

**“AYURVEDIC MANAGEMENT OF AVASCULAR NECROSIS OF  
HEAD OF FEMUR BY *PANCHATIKA KSHIRA BASTI- KARMA*” - A  
CASE STUDY**

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**ABSTRACT**

Avascular necrosis of the femoral head is an increasingly common cause of musculoskeletal disability and it poses a major diagnostic and therapeutic challenge. The disease affects mostly young adults within their 3rd and 5th decade, although patients are initially asymptomatic, avascular necrosis (AVN) of the femoral head usually progresses to joint destruction, requiring total hip replacement (THR), usually before the fifth decade.<sup>[1]</sup> A male patient aged 32 years (IPD registration No. 2686 national institute of Ayurveda and Hospital, Jaipur) presented with the complaints of pain in both hip joints and thigh region with difficulty in walking. It was diagnosed as a case of avascular necrosis of femoral head bilaterally based on MRI- reports. As per Ayurveda the patient is diagnosed as a case of *Asthipradoshaja Vikara* in general

and *Asthi-Vidradhi* in particular. Patient was treated with classical *Panchakarma* treatment particularly with *Basti Karma* by using drugs like *Panchatiktaka Kvatha* and *Guggulu Tiktaka Ghritam* along with conventional drugs of *Basti* as *Kala Basti* schedule. Certain oral medication like *Kaishora Guggulu*, *Lakshadi Guggulu*, *Dashamula Kvatha* and *Triphala Churna* etc were given. After completion of treatment the pain in hip joints and thigh region was reduced, range of movement of hip joint was improved and difficulty in walking was much reduced and walking distance was also improved.

**KEYWORDS:** Avascular necrosis of head of femur, *Asthipradoshaja Vikara*, *Asthi-Vidradhi*.

## INTRODUCTION

Avascular necrosis is cellular death of bone component due to interruption of blood supply. Without blood the bone tissue dies and the bone collapses resulting in bone distraction, pain and loss of joint function. Avascular necrosis primarily affects the joints of shoulder, knee and hip. The classical sites are: head of the femur, neck of talus and waist of scaphoid. Most of the patients presenting this diagnosis are in their third or fourth decade of life.<sup>[2]</sup> Symptoms of AVN of femoral head are presented by groin or hip pain radiating to buttocks, anteromedial thigh or knee that is aggravated by weight-bearing and sometimes by coughing. Progressive increase of the pain worsens with time and use, patient experiences pain on rest which may be worse during night and may have association with morning stiffness.<sup>[3]</sup> This condition can be clinically correlated to *Asthipradoshaja Vikara* in general and *Asthi – Vidradhi* in particular described in Ayurveda .Occurs due to the vitiated *Vāta Doṣa and Pitta Doṣa* residing in *Asthi* (bones). It presents with the clinical features as *Asthi-shoola* and *Asthi-toda* (Pricking type of pain in bones) which correlates with symptoms of AVN.<sup>[4]</sup> A patient presented to us had bilateral avascular necrosis involving both femoral heads stage- 3 C on the right side and 3B on the left side and advised for surgery. In this acute stage, the case was well managed and relieved significantly by Administration of *Pancha Tikta-Kshira Basti* (milk infusions processed with *Panchtikta Dravyas* and *Guggulu Tikta Ghritam*). SoIt can be concluded that, AVN can be treated effectively with *Ayurveda* which is non-invasive in nature.

## CASE REPORT

A male patient (registration No 2686, national institute of Ayurveda and Hospital, Jaipur aged 32 years) presented with the complaints of pain and stiffness in both hip joints and thigh region with difficulty in walking since 3 months. Patient having history of Brain Tumour which was operated 2 years before onset of AVN, after operation he took corticosteroid for longer time. This history of the patient reveals the possible role of corticosteroids in the causation of AVN.

## OBSERVATIONS

### Signs

Difficulty in walking and movement of hip joint.

Gait: Slow, Waddling gait.

**Symptoms**

Pricking type of pain in bilateral hip joints and thigh regions and difficulty in movement.

MRI report:

Dated: - 09 SEP, 2015.

Suggestive of Bilateral Avascular Necrosis involving both femoral heads stage- 3 C on the right side and 3B on left side.

*Prakriti: Kapha – Pitta.*

*Vaya: Madhyama.*

*Bala: Madhyama.*

*Abhyavarana Shakti: Madhyama.*

*Jarana Shakti: Madhyama.*

*Koshtha: Madhyama.*

**Treatment given*****Basti Karma******Niruha Basti***

Rectal administration of medicine. It consist of *Kwatha* (herbal decoction), *Sneha* (medicated oil), *Madhu* (honey), *Saindhava Lavana* (rock salt) and *Kalka* (herbal powder).<sup>[5]</sup>

*Panchatiktaka Kshira Basti* was given in *Kala Basti* schedule for 16 days with the following contents.

*Madhu* – 60gms.

*Saindhava lavana* – 05gms.

*Guggulu tiktata ghritam* – 90ml.

*Panchatiktaka Kwatha* – 240ml.

*Putoyavanyadi Kalka* - 30gms.

*Kshira*-240ml.

The contents of *Kwatha* are *Guduchi*, *Nimba*, *Patola*, *Vasa* and *Kantakari*.

***Anuvasana Basti***

Administration of medicated oil or other fat through the rectal route in a prescribed dose is called as *Anuvasana Basti*.<sup>[6]</sup> In this case study *Madhuyashtyadi Tailam* was used for *Anuvasana Basti*.

***Shamana Aushadi***

Palliative treatment was given with following drugs.

*Kaishora Guggulu* – 2 pills (500mgm) three times a day.

*Dashamoola Kwatha* – 40ml two times a day.

