

MANAGEMENT OF ASTHI-MAJJAGATA VATA W.S.R. TO AVASCULAR NECROSIS (AVN) OF B/L FEMORAL HEAD STAGE 4 - A CASE STUDY

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ABSTRACT

Avascular Necrosis (AVN), or Osteonecrosis, is characterized by bone tissue death due to insufficient blood supply, prevalent in India with a common occurrence in the femoral head. *Ayurveda* associates AVN with an imbalance in Vata dosha, presenting symptoms aligning with both traditional and modern medical perspectives. Conventional treatments involve anti-inflammatory drugs and hip replacement, though the latter has limitations. *Ayurveda* approaches include holistic treatments like herbal medicines and *Panchakarma*, showcasing potential benefits in symptomatic relief. Modern treatment involves anti-inflammatory drugs and, in severe cases, hip replacement. The presented case is of a 24-year-old, diagnosed case of grade 4 bilateral AVN of the femoral head who was treated with *Panchakarma* including *Manjisthadi Kshara Basti*, *Patra pind sweda*, *pizhichil* along with a few Oral *Ayurvedic* preparations, for 30 days, which provided significant symptomatic relief in pain, improved range of motion and gait. Based on the results, it can be said that *panchakarma* can provide significant relief in signs and symptoms of *Asthimajjagat vat* (AVN)

Keywords: Avascular necrosis (AVN), *Asthimajjagat vat*, *Patra pind sweda*, *Manjisthadi Kshara Basti*

INTRODUCTION

Avascular Necrosis (AVN) is additionally referred to as Osteonecrosis, bone necrosis, bone infarction, aseptic necrosis, and ischemic necrosis.[1] It is caused due to injury or any occlusion in the blood vessels nourishing the bone tissue. About 16000 people develop AVN of the head of the femur in India each year. The most common form of necrosis affecting bones is AVN of the femoral head. The arteries supplying to the femoral head are very narrow and hence are easily liable to get injured followed by mere dislocation or sub-capital fracture of the femoral neck which leads to a lack of nourishment femoral head resulting in necrosis. It may be asymptomatic initially but later mild to severe pain is seen along with the change in gait. It generally affects people between the ages of 30 to 50. [2] According to the signs and symptoms, this condition can be correlated to *Asthi- Majjagata Vata* in Ayurveda. *Bhedoasthiparvanam* (breaking type of pain in bones), *Sandhi Shula* (joint pain), *Mamsakshaya* (muscular wasting) *Balakshaya* (weakness), *Aswapnasantataruka* (disturbed sleep due to continuous pain), *Sandhi Shaithilyam* (laxity of joints), *Shiryantiva Cha Asthidurbalani* (destruction of bony tissue causing generalised weakness). [3] Treatment in Modern Medical Science involves taking anti-inflammatory, analgesic medicines. While this non-surgical treatment may slow the progression of AVN, sufferers need surgical intervention most commonly hip replacement, which has a number of drawbacks including long-term recovery and a short life span of the hip joint. Other treatment includes core decompression. Early diagnosis and treatment are crucial in instances with AVN of the hip to stop further complications. A case of AVN diagnosed as *Asthi-Majjagata Vata* by Ayurveda is presented here. The patient had taken ayurvedic treatment in addition to *panchakarma* and experienced significant symptom relief.

MATERIALS AND METHODS

Case report

A female patient aged 24 years, diagnosed with Avascular Necrosis of the bilateral head of the femur (Rt>Lt) came to *Kayachikitsa* OPD of Pt. Khushi Lal Sharma govt. Ayurveda Hospital, Bhopal admitted

with chief complaints of severe pain in both right and left hip joints, Groin region, difficulty in standing from sitting position and slight pain in bilateral knee joints in the last 2 years with aggravation of pain in the night and stiffness in the morning. She had also abnormal walking with a limping gait. Pain aggravated on doing her daily routine work like walking or even in a prolonged sitting position.

Investigations

MRI

MRI report shows Avascular necrosis of the Bilateral femoral head – Grade 4 (Arlet and Ficat's classification) and multiple serpiginous bone infarcts in the bilateral femoral neck and upper shaft including the trochanters.

