

**AYURVEDIC MANAGEMENT OF AVASCULAR NECROSIS OF
FEMORAL HEAD – A CASE STUDY**

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ABSTRACT

Avascular necrosis is the death of bone tissue i.e., osteocytes with subsequent structural changes due to loss of blood supply, therefore also called as osteonecrosis, ischemic bone necrosis. It is associated with excessive alcohol intake and long-term use of high dose steroid medication. In the initial stages, this disease generally asymptomatic but as the disease progress, there is constantly increase in pain which affects the patients day to day routine life. There is no permanent treatment other than hip replacement Surgery. Other treatments include physiotherapy and NSAIDs. And all the treatments are costly and having poor prognosis. The present case was aimed to evaluate the efficacy of Ayurveda system in the conservative management of AVN.

In this present case was a 40 years old male was diagnosed with AVN

of bilateral hip joint, was managed with Shaman Aushadhi followed by Erandamuladi yoga basti, panchatiktta ghritha basti, manjishthadi kshara basti, repeated jalaukavacharan and gutta mutta pottali sweda. Patient was observed for symptomatic improvement based on signs and symptoms before and after treatment. The therapy provided marked improvement in the gait, pain, tenderness and range of movements. Conservative management of AVN through Ayurvedic principles provided significant relief in signs and symptoms and improved quality of life.

KEYWORDS: Avascular necrosis, Shamana Aushadhi, Shodhana, Bruhana Basti, jalaukavacharan.

INTRODUCTION

Avascular necrosis (AVN) of femoral head is pathological process arising from occluded blood vessels supplying to the bone. It generally affects the people during 3rd to 5th decade of life. It is also called as osteonecrosis, ischemic bone necrosis where ischemia due to interrupted blood supply is the main cause of the death of the bone marrow cells.^[1] In Ayurveda, there is no direct correlation of any disease with avascular necrosis. According to the involvement of the Dosha and Dushya treatment modality of this disease should be planned. It may be correlated with Asthimajjagat vata one among the Vatavyadhis. Its symptoms are Bhedoasthiparvanam (breaking of pain in bones and joints), Sandhishoola (joint pain), Mamsakshaya (muscular wasting), Balakshaya (weakness), Sandhishathilyam (laxity of joint), Aswapanasantat Ruk (sleeplessness due to continuous pain), Shiryantiva Cha Asthinidurbalani (destruction of bony tissue causing generalized weakness).^[2] General line of treatment of Vata Vyadhi is Abhyanga (oil anointing), Swedana (sudation), Basti (therapeutic enema), etc. In AVN the, Vata Dosha is the main vitiated Dosha here, so treatment process should be Vata shamaka (pacifies vata), and therapies such as Abhyanga (oil anointing), Mrudu Swedana (mild sudation), Bruhana Basti (nourishing type of enema) to restore the diminished dhatus. Panchakarma procedures involving Pinda sweda like gutta mutta pottali sweda and Parisheka, Bruhana basti like panchatikta kshira basti along with shaman medicine have shown satisfactory results in improving quality of life of the person suffering from AVN of femoral head.^[3]

MATERIAL AND METHODS

Selection of patient; Patient selected from OPD – Government Ayurvedic college and hospital, Osmanabad.

Materials required Internal medicine

1. Asthimajjapachak Vati (2-0-2 before meal)
2. Aampachaka Vati (2-0-2 before meal)
3. Panchatikta ghrita (1tsp at 7.00 am empty stomach)
4. Amritarishta (20 ml-20 ml after food with equal amount of hot water)
5. Tab. Neuro XT (2-0-2 after meal)
6. Tab. Ostoleaf neutra (2-0-2 after meal)
7. Panchatikta ghrita guggul (2-0-2 after meal)
8. Erandamuladi basti 7 days

9. Manjishtadi kshara basti 7 days.
10. Panchatikta kshara basti 10 days.

External treatment

1. Snehana with Balaguduchyadi tail^[4] (around both hip joint)
2. Sarvanga Petiswedan.
3. Pinda sweda – Gutta mutta pottali sweda.^[5]
4. Jalaukavacharan. Patient Particulars - Name – XYZ

Age – 40 years Sex – Male

Religion – Hindu OPD No.-

Address – Osmanabad Date – 24/01/2023 Chief complaints –

1. Difficulty in walking associated with pain in groin and the thigh region
2. Restricted movement of lower limb

A 40 years old male patient history of covid 19 before 2 years ago, reported to the OPD of Panchakarma, Government Ayurvedic college and hospital, Osmanabad. With complaints of pain and stiffness in bilateral hip and thigh region since 1 and ½ year which was associated with difficulty in walking and other daily activities. The patient claimed to be apparently healthy 2 year earlier with the pain and stiffness developing gradually. The pain was constant throughout the day and aggravated during the night hours. He consulted an orthopaedics doctor for relief from these symptoms. He was diagnosed with Avascular necrosis of bilateral head of femur with aid of X-ray and MRI. Orthopaedic surgeon starts the Biphosphonate therapy and other pain killers and calcium and Vit D3 supplements, which did not relieve the symptoms. Then doctor recommended or advised total hip joint replacement but patient was reluctant, and he approached our hospital for conservative and better treatment. The condition of the patient during first visit was pain, stiffness, and heaviness in both the lower limbs, disability to perform regular activities.

