

## **Ayurvedic management of Avascular Necrosis (AVN) of femoral head: A case study**

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### **Abstract:**

Avascular Necrosis (AVN) is a progressive degenerative condition of bone, caused by interruption to the blood supply. While it can affect any bone, AVN is especially common in the hip joint. Disease has very poor prognosis in modern orthopaedic practice. Treatment aspect of AVN in contemporary science revolves around the pain relieving medicine to total hip replacement surgery, which have drawbacks of long term recovery and short life span of hip joint. On contrary Ayurvedic treatment provides long term relief and stops the progression of disease without any drawback. There is no direct co-relation of AVN and *Asthi-Majja GataVata* but on their clinical presentations it is *Vata Pradhana Tridoshaja Vyadhi* with *Vikruti* of *Asthi-Majja Dhatu*. Following is documentation of improvement in patient diagnosed with AVN. A male patient of age 50 years consulted to OPD department, with complaints of pain in bilateral hip joints (right more than left) with difficulty in walking since 8 months. The patient was treated with *Tikataka Ksheera Basti Chikitsa* as *Kala Basti* schedule. Hence the study concluded the Basti Karma is one of the potential treatment options in AVN management.

**Keywords:** Avascular Necrosis, *Asthi-Majja Gata Vata*, *Basti Karma*, *Tiktaka Ksheera Basti*

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**Introduction:**

Avascular necrosis (AVN), also called osteo necrosis, aseptic necrosis, bone infarction and ischemic bone necrosis, is a degenerative condition of bone which is progressive in nature, caused due to interruption to the blood supply. While it can affect any bone, AVN is especially common in the hip joint. The disease prevalence rate is 0.135% per 1000 population most of them ages between 20-50 years of age.<sup>[1]</sup>

If avascular disease is caught early, treatment may involve taking anti-inflammatory medication, analgesics and limiting use of the affected area. Crutches may be necessary to take weight off the hip joint. While these non-surgical treatments may slow the progression of AVN, most people with the condition eventually need surgery, most common being the total hip replacement. But total hip replacement have a number of downsides including long term recovery and short life span of hip joint. Other treatments include core decompression, where internal bone pressure is relieved by drilling a hole in bone and a living bone chip and an electrical device to stimulate new vascular growth implanted. A 2012 Cochrane systematic review noted that no clear clinical improvement can be found between people who have had hip core decompression with physical therapy, versus physical therapy alone<sup>[2,3]</sup>. Hence an effort has to be done to know the effect of *Tiktaka Ksheera Basti*<sup>[4]</sup> in the management of *Asthi Pradoshaja Vikara* (AVN of femoral head).

**Case History:**

A 50 years old male patient came in OPD with chief complaints of pain n bilateral hip joints (right more than left) since 3 years that was aggravated since 8 months. Patient also has difficulty in walking for more than 100 meters.6 months

Patient was apparently healthy 3 years before, with gradual onset of pain in right hip joint after walking for more than 100 meters. For this patient took allopathic medicine (NSAID- ibuprofen)and found temporary symptomatic relief and aching, sharp pain gradually started in left knee joint also with more intensity than before. The pain intensity aggravated extensively since 8 months which was persistent nociceptive in nature. So he approached to Panchakarma OPD of Ashwini Ayurvedic Hospital, Tumkur for taking Ayurveda treatment. No History of Diabetes, Hypertension or any metabolic Disorders were found. MRI of bilateral hip Joint showed bilateral Femoral Head AVN, Grade III on right and Grade II on Left side. On examination of the hip joint, restricted hip angle flexion, forward bending and lateral rotation were noted. Also there was shortening of right leg compared to left leg by 5 cms. Patient was suggested to get admission in hospital for the *Tikataka Ksheera Basti* as *Kala Basti* schedule.

**Methodology/Treatment given:****Poorva Karma:**

Informed consent was taken. Examination of the patient was done for vitals and if patient is indicated for *Basti Karma*.

Preparation of Basti:

Madhu- 1 Prasurta

Saindhava- ½ Aksha

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Sneha- Bala Ashwagandha Lakshadi  
Taila- 1.5 Prasruta

Kalka- Ashwagandha Kalka Churna- ½  
Prasruta.

Kwatha- PanchaTiktakaKwatha- 2  
Prasruta

Ksheera- 1 Prasruta.

Total dosage: 6 prasruta

Preparation of patient: after passing feces, urine and flatus, the patient on empty stomach was prepared with Abhyanga and Swedana.

**Pradhana Karma:**

Patient was lie down in left lateral position and administered with *Niruha Basti* (6prasruta ~600 ml) during morning in empty stomach (*Niranna*) daily for 10days as *Kala Basti* procedure. *MatraBasti* was administered same day evening after food till the end of Kala Basti procedure<sup>[5]</sup>.