*Lakshadi guggulu* – 2 pills (500mgm) three times a day.

*Triphala Churna*– 3gms + *Chopchini* – 500mg + *Madhuyashti* – 2gms three times a day.

*Tarunikusumakara Churna* – 5gms at bed time.

**RESULTS**

Improvement in all signs and symptoms of the patient. Marked relief was found in both pricking type of pain and stiffness in hip joint and thigh region. Difficulty in walking was reduced. Gait was also improved.

**DISCUSSION**

AVN is a pathologic condition that results from temporary or permanent loss of blood supply to the particular part, frequently affecting the femoral head. Though pathophysiology of AVN of the femoral head has been poorly understood, following mechanisms can theorized as the causes:).<sup>[7]</sup>

- Vascular occlusion: Due to direct trauma (e.g. fracture and dislocation), non-traumatic stress and stress fracture, there will be an interruption of the extra osseous blood supply.
- Altered lipid metabolism: Lipid-level-lowering drugs in animals showed reversal of lipid deposition in the femoral head.
- Intravascular coagulation: Coagulative disorders have been implicated in the pathogenesis of AVN.
- Healing process: Repair process triggered by necrotic bone which includes osteoclasts, osteoblasts, histiocytes and vascular elements. There will be new bone formation over the dead bone and forms a thick layer on the dead bone which prevents revascularization of the dead/necrotic bone.
- Mechanical stress: Animal studies have shown an association between increased weight bearing and an increased bearing and an increased incidence of AVN of the femoral head.
- Whatever may be the reason, prime pathology involves the reduction in blood supply to the femoral head. Which can be inferred in *Ayurvedic* pathogenesis as follows: *Rakta dhātu* (blood tissue) supply to the femoral head is decreased. Subsequently resulting into

*Kotha* (necrosis) due to lack of supply of *Prana* and finally resulting into loss of *Asthi Dhatu*.

- **Role of Basti**

*Niruha Basti* is the best treatment for correcting *Vata Dosha* and for *Asthi Pradoshaja Vikara*, further *Panchatikta Kshira Basti* was selected here as it is specifically mentioned for the treatment of *Asthi Pradoshaja Vikara*.<sup>[8]</sup>

Specially *Guggulu Tiktaka Ghritam* used as *Sneha* in *Niruha Basti* is specifically mentioned for *Asthi Sandhigata Vikara* due to its *Tikta Rasa* help to reach *Asthi, Sandhi* because *Tikta Rasa* is having predominance of *Vayu* and *Akasha Mahabhuta*. Hence, it has got affinity toward the body elements like *Asthi* which has same *Mahabhautika Tattva* (subtle constituents of matter). Due to its *Sukshma Guna* may help to open fresh blood supply and because of *Tikta Rasa* may reduce the *Kleda* and *Kotha* and by virtue of *Snigdha Guna* and *Balya* and *Brimhana* action nourishes the *Asthi* and *Sandhi*.

Most ingredients of *Guggulu tiktaka Ghrita* that is administered for *Sneha* in *Niruha Basti* have *Tikta Rasa*, *Ushna Virya* and *Madhura* (sweet) and *Katu Vipaka* favours normal functioning of *Dhatvagni* (metabolic stage), facilitating increased nutrition to the *Asthi Dhatu* (bony tissue). As a result, degeneration of *Asthi* reduced and helping its regeneration. *Ghrita* (ghee) is *Vata-Pitta Shamaka* (reduces *Vata* and *Pitta Doşa*), *Rakta Prasadaka*, *Balya* (increases body strength), *Agnivardhaka* (increases appetite as well as metabolism), *Madhura*, *Shita Virya* (cold in potency). Thus, it pacifies *Vata*; improves the *Dhatu Upachaya* (metabolism of the tissues) and acts as a rejuvenator of the body. *Ghrita* has the properties of *Samskarasya anuvartana* (that which inherits the properties of other drugs without altering itself) precipitating bio-availability of other drugs. *Ghrita* also contains vitamin D which plays an important role to utilize calcium and phosphorous from blood and helps in bone formation. Thus, helps in the *Samprāpti Vighatana* (breaking down of pathology) of the *Ashti Kshaya*.

*Kshira* is having *Madhura* and *Snigdha* (having oleation property) properties which help to control *Vata Doşa* and *Pitta Dosa* acts as *Brimhana* (nourishing).

**Anuvasana Basti**

*Madhuyashtyadi Tailam* was administrated as *Anuvasana Basti*. It is having *Madhura Rasa*, *Guru Snigdha Guna*, *Shita Virya*, *Madhura Vipaka* and *Vata-Pitta Shamaka*. *Yasthimadhu* is also *Rasa Rakta Prasadaka* which may help to increase the blood circulation.

Thus the combination of these *Basti* acts at different level to in treating Avascular Necrosis of neck of femur.

**Shamana drugs**

*Kaishora Guggulu* is a drug of choice in *Vatarakta* in which obstruction in blood vessels is main pathology more keeping this in view it was used.

*Dashamula Kwatha* is *Tridosahara*, *Vedana Sthapaka* and *Srotoshodhaka*.

*Lakshadi guggulu* having property of *Bhagna Sandhana*, *Vedanahara Madhuyashti churna* having property of *Vata pitta Shamaka*, *Jeevniya*, *Sandhaniya*, *Rasayana*, *Balya*.

Chopchini is *Vedanahara*, *Shothahara* and able to carry drugs in *Sukshma Srotasa*.

**CONCLUSION**

On the basis of this single case study it can be concluded that *Panchatikta Kshira Basti* along with certain palliative medicine are effective in the management of *Asthi-Vidradhi* WSR to Avascular necrosis of neck of femur.

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