On examination patient presented with

- Third degree tenderness over bilateral thigh, patient was not able lift the right limb up to 10 degrees.
- Gait – Antalgic Movements
- Pain on movements of the limb such as flexion, extension, lateral flexion and rotation.

Motor system

- Crepitus – absent
- Attitude of the limbs – flexed upper and lower limb.
- Nutrition – moderate
- Tone – hypotonic in right lower limb.
- Power – Left side – normal power and right side – Grade-4
- Involuntary movement – absent. Investigation
- MRI revealed – AVN of both hip joints, Grade 3 of the right hip joint and Grade 2 of left hip joint.

Treatment schedule

- Shamana Aushadhi
1. Dipana (carminative) & Pachana (digestive) treatment was adapted by administration of a. Aampachak vati (2 tab twice a day before food) and b. Assthimajjapachak Vati^[6] (2 tab twice a day before food) in order to relieve ama (a state where metabolism is hampered) symptoms such as jivhaliptata (coated tongue), Angagauravata (heaviness in the body), malabaddhata (irregular and constipated bowel habits). The treatment was aimed at amapachana (digestion of ama), and vatanuloman (downward movement of vata dosa) effect.
 2. Shulghna (pain management) – Tab. Neuro XT^[8] (the ingredients have anti-inflammatory, analgesic, muscle relaxant & regenerative property.)- 2 tab twice a day after food with luke warm water.
 3. Bruhana - Tab. Ostolief nutra^[8] – It reduces joint pain and inflammation, joint stiffness, improves flexibility and mobility of the joint. (2 tab twice a day after food with luke warm water.)

Panchatikta ghrut guggul^[9] – It balances Tridosha and increase in digestive fire. It acts as Strotoshodhak and is very beneficial in diseases like Asthikshaya, Asthmajjagat vata. (2 tab twice a day after food with luke warm water)

Table no. 1: Details of oral medications administered.

Sr no.	Drug	Dose	Anupana	Time	Duration
1	Aampachak vati	500 mg	Luke warm water	Before food BD	2 weeks
2	Asthimajjapachak vati	500 mg	Luke warm water	Before food BD	4 weeks
3	Tab. Neuro XT	500 mg	Luke warm water	After food BD	4 weeks
4	Tab. Ostoleaf Neutra	500 mg	Luke warm water	After food BD	4 weeks
5	Panchatikta Ghrut	10 ml	Luke warm water	Early morning OD	3 months
6	Panchatikta Ghrut guggul	500 mg	Luke warm water	After food BD	Next 3 months
7	Amritaarishta ^[10]	20 ml	Same quantity of warm water	After food BD	3 months

- Panchakarma

1. Snehana – Sarvanga snehana (full body massage) was done with balaguduchyadi tailam^[4] for 15 days.
2. Swedana – From the next day onwards Pinda sweda with Shashti shali rice, cow milk and banana.^[5]
3. Jalaukavacharan^[11] – Bloodletting was opted to be done on every 8th day with the help of 4 jalauka (leech) on each hip joint.
4. Basti –

- a) Erandamuladi yoga basti^[12]

Table No 2: Erandamuladi Niruha basti ingredients.

Kwath	Erandamula, Laghupanchamula, madanphala, guduchi, ashwagandha, punarnava, rasna etc.
Dravya	Water- 2000 ml
Other ingredients	Madhu 30 ml; Saindhav 10 gm Sneha-Eranda tailam 40 ml;
	Kalka – Shatpushpa, yashtimadhu, vacha, musta etc.

- b) Anuvasana Basti – Eranda tail – 40 ml; Tila Tail- 20 ml
- c) Manjishthadi kshar basti^[13,14]

Table No. 3: manjishtadi kshar basti ingredients.

Kwath	Manjishta, Guduchi, Yashtimadhu bharad (each 20 gm)
Dravya	Gomutra 80 ml, water 1000ml
Other ingredients	Madhu – 40ml, saindhav- 8gm, Sneha- Tila tail 60 ml, Kalka – Shatpushpa and Yashtimadhu each 10 gm.

