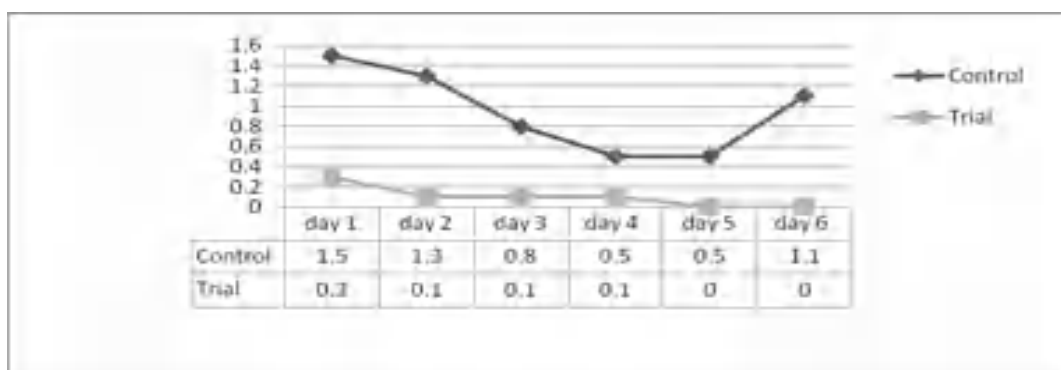
Intensity of Pain in 2nd / trial Group:-



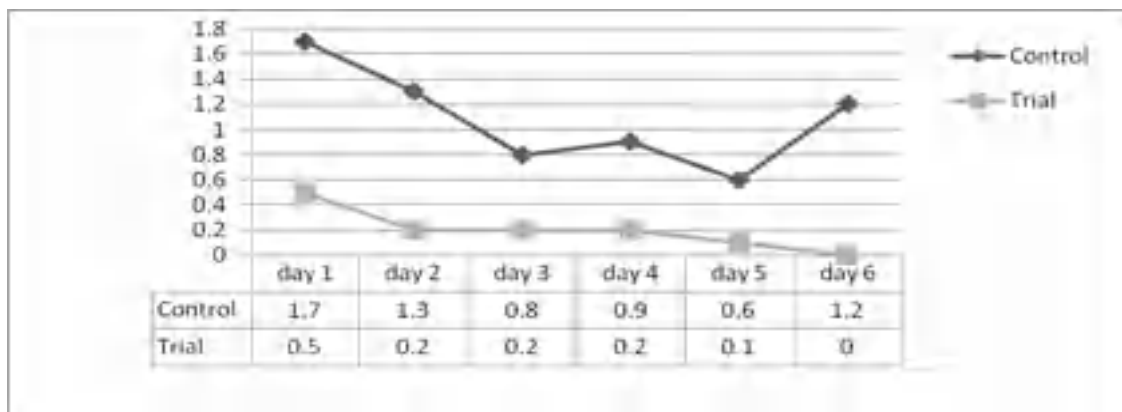
Intensity of Tenderness in 2nd /trial Group:-



Pain Comparison on Postoperative Days, between the groups:



Tenderness Comparison of on Postoperative Days, between the groups:



COMPARISON BETWEEN THE CONTROL AND TRIALGROUP:

- The Statistical analysis was done using Sigma Stat software.
- Unpaired t- test was used for comparing the results of both groups.

Intensity of pain:

Group	Mean	Difference in mean	Unpaired 't' test			
			S.D.	S.E.M.	't'	P
Control	1.000	0.900	0.304	0.0962	8.267	<0.001
Trial	0.1000		0.161	0.0509		

The mean of control group is 1.000 whereas trial group is 0.1000 and the difference in the mean values is 0.900 hence the difference in the mean values of the two groups is greater than would be expected by chance. There is a statistically significant difference between the input groups (P = <0.001). Further details with standard deviation, standard error of Mean, t value and P value are given in above table.

Tenderness:

Group	Mean	Difference in mean	Unpaired 't' test			
			S.D.	S.E.M.	't'	P
Control	1.083	0.884	0.668	0.211	3.928	<0.001
Trial	0.200		0.245	0.0775		

The mean of control group is 1.083 whereas trial group is 0.200 and the difference in the mean values is 0.884 hence the difference in the mean values of the two groups is greater than would

be expected by chance. There is a statistically significant difference between the input groups ($P = <0.001$). Further details with standard deviation, standard error of Mean, t value and P value are given in above table.

