



IJPPR

INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH  
An official Publication of Human Journals

ISSN 2349-7203




Human Journals

**Case Report**


September 2023 Vol.:28, Issue:2

© All rights are reserved by Dr. Shashidhar A Naik et al.

## A Panoramic Approach to Avascular Necrosis of Femur Head by Ayurveda Management – A Case Report



**IJPPR**  
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH  
An official Publication of Human Journals



ISSN 2349-7203

**Dr. Shashidhar A Naik<sup>1</sup>, Dr. Vishwanath S Wasedar<sup>2</sup>, Dr. Poornima T<sup>3</sup>**

<sup>1</sup> PG Scholar, Department of Kayachikitsa - Rasayana Evam Vajikarana. KAHER's Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India.

<sup>2</sup>Reader, Department of Panchakarma KAHER's Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India.

<sup>3</sup> Assistant Professor, Department of Rasashastra and Bhaishaja Kalapana KAHER's Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India.

**Submitted:** 18 August 2023  
**Accepted:** 20 September 2023  
**Published:** 30 September 2023

**Keywords:** Panoramic Approach, Avascular Necrosis, Femur Head, Ayurveda Management

### ABSTRACT

A case study of a 35-year-old patient who has been complaining for six months about low back pain that radiates down the left leg and makes walking difficult. According to MRI results, there is modest left hip joint effusion and stage III avascular necrosis of the left femoral head. The patient received Panchakarma treatment, and after taking Shamanoushadhis for a conservative three months, all of their ailments were resolved. According to the same protocol used by Ayurveda, which places a greater emphasis on prevention than on treatment, this case was successfully managed in the course of three months with the help of appropriate Panchakarma, as well as Shamana and Rasayana Therapy.



HUMAN JOURNALS

[ijppr.humanjournals.com](http://ijppr.humanjournals.com)

## 1. Introduction:

Infracture of bone and marrow is a relatively common event that can occur in the medullary cavity of the metaphysis and subchondral region of the epiphysis. Ischemia underlies all forms of bone necrosis, which can occur in the setting of diverse predisposing conditions or idiopathic events.<sup>(1)</sup>

The symptoms depend upon the location and extent of the infracture. Typically, subchondral infractures causing chronic pain that is initially associated only with activity but then becomes progressively more constant as secondary changes supervene.<sup>(2)</sup> The line of treatment is NSAIDs, Pain killers and lastly Joint replacement.

In Ayurveda literature we get many references in regards to dhatu Kshaya, Asthi dhatu Kshaya lakshanas, and Patient experience similar kind of pain as explained in the pathology of osteonecrosis.

The femoral head is most commonly affected by this disease. Usually, the patients are in their third, fourth, or fifth decade of life at the time of diagnosis. Men are more prone to this disease than women. Initially, patients are asymptomatic, but, in time, AVN leads to joint destruction, requiring surgical treatment and in later stages, total hip replacement (THR).

AVN can be correlated with Asthimajjagata Vata, and Asthibhagna, out of these Asthimajjagata Vata is more similar to AVN by its pathogenesis and symptoms. The sign and symptoms of Asthimajjagata Vata are Bhedoasthiparvanam (breaking type of pain in bones), Sandhishoola (Joint pain), Mamsakshaya (muscular wasting) Balakshaya (weakness) Sandhishaitilyam (flaxity of joints) Aswapna Satatruka (sleeplessness due to continuous pain) Shiryantiva Cha Asth – Dourbalyani (destruction of bony tissue causing generalized weakness).<sup>(3)</sup>

The chikitsa explained in the samprapti of Asthimajjagata vata to be taken into consideration, where acharyas have explained shodhana basti, Tiktaksheera prayoga and shaman chikitsa to be done for the management of asthimajjagata vata and keeping vata dosha in the samprapti treatment protocol to be followed.

## **2. Materials and methods**

### **2.1 Case Report:**

A 35-year-old male patient came with the complaint of severe pain in the lower back region, flanks and left lower limb, he also complained of pain in both hip joints, and knee sometimes radiating pain in the bilateral lower limbs.

On complete detailed history it was revealed that the patient also observed restricted movements in the lateral side of the left lower limb, stiffness after long standing. He also had difficulty in walking, was not able to do his routine activity and had to avoid long-standing i.e., not more than 45 minutes, it was difficulty for him to do his routine activity. The patient was advised for steroids, painkillers and Total Hip Replacement (THR).

