



REVIEW ARTICLE

AYURVEDIC MANAGEMENT OF ASTHI – MAJJAGATA VATA (WITH SPECIAL REFERENCE TO AVASCULAR NECROSIS) A CASE STUDY

¹Dr. Pujar, C. R. and ²Dr. Alaekhya, P.L.

¹Supervisor, Dept. of Panchakarma Sri Shivayogeeshwar Rural Ayurvedic Medical College & Hospital, Inchal, Belagavi District, Karnataka

²P.G. Scholar, Dept. of Panchakarma Sri Shivayogeeshwar Rural Ayurvedic Medical College & Hospital, Inchal, Belagavi District, Karnataka

ARTICLE INFO

Article History:

Received 10th July, 2022
Received in revised form
27th August, 2022
Accepted 19th September, 2022
Published online 19th October, 2022

Key words:

Gata Vata; Asthi – Majjagata Vata;
Avascularnecrosis; Osteonecrosis:

*Corresponding Author:
Dr. Pujar, C. R.

Copyright©2022, Pujar and Alaekhya. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. Pujar, C. R. and Dr. Alaekhya, P.L. 2022. "Ayurvedic management of asthi – majjagata vata (with special reference to avascular necrosis) a case study". *International Journal of Current Research*, 14, (10), 22416-22419.

ABSTRACT

Gata Vata comes under the category of *Vata Vyadhi* where the vitiated *Vata* gets located in a particular *Sthana* (site) resulting in manifestation of specific *Lakshana* related the *Shana* where it is located. The *Brihatrayee* and *Acharya Yogaratnakar* have thoroughly elaborated on *Gata Vata* with clarity and objectivity in their works. *Acharaya Charaka* while explaining about treatment for *Asthimajja Gata Vata*, emphasizes to consider both *Asthi and Majja* for treating through *Snehana* (*Oleation*) in both *Bahya* (externally) and *Abhyantara* (internally). *Avascular necrosis* (AVN) is *Osteo-necrosis* (dead bone) caused due to the injury or any occlusion in the blood vessels nourishing the bone tissue. It may be classified mainly into two types: 1) Post traumatic 2) Idiopathic. The arteries supplying to the femoral head are very narrow and hence are easily liable to injury resulting necrosis. It may be asymptomatic in the beginning but in advanced stages that lead to painful arthritis and in extreme cases, it may result in the collapse of a section of bone. *Ayurveda* has been playing the vital role in curing chronic and untreatable conditions of AVN. But principles of *Ayurveda Chikitsa* must be applied clinically to diseases which are not described in *Ayurveda* texts which are termed as *Anukta Vyadhi* (unmentioned disease). An effort was made to evaluate the efficiency of *Panchakarma* (five therapeutic procedures) treatment along with the conservative managements of AVN.

INTRODUCTION

Basic principles of *Ayurveda* are based on *Vata, Pitta & Kapha* the 3 components of *Tridosha* that are responsible for all physiological processes as well as pathological changes in the body. Among the three, *Vata* is considered to be of utmost importance and its involvement plays a key role both in normal healthy individual as well as in diseased condition because of its main property *Gati* or the movement. This movement, localization, disturbing the normal mechanism is known as "*Gatavata*." *Gatavata* comes under the category where *Vata* being located in a particular *Sthana* gets vitiated and later causes specific symptoms pertaining to that *Sthana*. In the chapter of *Vataja Vyadhi*, 80 types of diseases has been described in most of which *Gati* or *Chalatwa Guna* (motility) of *Vata* is involved. The *Brihatrayee* and *Acharya Yogaratnakar* have thoroughly elaborated on *Gata Vata* with clarity and objectivity in their works. It can be understood under two headings i.e. *Ashayagata vata* (including *Amashaya, Pakwashaya & Panchendriya*) and *Dhatugata vata* (*Saptadhatu*). *Asthi dhatu* and *Vata dosha* have *Ashraya ashrayee Sambandha* (inter relationship) because of this *Vata vrudhi* (aggravation) takes place in *Asthi dhatu* and, *Majja dhatu* has *Ashraya sambandha* with *Kapha dosha*. *Dhatu Gatavata* may produce symptomatology suggesting a single disease, a group of disease or even diseases which are opposite in nature.

Analyzing the above, it can be understood that the word *Gata* has two implications. One related with the movement and the other related with occupying. Hence '*Gatavata*' of *Vata* implies an undesirable movement of *Vata* and its unnecessary occupation of certain sites.