CONCLUSION:

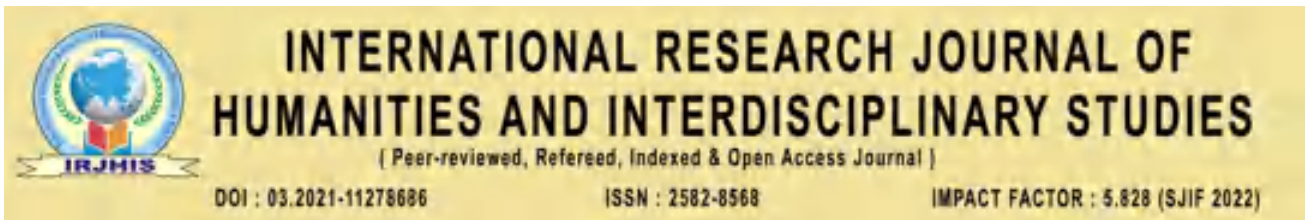
- Hydrocele is primarily a painless condition but patients do complain of pain after surgery which varies from patient to patient. The present study was designed for management of postoperative pain in hydrocele using balataila matrabasti along with some internal medication.
- Results show that there is a definite and statistically significant advantage of addition of balataila matrabasti over the conventional post-operative pain treatment protocol which included administration of internal medication alone.
- So, it can be concluded that pain in post operative cases of hydrocele can be effectively managed by a combination treatment protocol including Triphala guggulu, Gandhak Rasayana, Asanaadi kwatha and balataila matrabasti.
- It can be concluded that if the above said combination is followed then administration of any variety of analgesics is not required for pain management in post operative cases of hydrocele.

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Haemostatic effect of Sphatika in Raktarsha - A Pilot Study

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ABSTRACT:

Raktarsha is a grave disease and it is still a challenge in the medical field. Due to its remission, exacerbations, both the patients and doctors were in embarrassing situation. In Ayurved many preparations and medicines are described as a Raktastambhak for the management of Raktarsha, Raktapitta, Raktatisar etc. but there are few researches on evaluation of haemostatic properties of drugs. So there is a need to have look on the subject and evaluate a medicine which will provide fairly successful and acceptable for the management of bleeding piles. In the present study, the efforts are made to evaluate the haemostatic effect of Sphatika in bleeding piles. The present study we conducted as a pilot study prior to a dissertation work so here the results were not compared with statistical tests. Controlled trials can be conducted to compare efficacy of sphatika with many other haemostatic drugs.

KEYWORDS: Raktarsha, bleeding piles, Rasaushadhi, Sphatika.

INTRODUCTION:

Raktarsha is bleeding pile which appears due to the dominance of Pitta and Rakta. Bleeding piles is a common disease of alimentary canal in India affecting both male and female. It is a condition in patient passes suddenly streaks of bright red blood along with stool. Sometimes it may bleed profusely leading to the common complication like weakness fatigue Anaemia. Due to its high prevalence rate, many efforts have been done in order to search new modalities of treatment. As

mentioned in Ayurvedic texts, Sphatika is one of the important drug in Rasaushadhi. Sphatika is generally known as Phitkari, Saurashtri or kankshi as well as turati. In modern science, it is known as Alum or Alum Sulphate. Its chemical formula is $K_2SO_4, Al_2(SO_4)_3, 24 H_2O$. It is Hydrated salt of potassium or Alum Sulphate. According to Ayurveda, Sphatika posses Amla, Katu and Kashay rasa properties sphatika is antiseptic in nature it also performs actions like haemostatic, astringent, antipyretic, anti inflammatory & antibiotic effects when administered internally as well as externally. It has various internal as well as external applications to cure wound and many other diseases. Based on these references, we conducted a pilot study to evaluate the haemostatic effect of Sphatika in Raktarsha.