His personal history; Appetite was good with regular vegetarian diet, Bowel was clear, micturition was normal, sleep was sound sleep of 8 hours, patient did not have any habits like Alcohol, Tobacco, smoking, etc., Patient was not a known case of hypertension, DM etc.

### **2.2 Local examination:**

- Gait: Trendelenburg sign positive.
- Tenderness Present in Left hip region and Groin region (L > R)
- Swelling (mild) - over bilateral hip joint.
- Significant loss in the range of movement.
- Painful internal and external rotation.
- Involuntary Movement - Absent
- Flexion, Abduction, Adduction – Possible with Pain
- FABER'S test was positive on the left side.

2.3 Investigations:

Table no.1

Sr. no.	Investigation	Range
1.	Hb %	12.9 %
2.	WBC	11,200 cells/cum
3.	HbA1C	5.6
4.	ESR	40mm 1st hr.
5.	Sr Uric Acid	7.1mg/dl

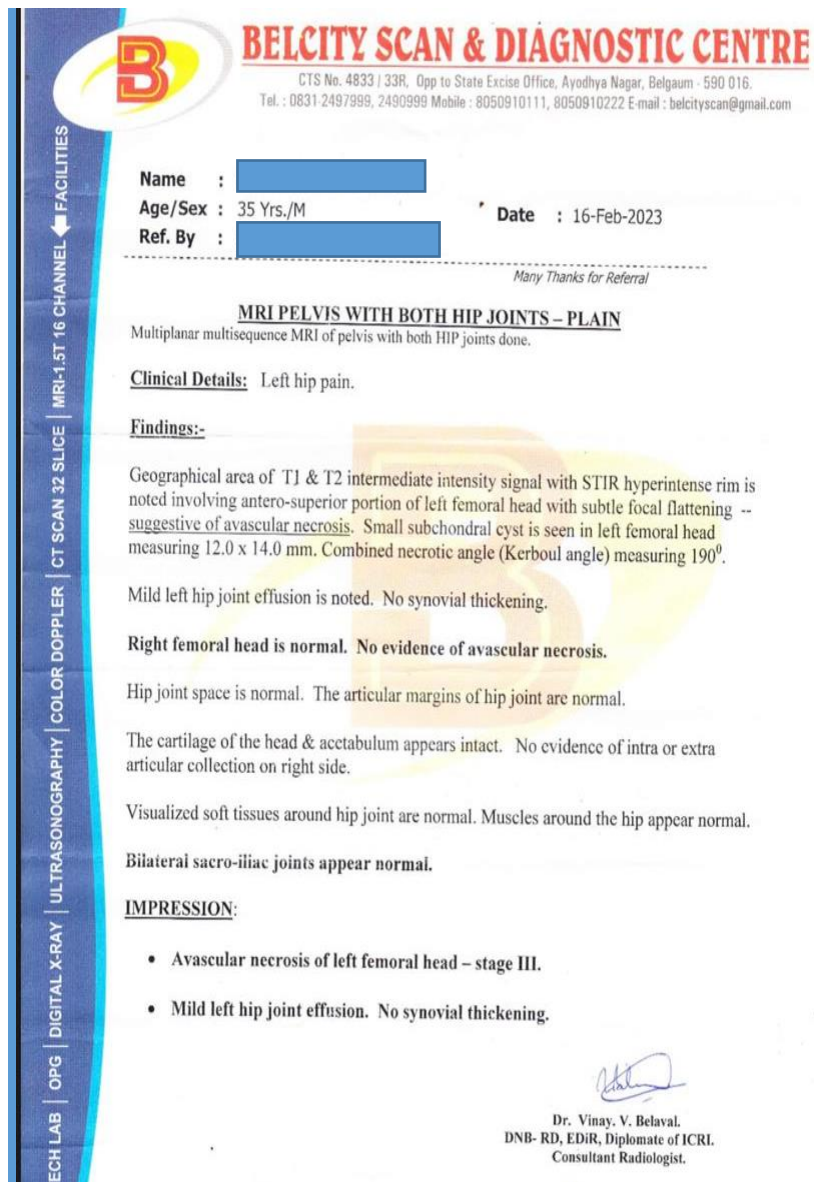


Figure 1

### 3. Result:

#### 3.1 Treatment:

Considering the history and examination of the patient, treatment was planned with a *chikitsa krama* (treatment plan) based on principles of *ṣaḍvidhopakarma* (six principles of treatment). Presentation of the patient with pain and stiffness in bilateral anterior hip-to-knee region showed the involvement of *vātakapha duṣṭi* associated with the *Asthivāha srotas* (disorders of musculoskeletal origin) and Abhyanga, Basti *Manjistadi kshara basti* and internal administration of *Mahamanjistdi kwatha 10ml thrice a day* and *Shivagutika* half tablets twice daily before food.