Avascular Necrosis: *Avascular necrosis* (*Osteo-necrosis*) is a progressive disorder where the cellular death of bone component due to interruption of the blood supplies to the bone in transiently or permanently because of injury or any occlusion in the blood vessels nourishing the bone tissue. It is additionally referred to as *Osteo-necrosis, bone necrosis, bone infarction, aseptic necrosis, and ischemic necrosis*. [3] The disease prevalence rate is 0.135% per 1000 population, Male to female ratio of this condition is 5-8:1. It is a condition in which the bone "dies" as an outcome of loss or interrupted blood circulation to an area of bone tissue due to injury. Certain inflammatory diseases like *Vasculitis, Systemic Lupus Erythematosus*, etc. and even systemic steroids might cause *avascular necrosis*. While it can affect any bone, AVN is particularly common in the hip joint with head of the femur is one of the common classical site is involved and body of the scaphoid, carpal, talus and lunate are the places which are less common involved. It may be classified mainly into two types: 1) Post traumatic 2) Idiopathic.

It may be asymptomatic in the beginning but later, mild to severe degree of pain is seen along with change in the gait. It may be asymptomatic within the starting however later delicate to severe degree of pain is seen in conjunction with change within the gait. AVN of femoral head presents with groin pain that radiates down towards antero-medial thigh. Change within range of motion i.e. abduction, adduction, flexion and extension are found. The hallmark of AVN is severe night pain. In the advanced stages that lead to painful arthritis and in extreme cases, it may result in the collapse of a section of bone. Once the joint surface is involved, a hip replacement may become necessary. In view of its progressive nature, it is important to diagnose and treat early to prevent any further complications. Treatment varies significantly, depending on the location and severity, however the goal of initial treatment is to prevent collapse of the joint surface.

Ayurvedic View Point: According to Ayurveda point of view there is no direct co-relation with avascular necrosis. But basing on the Clinical presentation and also on the signs & symptoms described in Ayurveda, it can be correlated with Asthi - Majjagata Vata. and / or Asthi dhatu kshaya with manifesting symptoms like Bhedo asthi parvanam (breaking type of pain in bones and joints), Sandhi shula (joint pain), Mamsakshaya (muscular wasting), Balakshaya (weakness), Aswapna santataruk (disturbed sleep due to continuous pain) and Sandhi shaithilyam (afflicted joints) with Shiryanti iva cha asthini durbalani (destruction of bony tissue) resulting in generalized other aggravated features of Vata (Pratata Vata rogin). Wide range of treatment modalities have been mentioned in Ayurveda that are effective in such manifestations. In Brihatrayee specific treatment for asthimajjagata vata is internal and external oleation.

MATERIALS AND METHODS

Case Report: A 61 yr old female patient visited the Panchakarma OPD with the complaints of severe pain in right hip, radiating down to lower –limb. She is having difficulty in standing and also difficulty in walking without support. There is a history of associated complaints of stiffness and restricted and painful movements of hip and Rt. Lower limb. She is a Diabetic since 6 years and Hypertensive for the past 2years.

History of Present Illness: The patient was asymptomatic before 6 years. Later on she met with Road Transport Accident 6 years ago and later on she gradually developed pain in right hip associated with stiffness. The pain was initially mild but progressed to severe natured with the passage of time. As a consequence she has developed difficulty to stand and also to walk without support. The pain in low back was radiating to her right leg associated with numbness and the pain is severe in the lower 1/3 rd of her right leg. The pain is aggravated on bending forwards, standing and walking and the patient developed analgic gait due to severe pain. With the above complaints, the patient visited OPD unit of Panchakarma of SSRAMC & H. Considering the history, presenting complaints and the illness she was treated at OPD level for 3 weeks. After that, the patient found moderate relief in symptoms. Later on she was admitted as in-patient for comprehensive management through Panchakarma procedures.

FAMILY HISTORY: Nothing significant

PERSONAL HISTORY

Appetite - Good Sleep - Disturbed
Micturition - 4-5 times /day Bowels – Constipated
Menstrual history - Menopausal No Surgical history

PAST HISTORY

Except for Diabetes & Hypertension, she has not used any medicines especially for the presenting complaint.