- d) Panchatikta Kshirbasti – Charaka Acharya said that in the disease of asthi, basti should be given using Tikta Rasatmak aushadhi Dravya along with Ghrut and Ksheer that is Saghrit Tikta Ksheer Basti. Akash and Vayu Mahabhuta are prominent in Tikta Rasa. It contains Tikta Rasa Pradhan dravyas which also has Prithvi Mahabhuta that help in bone formation and nourishment. It is Snigdha, Balya, and does Bruhan hence proven beneficial in Asthikshaya.^[15]

Table No. 4: Panchatikta Ksheer basti ingredients.

Ksheerapaka	Guduchi, Vasa, Nimba, Patola, Kantakari (each 40gm)
Dravya	Godugdha- 120 ml, water- 600 ml Ksheeravashesh – 120 ml
Other ingredients	Panchatikta ghrut – 40 ml

Table No. 5: Details of therapies administered.

Sr. no.	Procedure	Ingredients	Duration
1	Snehana	Bala Guduchyadi taila	15 days
2	Petiswedan	Dashamula bharad	15 days
3	Pinda sweda	Shashti shali, milk, banana	10 days
4	Jalaukavcharan	Jalauka	Weekly – 8 setting
5	Erandmuladi Niruha Basti	Anuvasana – Eranda Taila, Tila Taila Niruha – Erandmuladi dravya Kwath, Madhu, saindhav, Erand Taila	8 days
6	Manjishtadi Kshar Basti	Manjishtadi dravya, Gomutra, Madhu, Saindhava, Shatpushpa and yashtimadhu kalka, Tila taila	15 days
7	Panchatikta Ksheer Basti	Nimba, Patola, Vasa, Guduchi, Kantakari, Godugdha, Panchatikta ghrut.	10 days

OBSERVATION

Pathya was advised with nidana parivarjana (avoiding all aggravating habits) and during the course of treatment patient was given low carbohydrate diet. Patient was observed for any minor or major complications during whole course of treatment and no untoward complication was observed. During the course of shamana patient did not find significant relief but slight improvement was present during the course of shodhan therapy and in that, patient was able to lift lower limb to 30 degrees due to stiffness still present. After the course

of bruhan therapy and Jalaukavcharan, the patient was able to lift 60 to 70 degrees with complete reduction of stiffness and able to walk without support. Overall, the patient felt symptomatic improvements.

Table no. 6: Comparison of symptoms.

Sr no.	Symptoms	After shamana	After shodhana	After bruhana
1	Stiffness	Grade 3	++	Nil
2	Tenderness	Grade 4	+++	Nil
3	Pain	+++	++	Nil
4	Raising of lower limb (°)	10	30	60-70
5	Gait	Trendelenberg	Trendelenberg	Normal

CONCLUSION

This is single case study, where patient got 70% relief in signs and symptoms without any complication till date. Further rejuvenation was done by using the Panchakarma procedures along with treatment of Asthimajjagata Vata. AVN is challenging condition today due to non-availability medicine plan except surgery in modern science. The case study reveals victorious management of stage 2 and 3 AVN of head of femur. Patient of AVN with the bilateral femoral head was treated with Dipana, Pachana (Shamana) followed by Shodhana and Bruhana line of treatment. Acharayas while explaining the dhatupaka avastha clearly detail the importance of agni which is singularly responsible for the formation of dhatus. Thus, correction of agni should be done by administration of dipana and pachana dravyas and the process of dhatu paka must be strengthened.^[16] Basti is among the panchakarmas which clearly shows its efficacy. As the preoperative process of any panchakarma is snehana and swedana which help to remove srotorodha and sthirikaran of angas (imparting compactness to body). Aacharya mentioned the usage of shodhana or rukshana for better bruhana (rejuvenation). Hence the treatment modalities such as Erandamuladi niruha basti nad manjishtadi kshar basti were planned in order to remove srotorodh and samta. In chronic conditions due to its therapeutic effect especially in its bruhana action. Therefore in AVN like conditions this can be proved to be a better modality of treatment, as AVN represents Gambhir asthi dhatu involvement. In asthigata Vata tikta rasa aushadhi are beneficial.^[17] Hence the use of tikta rasatmak dravya and milk and ghrith which is very important for the bone formation. So we can plan the Panchatikta ksheer basti for bruhan karma. Patient started having relief in symptoms within 7 days after local snehana and Erandamuladi Niruha Basti. The primary goal is to stop the progress of avascular necrosis. Jalaukavcharan and Panchatikta Ksheer Basti has played a key role in treating AVN. Similar studies should be done to get more

confirmative conclusion.

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