**Table no.2**

On Admission			
	Treatment	Shamana	Duration
1.	Sarvanga abhyanga with Brihat saindhavadi taila	Shivagutika ½ -0- ½	7 days
2.	Kati basti with Brihat saindhavadi taila	Kaishora Guggulu 1-1-1	7 days
3.	Matra basti with Balaguduchyadi taila	Mahamanjistadi kashaya 3tsp TID	3 days
4.	Manjistadi kshara basti		3 days
5.	Tiktaksheera basti		3 days
On Discharge			
1.	Shivagutika ½ -0- ½		30 days
2.	Kaishora Guggulu 1-1-1		30 days
3.	Guugulutikta kashaya 3tsp TID		30 days
4.	Swarnamalini vasanta rasa		30 days

**3.2 Observations of the symptoms and range of movements.**

**Table no.3**

Sl No	Symptoms	Before Treatment	30 days follow	60 days follow
1.	Pain in hip joint (VAS)	9	5	1
2.	Difficulty in walking	Up to 50mtrs	Up to 200mtrs	After 1km
3.	Flexion (110°- 120°)	80	100	120
4.	Abduction (30°- 50°)	30	40	50
5.	Adduction (20°- 50°)	20	40	50
6.	Gait	Trendelenburg Positive.	Trendelenburg mild Positive.	Trendelenburg Negative.
7.	Internal Rotation (10°- 20°)	10	20	20
8.	External Rotation (40°- 60°)	30	30	60
9.	FABER’S test	Positive.	Negative	Negative

**3.3 Outcome:**

Pain and range of movements were assessed. Pain is assessed by using a visual analog scale (VAS), where “0” is no pain and “10” is severe pain. Range of movements assessed subjectively.

On the day of admission, pain was graded as “9” on VAS. After 5 days of treatment, pain was reduced to 8. Gradually the pain was reduced to 5 after 30 days of medication and later after 60 days of medication it was graded as 3.

Range of movements - he had significant improvement in range of movement.

The Patient has relieved all the symptoms and improved his quality of life.

#### 4. DISCUSSION:

Avascular necrosis has several causes. Loss of blood supply to the bone can be caused by an injury (trauma-related avascular necrosis or joint dislocation) or by certain risk factors (non-traumatic avascular necrosis), such as some medications (steroids), blood coagulation disorders, or excessive alcohol use.<sup>(4)</sup> Increased pressure within the bone also is associated with avascular necrosis. According to Ayurveda, the pathogenesis of AVN can be inferred as a lack of Raktadhatu (~ blood supply) to hip joints due to strotorodha (blockage of micro channels).

In order to correct Agni, it is necessary to administer Deepana and pachana dravyas, enhance the dhatu pāka process, balance the doshas, and perform panchakarma to remove metabolic poisons from the dhatus.<sup>(5)</sup>

Sarvanga abhyanga with Brihat saindhavadi taila was done for srotoshodhana as well to get bruhmana effect. Sthanika snehana was given i.e., Kati basti with Brihat saindhavadi taila, which helped in relieving pain in the lower back region. *Brihat Saindhavadi Taila* most of its contents have basically *Ushna*, *Vata-Kaphashamaka*, *Shothhara* (anti-inflammatory), *Vednasthapana* (analgesic), and *Deepaka* properties. The properties of *Basti Dravya* help overcome the obstruction and expel the morbid material from the entire body, thus interrupting the pathogenesis of the disease. Therefore, we can say that *Basti* plays a pivotal role in the management of *Āmavata*.

Matra basti with Balaguduchyadi taila it has Rasayana (rejuvenation) and bruhmana (nourishment) properties and it is used in therapeutics both topically and systemically. It is indicated in saruk, sadaha, sashopa, and inflammatory condition. Balaguduchyadi taila is also Vataghna with Pitta and Rakta poshana qualities which help in improving the strength of muscles. Dhanvantara tail is having strong Balya properties; nourishing Mamsa, Asthi and Majja dhatu. The Taila is having anti-inflammatory, and analgesic effects. Bala Guduchyadi Taila possess similar effectiveness in treating the inflammation seen in both acute and chronic Vatarakta.