PHYSICAL EXAMINATION

Built - Normal built Nutritional status - Good
Temperature – A febrile Blood pressure - 130/80 mm hg
Pulse rate – 80/pm regular Respiratory rate - 18 /min
Skin - Normal Hair - Normal
Eye - Normal Ear - Normal
Nose – Normal Icterus - Absent
Pallor – Absent Cyanosis - Absent

DASAVIDHA PARIKSHA

Prakriti - Vata, Pitta Vikriti - Vata
Sara - Avara Samhanana - Avara
Pramana - Madhyama Satva - Pradhana
Satmya - Pradhana Vaya - Vriddha
Aharashakti – Madhyama Vyayama Shakti - Avara

LOCAL EXAMINATION

• Gait - Antalgic
• Tenderness - L3 – 4 & L4 – 5
• Para-spinal Muscles tenderness - Present
• SLR - Rt. – Positive at 50° Lt. – Positive at 70°

INVESTIGATIONS

• Hb% - 10.8 gm
• E.S.R. - 26 mm/hr
• RBS - 97 mg/dl
• Serum Creatinine - 0.6 mg/dl
• Blood Urea - 29 mg/dl
• C.U.E. - Nil Significant

RADIOLOGICAL

• M.R.I. Right – Hip - Avascular Necrosis Stage – II

ASSESSMENT CRITERIA

• Range of Movement - Goniometer
• Pain - Visual Analogue Scale (VAS)
• Overall improvement - Harris Hip - Scale

TREATMENT

AT O.P.D. LEVEL

S.No.	Medicine	Dose	Duration	Time of Administration
•	Sahacharadi Kashayam	15 ml	2 times a day	Before food
•	Gandha Tailam	2 caps	2 times a day	After food
•	Lakshadi Guggulu	2 tabs.	2 times a day	After food
	Guggulu Tikta Ghritam	10 ml	2 times a day	After food

AT I.P.D. LEVEL:

S.No.	Procedure	Drug	Dose	Duration
•	Abhyanga	Sahacharadi Taila	200 ml	45 minutes
•	Swedana (Nadi Sveda)	Dasamula Kashaya	1000 ml	15 minutes
•	Kati Basti	Murivenna Taila + Ksheerabala Taila	60 + 60 ml	30 minutes
•	Matra Basti	Guggulu Tikta Ghrita + Dhanwantara Taila	30 + 30 ml	7 days

ASSESSMENT CRITERIA

RANGE OF MOVEMENT (Rt. HIP – JOINT)

S.No.	Activity	Range	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Abduction	30 ~ 50 °	28 °	32 °	39 °	44 °
•	Adduction	20 ~ 50 °	19 °	25 °	34 °	41 °
•	Flexion	110 ~ 120 °	88 °	102 °	109 °	115 °
•	Extension	10 ~ 15 °	7 °	9 °	12 °	13 °
•	Internal Rotation	30 ~ 40 °	28 °	35 °	34 °	38 °
•	External Rotation	40 ~ 60 °	37 °	41 °	49 °	53 °

PAIN:

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Bed-ridden / Pain even at Rest	0	10	20	30	30
•	Marked Pain with serious limitation of activities	10				
•	Moderate, tolerable Pain with Some limitation of activity requiring pain medication	20				
•	Mild pain with no effect on daily activities, rarely moderate pain with unusual activity	30				
•	Slight, occasional, no compromise in activities	40				

LIMP:

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Severe	0	0	5	5	8
•	Moderate	5				
•	Slight	8				
•	None	11				

SUPPORT:

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Not able to walk even with support walker	0	2	7	7	10
•	Able to walk with walker	2				
•	Able to walk with stick	5				
•	Stick for long - walks	7				
•	Able to walk without support	10				

DISTANCE WALKED

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Confined to Bed / Chair	0	5	8	8	10
•	Indoor only	2				
•	2 – 3 blocks	5				
•	8 – 10 blocks	8				
•	Unlimited	10				

STAIRS:

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	Not able to do Stairs	0	2	7	7	10
•	Able to do Stairs using Railings	5				
•	Able to do Stairs without using Railings	10				

ENTERING PUBLIC TRANSPORTATION

S.No.	Severity	Score	B.T.	A.T. - 1	A.T. - 2	A.T. - 3
•	No	0	0	0	1	1

DISCUSSION

Abhyanga: By application oil, roughness, immobility, dryness, fatigue, and numbness are instantaneously relieved and even strength and steadiness is improved. Most importantly it does the prevent constriction of vessels and ligaments of lower limb and improves local circulation. Since *Abhyanga* is done on the skin, it alleviates *Vata*. *Sushruta* has given a calculation of time in which *Sneha* in *Abhyanga* reaches different *Dhatu*. With this reference it can be said that, *Sneha* applied on skin for 900 *Matra Kala* (approx. 3-5 minutes) can reach up to *Majja Dhatu*. It can slow down the degenerative process occurring in different *Dhatu*.