Past History

She was apparently well 2 years ago, and then she was diagnosed with IUFD with sepsis, for which she took treatment from an allopathic hospital in which IV medicines were given according to their line of treatment for approx. 12 days She was discharged on her request with a stable condition, but a few months later she started to feel pain in the bilateral knee joints and then in the right hip joint. The pain was mild in the beginning but later on, the severity of the pain increased day by day. After a few months, the pain developed in both the hip joints, making it difficult for her to walk or squat. She also noticed that she was limping when walking to the right side of her body with pain in the inner side of her groin area and hip joint. Pain was associated with morning stiffness, so she had to do a light warm-up or some exercise to get rid of the stiffness. She sought the advice of an orthopedic physician when the discomfort was severe. MRI was done which suggested Avascular Necrosis of the head of the femur (Right>Left) and subchondral mild collapse of the right femoral head and minimal collapse of the left femoral head, for which she was advised for surgical intervention. As she was not willing to do surgical interventions, she approached Pt. Khushi Lal Sharma govt. ayurveda hospital for further conventional management. The patient was then admitted to our hospital

after being thoroughly examined with UHID number 20210016986.

PERSONAL HISTORY: She was vegetarian, had regular bowels, disturbed sleep (due to pain), non-alcoholic and non-smoker.

EXAMINATION OF PATIENT- Local Examination: The hip region was slightly tender. There was a significant loss in the range of movements. She had a limping gait resulting from the shortening of the right leg by 1cm.

Measurements of the lower limb: -

1. Apparent length
 - A. Right leg-76cm
 - B. Left leg- 77cm
2. True length
 - A. Right leg- 82cm
 - B. Left leg- 83cm

Table1: Showing Asthavidha Pariksha (Eight-fold examination)

1	<i>Nadi</i> (pulse)	74/Minute, Regular
2	<i>Mutra</i> (urine)	<i>Samyaka</i>
3	<i>Mala</i> (stool)	<i>Samyaka</i>
4	<i>Jivha</i> (tongue)	<i>Nirama</i>
5	<i>Shabda</i> (sound)	<i>Spashta</i>
6	<i>Sparsha</i> (touch)	<i>Samsheetoshna</i>
7	<i>Drika</i> (eye)	<i>Samanya</i>
8	<i>Aakriti</i> (built)	<i>Madhayama</i>

Dosha: Vata

Adhithana: Pakvashaya

Dushya: Rakta, Sira, Snayu, Asthi

Samprapti (Pathology): Lack of blood supply to the head of the femur, causes weakness in the neck and head of the femur and hip joint. Due to indulgence in Vata-provoking food and habits, the aggravated Vata accumulates in the hip joint causing further degeneration resulting in severe pain and difficulty in the movement of the hip joint.

Assessment Criteria: The range of movement of the hip joint i.e., Abduction, Adduction, Extension, Flexion, Internal rotation, and external rotation was measured by Goniometer. Visual Analogue Scale (VAS) is used for pain.

General examination

- G.C.- good
- Pulse -74/min
- B.P.-130/82 mm of hg
- Icterus- not found.
- Pallor -absent

Systemic examination

- RS- B/L chest clear
- CVS- S1, S2 normal, no abnormal sound
- CNS- conscious and oriented
- P/A- soft and non-tender

Examination of the patient as per *Ayurved:*

Atur bala praman and *Astavidha pariksha* was done and the details are highlighted below in Table 1

VAS Pain Score – In VAS Score “0” denotes No Pain and “10” denotes Worst Pain.

Treatment Plan

Management of the condition

The treatment was planned according to involved *Dosha* and *Dushya*. Kaal Basti was planned in which *dashmooladi majja Basti* was administered as *Niruha Basti* and *Anuvasana Basti* was administered with *Guggulu Tiktak Ghritam* and *Sahacharadi Taila*. *Rooksha Choorna Pinda Swedana* was done for 7 days, followed by *Patra Pinda Swedana* for 7 days, *Pizhichil* for 7 days, *Shastikashali Pinda Swedana* for 9 days, and Basti. Both medicinal and procedural therapies were administered to the patient. The details are mentioned in Tables 2 & 3.

Table 2: The following Oral medications were given along with the Panchakarma procedure.