Rakta, Asthi and Majja are the main involved Dhatus in case of AVN, Manjistadi Basti was prescribed for Asthimajjagata Vata patients as Manjistadi Kwatha is having Tikta, Katu Rasa Pradhana, and Ushna Virya, which is Tridosahara and Raktaprasadaka and kshara helps in srotoshodhana and strengthen Asthi dhatu which in turn nourishes Majja Dhatu.

These basti's constituents include Tikta Rasa, Katu Vipaka, Ushna Virya, etc. Together, they improve Majja's qualities and aid in bringing the exacerbated Vata Dosha into balance. They also support the Dhatvagni's regular operation, permitting improved nutrition for the Asthi Dhatu. Tikta Rasa also has Srotoshodhana properties that aid in clearing the Srotosanga. Through its Purana (filling) and Snehan characteristics, the Majja calms vitiated Vata in Asthi and nourishes Asthi.

Shilajeetu is present in the Shivagutika, which was provided as a strotoshodhak. Preventing the buildup of lipids in the femoral head, it increases the patency of veins and promotes better circulation. This is known as lekhana karma (scrapping property). It's provided promoting bone tissue regeneration Shilajeetu including the key component fulvic acid, functions as a carrier molecule in the human system, aiding in the movement of nutrients into deep tissues and the removal of poisons from the body that have been ingested for a long time. Shilajeetu speeds up the repair of injured muscles, bones, and nervous system cells and aids in energy production. It also helps in The Shivagutika contains Bruhmana drugs like Shatavari, Vidari, Draksha, Godugdha, Jeevanthi and so on Shilajatu has significant anti-inflammatory, analgesic, immunomodulatory, antiviral and antioxidant activity

Kaishora Guggulu possesses shothahara property (capacity to reduce edema) and.

Avascular necrosis is cellular death of bone components due to interruption of blood supply causing collapse of the bone, resulting in pain, and loss of joint function and finally damage of the joint. It helps in both traumatic as well as non-traumatic disease <sup>(6)</sup> avascular necrosis is usually of traumatic and non-traumatic causes. <sup>(7)</sup>

Mahamanjistadi kashaya is Rakta prasadana (blood purifying) strotoshodhak properties helps in treating the Rakta duṣṭi. Mahamanjishtadi kashaya, Offers Vatashamana effect used to balance vitiated Vata Dosha associated with Pitta in Rakta duṣṭi.

Swarnamalini vasanta rasa is a unique combination of Sheeta and Ushna Dravya. They help to improve Agnivyapara at various levels hence cellular rejuvenation takes place so acts as Rasayana and immune booster Swarnamalini vasanta rasa formulations are the group of well-acclaimed Kharaliya Rasayana which is in use to increase vigor and vitality, to nurture depleted body constituents through anabolic effect.

Avascular necrosis is not specifically mentioned in the Ayurvedic perspective, however, based on the clinical presentation, Vata Dosha and Vikruti (vitiation) of Asthi Dhatu are more



prevalent. The blood supply (Rakta Dhatu) to the femoral head is reduced in AVN of the femoral head as a result of Margavrodha (blood vessel obstruction) or Abhighata (trauma), which finally results in necrosis. Both Margavrodha and Abhighata contributed to the deterioration of the Vata Dosha, which eventually led to the disappearance of the Asthi Dhatu. In an advanced stage, the ongoing imbalance of Vata Dosha (caused by necrosis) also contributes to the vitiation of Pitta and Kapha Dosha. Therefore, Basti is an option for treating AVN in all Panchakarma treatments for Vata Dosha <sup>(8)</sup> and is also beneficial in the imbalance of Pitta, Kapha and Rakta Dosha.

Here the Avascular necrosis of the femoral head on the basis of signs, symptoms, and Dosha and MRI reports also says the same. Dushya is treated on the line of Asthimajjagata Vata Vikara Snehana and Swedana is also considered as the line of treatment of Vata Vyadhi <sup>(9)</sup> Snehana either internal or external is indicated for the disorder of Asthimajjagata Vata Aswledana helps in reducing the heaviness and stiffness. <sup>(10)</sup>

## 5. CONCLUSION:

The patient of AVN with the bilateral femoral head was treated by *shodhana*, *bruhmana* and Rasayana line of treatment. In *asthigatavāta tikta rasa auṣadhi* (medicines with bitter taste) i.e., guduchi, manjista etc. are beneficial. *Ācāryas* while explaining the *dhātupāka avasthā* (metabolism process) clearly mentioned the importance of *Agni* which is singularly responsible for the formation of the *dhātus*. Thus, correction of *Agni* should be done by administration of *dīpana* and *pācana dravyas* and the process of *dhātu pāka* must be strengthened, the *doṣas* must be balanced, and metabolic toxins must be eliminated from the *dhātus* through *pañcakarma like basti was given in this case.* <sup>(5)</sup>

Rasayana plays a vital role in treating the disease as well as stopping the progression of the disease samprapti. Shivagutika having the main action of Rasayana, was used as naimitika Rasayana.