**Paschata Karma:**

*Basti Pratyagamana Kala, Samyaka Lakshana* were noted after administration of *Basti. Matra Basti* with *Panchtikta Guggulu Ghrita* 1 pala (48ml) was given during *Tiktaka Ksheera Basti* procedure. <sup>[6]</sup> Follow up was done on 21<sup>st</sup> day after completion of treatment. The study duration was of 31 days.

Kaishor Guggulu (weight) 1 two time a day after food with UshnaJala. for 15 days, Cardorium plus syr (Alakananda Herbals) 10 ml three time a day before food with Ushna Jala for 15 days was prescribed as internal medicines.

Sthanika Abhayanga with Murivenna Taila and Dhanyamla Pariseka was given during the Basti Karma Chikitsa

**Assessment on the Basis of Gradation****System:****Pain in hip and groin region:**

- 0- No pain
- 1- Occasional pain and can be ignored
- 2- Interfere with task
- 3- Interfere with basic needs
- 4- Bedrest require

**Stiffness of hip joint:**

- 0- No stiffness
- 1- Occasional stiffness present
- 2- Stiffness retains for 30 mins
- 3- Stiffness after sitting and walking for long time
- 4- Stiffness whole day or whole night

**Restricted range of movement of hip joint**

- 0- No restriction (flexion of 130°)
- 1- Restricted initially (flexion of 90°-130°)
- 2- Partially restricted (flexion of 70°-90°)
- 3- Restricted with pain (flexion 45°-70°)
- 4- No joint movement (flexion 0°-45°)

**Gait:**

- 0- Normal without pain
- 1- Occasional pain during walking
- 2- Walk with support with mild pain
- 3- Walk with support with severe pain
- 4- Unable to walk

**Plain radiograph (ficat scoring):**

- 0- Normal
- 1- Normal or minor osteopenia
- 2- Mixed osteopenia/ sclerosis
- 3- Crescent sign and eventual cortical collapse
- 4- Secondary degenerative changes

**Table-1: Basti Schedule:**

1	2	3	4	5	6	7	8	9	10
	NB-TiKB	NB-TiKB	NB-TiKB	NB-TiKB	NB-TiKB	NB-TiKB			
MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG	MB-PTGG

**Note:** NB: Niruha Basti; MB: Matra Basti; PTGG: Panchatikta Guggulu Ghrita; TiKB: Tiktaka Ksheera Basti.

**Table-2: Assessment of Clinical Features Before and After Treatment**

Clinical feature	Before Treatment	After Treatment
Pain	3	1
Stiffness	3	0
Restricted Range of Movement	3	1
Gait	2	0
Radiograph (Ficat Scoring)	3	3


**Figure 1 Before treatment**

**Figure 2 After treatment**
**Result and Discussion:**

After the completion of prime treatment i.e. *Basti Karma* symptoms were evaluated. It was observed that there was significant relief in pain after 3<sup>rd</sup> day of *Niruha Basti*. Also stiffness was reduced along with pain. Gait of the patient which was limping initially came back to normal after 5<sup>th</sup> day of *NiruhaBasti*. The range of movement was also clinically improved. But as far as the radiographic images (MRI) is concern no change was noted. So

the most outcome of the study was that, it helps in relieving the symptoms. This enables the patients to resume day today activities during treatment. Hence this study had positive outcome and can be recommended as the therapeutic procedure for AVN of femoral head.

There is no direct co-relation of *Asthi-MajjagataVata* and AVN of femoral head but on their clinical presentations it is *VataPradhanaTridoshajaVyadhi* with *Vikruti* of *Asthi* and *MajjaDhatu*<sup>[4]</sup>. In

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advance stages of AVN due to continuous *VataDosh*a imbalance, it further responsible for vitiation of *Pitta* and *KaphaDosh*a also. So here *Basti* is the choice of treatment for AVN. In all *Panchakarma* procedures *Basti* is first line of treatment of *VataDosh*a as *DoshaPratyanikChikitsa*. It has been explained as *Ardhachikitsa* and *Poorna Chikitsa* by *AcharyaCharaka*<sup>[5]</sup>. *Basti* is also the treatment explained for vitiation of *Vata* as well as *Pitta Dosh*a, *KaphaDosh*a, *Rakta Dhatu* and combination of these.<sup>[6]</sup>

### Conclusion:

Thus this study concluded that *TiktakaKsheera Basti* in AVN showed significant result to gain symptomatic relief. Although in order to generalise the result to other patient further study is required with large study group.

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