Sr.no.	Drug	Dose
1	<i>Sahacharadi Kasayam</i> ^[3]	15 ml thrice a day before food with Lukewarm water
2	<i>Abha Guggulu</i> ^[4]	2 tabs (250 mg each) thrice a day before food with Lukewarm water
3	<i>Punarnavadi Kasayam</i> ^[5]	15 ml thrice a day After food with Lukewarm water
4	<i>Cap Antarth plus</i>	1 Tab twice a day with Lukewarm water
5	<i>Gandharvahastadi Taila</i> ^[6]	10 ml at night with milk
6	<i>Tab Boniheal</i>	1 OD after lunch

Table 3: Panchakarma Procedures

S. no	Procedure	Drug used	Quantity	Days
1.	<i>Rooksha Choorna</i> <i>Pinda Swedana</i>	<i>Kottumchukadi Choorna</i>	Q. S	7 days
2.	<i>Manjisthadi Kshara Basti</i>	Anuvasana Basti <i>Guggulu Tiktakam Ghritam</i> <i>Sahacharadi Oil</i> <i>Shatpuspa Kalka</i> <i>Saindhava</i>	80ml 50ml 20gm 5gm	<i>Anuvasana Basti</i> -18
		Nirooha Basti <i>Gud</i> (jaggery) <i>Imli Shatpuspa</i> <i>Saindhava</i> <i>Go-mutra</i> <i>Manjisthadi Kwath</i>	100gm 100gm 10gm 10gm 200ml 200ml	<i>Nirooha Basti</i> -12
3.	<i>Patra Pinda Swedana</i>	Patra used. <i>Eranda Patra, Shigru Patra Ark Patra</i> Lemon, <i>Harida, Coconut</i> <i>Karpasasthayadi Taila</i> used for <i>Abhyanga</i>	Q. S	7 days
4.	<i>Pizhichil</i>	<i>Ksheerbala Taila</i> and <i>Tila Taila</i>		7days
5.	<i>Shastikashali Pinda Swedana</i>	<i>Abhyanga</i> with <i>Ksheerbala Taila</i> and <i>Tila Taila</i>		9 days

OBSERVATIONS

The pain was assessed using a Pain VAS Score from 0 to 10. Visual Analogue Scale (VAS) was 8 in the right leg before treatment, and it came down to 2 after the treatment. In the left leg, it was 5 in the beginning i.e., before treatment and it came down to 0 after treatment.

Assessments of flexion, extension, adduction, abduction, internal rotation and external rotation were made before treatment, after *Patra Pinda Swedana*, after *Pizhichil* and after completion of both *Shastikashali Pinda Swedana* (SSPS) and *dashmooladi majja Basti*. Improvements in the Range of Movement of the hip joint are shown in Table 4.

Table 4: Observation in Range of Movement of Hip Joint

Range of Movement		Before Treatment (In Degree)	AT1 After Patra Pinda Swedana (In Degree)	AT2 After Pizhichil (In Degree)	AT3 After SSPS & Completion of dashmooladi majja Basti (In Degree)
Abduction(30°-50°)	Right Leg	15	15	20	20
	Left Leg	25	25	30	30
Adduction(20°-50°)	Right Leg	10	10	15	15
	Left Leg	20	20	25	30
Flexion (110° -120°)	Right Leg	105	105	110	110
	Left Leg	110	110	115	120
Extension (10° - 15°)	Right Leg	5	5	10	10
	Left Leg	10	10	10	15
Internal rotation (30°-40°)	Right Leg	15	15	20	20
	Left Leg	25	25	35	35
External Rotation (40°-60°)	Right Leg	10	10	20	25
	Left Leg	20	25	25	35

DISCUSSION

Avascular necrosis (AVN), also called osteonecrosis or bone infarction, is the death of bony tissue due to extirpation of the blood vasculature. Early on, there might not be any symptoms. Gradually joint pain may start to appear limiting the range of motion. Complications may include bony erosion with the fusion of the hip joint. *Rooksha Choorna Pinda Swedana* with *Kottumchukkadi Choorna*[4] was planned for *Rukshana*. To eliminate *Avarana* brought on by *Kapha* and *Meda*, to lessen morning stiffness, and to improve the action and bioavailability of future treatments, *Rukshana* was thought to be the preferred technique. The ingredients of *Kottamchukkadi Churna* are mainly *Kushtha*, *Shunthi*, *Vacha*, *Shigru*, *Lashuna*, *Kartotti*, *Devadaru*, *Sarshapa* and *Rasna*. The overall properties of the drugs are *Tikta*, *Katu* dominant *Rasa*, *Laghu*, *Ruksha Guna*, *Ushna Virya*, and *Katu Vipaka*. Due to these properties, it acts as *Amapachaka*. It does *Doshavilayana* and *Srotoshodhana* which aids in relieving *Margavarana* of *Vata*. It will move in the *Sukshma Srotas* and thus help in pacifying *Vata Dosh*. *Basti* was administered along with the *Rooksha*