Rasayana and other dravyas were used to improve the quality of life of the patient and to control the disease progression. For improving longevity Rasayana is used for a longer period of time on a regular basis. For improving action of the tissues Rasayana plays a major role. <sup>(11)</sup>

**Reference:**

1. Pathologic basis of disease, chapter 26 Bones, joints and soft tissue tumors, page 1220 Eighth edition by Kumar, Abbas, Fausto, Aster.
2. Pathologic basis of disease, chapter 26 Bones, joints and soft tissue tumors, page 1221 Eighth edition by Kumar, Abbas, Fausto, Aster
3. Sakshi Gupta, & Sanjay Srivastava. (2023). An Ayurvedic approach for the management of Avascular Necrosis (AVN) - A Case Study. Journal of Ayurveda and Integrated Medical Sciences, 8(5), 265 - 270. <https://doi.org/10.21760/jaims.8.5.46>
4. Chaturvedi A, Kumar MA, Lohith BA, Praveen BS, Swathi C. Role of Ayurveda in the conservative management of avascular necrosis of the femoral head: A case study. Anc Sci Life. 2016 Jan-Mar; 35(3):173-5. Doi: 10.4103/0257-7941.179865. PMID: 27143802; PMCID: PMC4850778.
5. Sakshi Gupta, & Sanjay Srivastava. (2023). An Ayurvedic approach for the management of Avascular Necrosis (AVN) - A Case Study. Journal of Ayurveda and Integrated Medical Sciences, 8(5), 265 - 270. <https://doi.org/10.21760/jaims.8.5.46>
6. Tofferi JK, Gilliland W (2008) Avascular Necrosis. Available via medicine. Accessed 18 Sep 2018
7. Assouline-Dayan Y, Chang C, Greenspan A, Schoenfeld Y, Gershwin ME. (2002) Pathogenesis and natural history of osteonecrosis. Semin Arthritis Rheum. 32(2):94–124. [PubMed]
8. Bhahmanand Triphathi, editor. Astangharadyam. Sutra Sthana, Chapter 1, Verse no. 25–26. 2007 Edn. Delhi: Chaukambha Pratishthan; 2007; 20p
9. Bhahmanand Triphathi, editor. Astangharadyam. Sutra Sthana, Chapter 1, Verse no. 25–26. 2007 Edn. Delhi: Chaukambha Pratishthan; 2007; 20p
10. Harish Chandra Singh Kushwaha, editor (2009) Charaka Samhita. 28th Adhyaya 93rd shloka Chikitsasthana. 1st ed. Varanasi: Chaukambha Sanskrit Sansthan; reprinted 2018. p. 749
11. Kuchewar VV, Borkar MA, Nisargandha MA. Evaluation of antioxidant potential of Rasayana drugs in healthy human volunteers. Ayu. 2014 Jan; 35(1):46-9. Doi: 10.4103/0974-8520.141919. PMID: 25364199; PMCID: PMC4213967.

<p><b>Image Author -1</b></p>	<p>Author Name – Corresponding Author: <b>Dr Shashidhar A Naik</b> Author Affiliation: <b>PG Scholar, Department of Kayachiktsa - Rasayana Evam Vajikarana</b> Author Address/Institute Address :<b>KAHER’s Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India</b></p>
<p><b>Image Author -2</b></p>	<p>Author Name <b>Dr. Vishwanath S Wasedar</b> Author Affiliation: <b>Reader, Department of Panchakarma</b> Author Address/Institute Address : <b>:KAHER’s Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India</b></p>
<p><b>Image Author -3</b></p>	<p>Author Name : <b>Dr. Poornima T</b> Author Affiliation <b>Assistant Professor, Department of Rasashastra and Bhaishaja Kalapana</b> Author Address/Institute Address : <b>:KAHER’s Shri B M Kankanwadi Ayurveda Mahavidyalaya Shahpur Belagavi Karnataka India</b></p>