Current clinical study was conducted on the well diagnosed patients of raktarsha. The Patients for trial were all diagnosed for the disease. For dignosing the 7 International Criterias were used i.e. Bleeding, Pain, Difficulty in passing stool, Protrusion, Confirmatory tests like DRE and Proctoscopy. Patients attending the OPD and IPD of our ayurved college, during the time period

Inclusive criteria:

- 1 Well diagnosed patients of bleeding piles
- 2 the age of 20 to 50 years
- 3 patients with Grade I to III haemorrhoids

Exclusive Criteria:

- 1 known patients of HT, DM, HIV,
- 2 Hb's Ag positive patients, children
- 3 Pregnant women

MATERIALS AND METHODS:

MATERIALS:

Materials used for the present study were
Sphatika,
sterile water ampoules,
disposable syringes with rubber tubes,
lithotomy table,

METHODS:

After screening with the above inclusive and exclusive criteria total 30 patients were selected randomly irrespective of age, sex, caste, religion and occupation.

All patients were given a proper information of the study and their consent taken. patients were divided equally into 2 groups of each 15 patients by alternate method.

Group A:

Patients selected in this group were administered with standerd ayurvedic treatment only

Group B:

Group B was treated with 20 ml Matra basti of sphatika solution (2 gm of Sphatika dissolved in 20 ml of sterile water) per anum along with standard Ayurvedic medicinal treatment for 10 days .

Assessment of the signs and symptoms was done before and after the treatment.

All the patients included in the study were informed about Pathya and Apathya need to be followed. The follow up was taken with clinical assessment daily for next 10 days.

Assessment Criteria:

Assessment of the signs and symptoms was done on the basis of international criteria for Haemorrhoids.

Group A – bleeding per anum

Patient No.	Day of Treatment									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1	+++	+++	+++	+++	+++	+++	++	++	++	++
2	+++	+++	+++	+++	++	++	++	++	+	+
3	+++	++	++	++	+	+	+	+	+	-
4	+++	++	+++	+++	++	++	++	++	++	+
5	++	++	++	++	+	+	+	+	+	+
6	++	++	++	+	+	+	+	+	-	-
7	+++	++	++	++	++	++	++	++	+	+
8	++	++	++	++	+	+	+	+	-	-
9	++	++	++	++	++	++	++	++	+	+
10	+++	+++	+++	++	++	+	+	+	-	-
11	++	++	++	++	++	+	+	+	+	-
12	++	++	++	++	+	+	+	+	-	-
13	+++	+++	++	++	++	+	+	-	-	-
14	++	++	++	++	++	+	+	+	+	+
15	++	++	++	++	++	+	+	+	-	-

Bleeding per Anum in group B

Patient No.	Day of Treatment									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1	+++	++	++	++	+	-	-	-	-	-

2	++	++	+	+	+	-	-	-	-	-
3	+++	++	+	+	+	+	-	-	-	-
4	+++	+++	++	++	+	+	+	+	+	-
5	++	+	+	+	+	-	-	-	-	-
6	++	+	+	+	+	+	-	-	-	-
7	+++	++	++	++	+	+	+	-	-	-
8	+++	++	+	+	+	+	-	-	-	-
9	++	++	++	++	++	+	+	+	+	+
10	+++	++	++	+	+	+	-	-	-	-
11	++	++	+	+	+	+	+	-	-	-
12	++	+	+	+	-	-	-	-	-	-
13	+	+	-	-	-	-	-	-	-	-
14	+++	++	++	++	+	+	+	+	-	-
15	++	++	+	+	+	-	-	-	-	-

(+ : Mild bleeding with less than 10 drops/ occasionally between 2 to 3 days

++ : Mild bleeding with 10 to 30 drops in each defaecation.

+++ : Stream/ more than 50 drops in every defecation)

OBSERVATIONS:

It was observed that the patients from the group B got maximum relief from bleeding within the short period of 2 to 3 days comparative to the patients from group A. Along with this pain, difficulty in passing stool, pruritus ani, mucosal discharge and degree of prolapsed reduced significantly in group B which was given 20 ml Matra basti of Sphatika solution for consecutive 10 days along with standard herbal medicinal treatment.

RESULTS:

The total effect 20 ml Matra basti of sphatika solution in bleeding piles was satisfactorily found to be highly significant over the standard Ayurvedic medicinal treatment.

DISCUSSION:

Thus, the study shows that Sphatika is an effective local haemostatic agent in controlling bleeding piles. Sphatika solution exerts its astringent and haemostatic effect through a chemical reaction with blood proteins which results in controlling the bleeding. It is also safe, cost effective and easily accessible way to arrest the bleeding in arsha.

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