Choorna Pinda Swedana considering *Vata* as the main *Dosha*. *Sahacharadi* oil and *Guggulu Tiktaka Ghrita* were used in *Anuvasana Basti*. *Asthi* is the main affected *Dhatu* in AVN; *Tikta Dravya Siddha Basti* was selected in the *Anuvasana Basti* in which *Guggulu Tiktaka Ghrita*[5] was used because *Tikta dravya sadhit Basti* is advocated in *Asthi Majja Gata Vata*[6]. Contents of *Sahacharadi tail* are *Snigdha*, *Guru*, and *Ushna* in property which alleviate *Vata Dosh*. AVN of the hip joint is brought on by a blockage of the small blood vessels supplying the femoral head. *Raktavaha Sroto avrodha* thus becomes the primary factor which imparts *Asthi Dhatu Kshaya* in the hip joint. To counter this *Rakta Dushti*, *Manjishthadi Kwath Basti* was administered. *Manjishthadi Kwatha*[7] is *Tikta*, *Katu Rasa Pradhana* and *Ushna Virya* which acts as *Raktaprasadaka & Tridoshahara*. Due to the presence of *Gomutra* in *Basti*, it pacifies the *Kapha* and helps in the removal of *Avarana*. *Manjishthadi Kwatha Basti* has antagonistic qualities towards *Kapha*, *Pitta* and *Rakta dosha*.

Patra Pinda Swedana:

Once *Samayaka Rukshana Lakshana* [8] observed *Patra Pinda Swedana* was planned to obtain the *Mridu Snigdha* in the body. leaves used for the *Patra Pinda Swedana* are mentioned in the *Swedopaga Gana* of *Acharya Charaka*. The drugs used have *Vatahara* property and all the drugs used here have *Ushna Virya*, *Snigdha* and *Sukshma Guna*. So, drugs act on the *Vata* directly. *Patra Pinda Swedan* relieves pain, stiffness and swelling associated with arthritis and other painful conditions, and pacifies the pathological changes caused by *Vata*, *Pitta* and *Kapha dosha* in the affected joints, muscles and soft tissues, by sweating which brings about lightness and reduction in congestion in affected joints, muscles and soft tissues.

Pizhichil: It is a *Brihmana* type of *Snigdha Swedana* advocated in *Asthi bhagna* (Helps in joining of fractures) and Strengthen the Dhatus. [9]. In *Pizhichil*, massaging the body with medicated oil and pouring down warm oil on the skin distresses the nerves and provides a soothing effect to the body. By *Pizhichil Snehana* and *Swedana* occur simultaneously. *Ksheer-bala Taila* and *Tila Taila* were used in the procedure. The main content of *Ksheerbala Bala Taila* is *Bala*. *Bala* has *Madhura Rasa*, *Guru*, *Snigha Guna*, *Sheeta Veerya* and *Madhura Vipaka*. It possesses *Vata-Pitta Hara* property and is *Balya* in nature.

Shashtikashali Pinda Swedana: It is a kind of *Brimhana*, *Vatahara*, *Balya Sweda*. Its ingredients like *Godugdha* and *Shashtikashali*, nourish and give strength to muscle tissues and *Balamoola* nourishes nervous tissues. Consequent application of therapeutic heat causes vasodilation, because of this the blood circulation improves and removes the waste products. Anabolism increases as tissue receives oxygen and nutrition occurs properly. Heating can decrease stiffness and increase tissue extensibility, thus facilitating ease of motion and gain in the range of movements. *Shashtikashali Pinda Sweda* improves the strength of tissues which in turn increases movements and flexibility.