Swedana: *Swedana* by virtue of its *Ushna guna*, pacifies and removes *Vata*, which causes rigidity; contracture due to its *Ruksha* and *Sheeta Guna*. In addition it removes the obstruction in the channels and facilitates easy transportation of vitiated *doshas* from *Sakha* to *Koshta* for elimination. *Swedana* also increases the *Dhatwagni* level, thus digesting *Ama Dosha*. *Swedana* also has an inherent property of decreasing the *Gaurava* and *Stambha*. *Swedana* liquefies the *Doshas* which are present in micro-channels. Therapeutic heat enters deeper tissues like *Mamsa Dhatu* and neutralizes the *Sheeta Guna* of *Vata* and *Kapha Dosha* increases the *Dhatwagni*, so the metabolism of *Dhatu* is proper and digests the *Ama Dosha* hence *Kati* gets proper nutrition from *Purva Dhatu* and *Asthi, Majja Dhatu*. *Dosha* reaches equilibrium phase and becomes more stable and patients get relief from all the presenting symptoms.

Kati Basti: It is the most effective procedure in reducing pain, by virtue of its focussed localized action. It increases blood circulation at the affected site. *Taila's* are selected according to the condition *Roga* and *Rogi* and even also *Kashayas* can also be used where ever there is an involvement of *Kapha Dosha* is there.

Vasti: *Vasti* administered through the anal route enters into the *Pakvashaya* & removes the faeces & gases accumulated there. This is the local action of *Vasti*; by which it removes *Mala & Apana Vayu*. But these are not the only *Karma* of *Vasti* for which it is called as *Ardha Chikitsa* or sometimes *Purna Chikitsa*. So, *Vasti* must be performing systemic actions which are possible only when *Vasti* gets absorbed through *Pakvashaya*. Drugs when administered forcefully through rectal route may reach up to *Grahani* and absorption may occur in the jejunum. In Ayurvedic classics, *Acharyas* have tried to explain actions of *Vasti* with suitable analogies as follows. As a tree irrigated at its root level attains nourishment for the whole tree, In the same way, *Vasti* drugs given through *Guda* [which is enriched blood vessels, lymphatic & nerves] nourishes all the limbs & organs of the body.

CONCLUSION

Vata is chief among the three *Doshas* and the functional requirement for both *Kapha* and *Pitta*. If co-ordination of *Vata* gets disturbed then the disease is going to manifest. Ayurvedic classics have described various treatment modalities in the management of *Asthi - Majjagata Vata*. They have stood the test of time and even today, are useful in bringing relief to the sufferers. These therapies are directed towards relieving the inflammation and underlying causes relieving the spasms and nerve compressions in the affected area and strengthening and nourishing the local and supporting tissues. With each therapy being tailor made to suit the severity and requirements specific to the patient, the benefit is immense. Thus it may be concluded that the Ayurvedic management of *Asthi-Majjagatavata* with Panchakarma procedures offers a better solution.

REFERENCES

Dr. Bramhanand Tripathy, Charaka Samhita of Agnivesha, chikitsa sthana, reprint ed. 2009, Chaukhambha Surabharati prakashana, Varanasi.

- Dr. Anantarama Sharma, Sushruta Samhita of Sushruta, nidana sthana, reprint ed. 2008, Chaukhambha Surabharati Prakashana, Varanasi,
- Dr. Anantarama Sharma, Sushruta Samhita of Sushruta, Chikitsa sthana reprinted. 2008, Chaukhambha Surabharati Prakashana, Varanasi,
- Dr. Bramhananda Tripathy, Astanga Hridayam of Srimadvagbhata with Nirmala Hindi Commentary, Nidana sthana, reprinted. 2007, Chaukhamba Sanskrita Pratishtana, Delhi,
- Dr. Bramhananda Tripathy, Astanga Hridayam of Srimadvagbhata with Nirmala Hindi Commentary, Chikitsa sthana, reprinted. 2007, Chaukhamba Sanskrita Pratishtana, Delhi.
- Dr. Indradeva Tripathy & Dr Dayashankar Tripathy, Yogaratnakara with Vaidyaprabha Hindi Commentary, First edition 1998, Krishnadasa academy, Oriental publishers, Varanasi.
- Dr, Ramanivas Sharma & Dr.Surendra Sharma, Sahastrayogam, Taila prakarana, Re-printed, 2004, Chaukhambha sanskrit pratishtana, Delhi.
- Dr. Priyavat Sharma, Cakradatta with english translation by Kashi Ayurveda, First edition 1994, Chaukhambha Orientalia, Delhi.
- Davidson's Principles and Practice of Medicine Editors Nicki R. College, Brian R. walker, Stuart H. Raltson, 20th edition, 2010.
- Ram Lakhan Meena, Santhosh Bhatted, Prashanth Dharmarajan, Nilam Meena, Jitender Kumar, Hanumant Nirmal. Management of Avascular Necrosis through Ayurveda - A Case Study. J. res. tradit. med. (2017) <http://www.rad.washington.edu /mskbook/osteonecrosis.html>