Internal medicines were given based on the *Avastha* of Disease. *Main content of Sahacharadi Kasayam* is *sahachara*, *Devadaru* and *Sunthi*. *Sahachara* has *Tikta madhura Rasa* and *Ushna Virya*. *Devadaru* has *Tikta*

Rasa and *Ushna Virya* and *Nagara* has *Katu Rasa* and *Ushna Virya*. So *Sahacharadi Kasyam* has *Vatakaphahara*, *Vedanashamaka* and *Avaranahara* properties.

Aabha Guggulu accelerates the process of bone restoration which ceases further damage and simultaneous repair of damage that occurred at the hip joint. So, in this condition, it might have helped to increase the rate of regeneration of the head of the femur. *Punarnavadi Kasayam* comprises *Punarnava* as main content. It has *Madhura*, *Tikta Kasaya Ras*, and *Ushna Virya* thus balancing the *Vata* and *Kapha*. *Gandharvahastadi Taila* was given to *Vata Anulomana*.

Antarth plus soft gel capsule contains mainly *shallaki*, *gugullu*, *nirgundi methi* etc. which combinedly ameliorates joint pain and stiffness and also helps to regenerate cartilage of affected joints due to the presence of herbal extracts in optimum therapeutic dose.

After completion of treatment, the patient was prescribed *Shamana* drugs. Throughout the entire period of treatment, *Pathya* and *Apathya* were advised. The patient was instructed to drink warm water and eat simpler digestible foods. Avoiding exposure to cold air, long periods in one position, abrupt movements often, and weightlifting were also encouraged.

CONCLUSION

Avascular necrosis (AVN) of the head of the femur was managed and further deterioration was also checked by using the *Panchakarma* procedures. AVN has become a health burden in the current period due to the lack of therapeutic options other than surgery in contemporary medicine. This case study shows successful symptomatic management of the stage 4 AVN of the head of the femur. The treatment should be focused on the cause of the disease, thus slowing down or even stopping the evolution of avascular necrosis and thus delaying the process as much as possible. It is advisable to conduct such studies on a larger number of subjects to draw more concrete conclusions.

REFERENCES

1. "Avascular necrosis." Synonyms.com. STANDS4 LLC, 2020. Web. 24 Mar. 2020. <<https://www.synonyms.com/synonym/vascular+necrosis>>.
2. Jitendra Gauttam, Aosemba Jamir, Poonam Verma, Prasanth Dharmarajan, Santoshkumar Bhatted. Management of Asthi-Majjagata Vata w.s.r. to Avascular Necrosis (AVN) of Femoral Head Stage 3 By Panchakarma - A Case Study. International Journal of Ayurveda and Pharma Research. 2019
3. Acharya YT, editor, Shri Chakrapanidatta, commentator, Agnivesha, Charka Samhita, Chikitsasthana; Vatavyadhichikitsa Adhyaya, 28/33, Chaukhamba Surbharati Prakashan, Varanasi, 2014; page 617.
4. K. Nishteswar & Dr R. Vidyanath translator, Sahasrayogam, Taila Prakarana, 9/2, Varanasi Chaukhamba Sanskrit series office, 2017, page 405.
5. Acharya Vagbhatta, Astangahridaya, Shri Arunadatta & Hemadri, editor Chikitsa Sthana 21/58-59, Varanasi, Chaukhambha surbharti prakashan; 2017. Page 811
6. Acharya YT, editor, Shri Chakrapanidatta, commentator, Agnivesha, Charka Samhita, Sutrasasthana; Vividhasitapiya Adhyaya, 28/27, Chaukhamba Surbharati Prakashan, Varanasi, 2014; page 180
7. Dr Bulususitaram, editor, Bhavprakash Nighantu of Acharya Bhavamishra, Madhyamkhanda, chapter 54, Kushtharogadhikar, verse 104-106, page 539
8. Acharya YT, editor, Shri Chakrapanidatta, commentator, Agnivesha, Charka Samhita, Int. J. Ayur. Pharma Research, 2019;7(8):21-28 Available online at: <http://ijapr.in> 28 Chikitsasthana; Langhanbrihmaniya Adhyaya, 22/34, Chaukhamba Surbharati Prakashan, Varanasi, 2014, page 121.
9. Dr Vasantpatilil, editor, Principle and practice of panchakarma, chapter 9, swedana Karma, Varanasi, Chaukhambha Publication, 2016, Page 224.

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