

## Effect of *Panchtik Ksheer Basti* in Management of Avascular Necrosis of Head of Femur (Case Study)

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### Abstract

Avascular necrosis (AVN) is temporary or permanent loss of blood supply to bone. Without blood, the bone tissue dies and ultimately the bone may collapse. Without treatment, the process is almost always progressive, leading to joint destruction within five years. AVN accounts for more than 10% of total hip replacement surgeries performed. A diagnosed case of male patient with complaint of severe pain in right hip joint and upper aspect of right thigh and difficulty in prolonged standing, sitting and lifting of objects, restricted movement of right hip joint and disturbed sleep due to pain. This presentation was correlated with *Asthi-Majjagata vata* (musculoskeletal disorder) and treated accordingly. An effort has been made in the present study to evaluate the efficiency of Ayurveda Panchkarma in the management of AVN of the femoral head. Initially, patient had been administered *Dipana* and *Pachana* followed by *Ksheer basti* (medicated enema prepared with milk and ghee) was administered in *Karma Basti* schedule (30 in numbers). There was relief of pain, moderate improvement was found in all signs and symptoms, pain and stiffness was reduced. Improvement in range of movement of hip joint and difficulty in walking was observed. This case study suggests that *Bastikarma* may provide a significant result in *Asthi Majjagat Vata* i.e., AVN.

**Keywords:** *asthi majjagat vata*, *avascular necrosis* (AVN), *basti*

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### INTRODUCTION

Avascular necrosis (AVN) of the femoral head is a pathological process that results from interruption of blood supply to the bone. It is also called aseptic necrosis or osteonecrosis. Conditions associated with aseptic necrosis include alcoholism, diabetes mellitus, and extended periods of steroid usage, sickle cell disease, Gaucher's disease, and trauma [1]. Without blood supply, the bone tissue dies and ultimately the bone may collapse. Without treatment, the process is almost always progressive, leading to joint destruction within five years. The objectives of the treatment include the preservation of structure, function and relief from pain. This condition is one of the most challenging problems faced by orthopedic surgeons. Many surgical procedures such as drilling, insertion of bone grafts, modified Whitman or Colonna reconstruction and insertion of prosthesis are carried out to remedy this condition. Most common site is hip joint. AVN accounts for more than 10% of total hip replacement surgeries performed with a male to female ratio of 8:1. It is a disease of middle age that most often occurs in 4<sup>th</sup> or 5<sup>th</sup>

decade of life and is bilateral in 55% of cases. AVN is a condition affecting different bones as a result of transient/permanent loss of blood supply to the bones. Initially, patients are asymptomatic, but in time, AVN leads to joint destruction, requiring surgical treatment and in later stages, total hip replacement (THR) [2]. No universally satisfactory therapy has been developed, even for early disease. This condition can be clinically correlated to *Asthi pradoshaja vikara* in general and *Asthi majjagata vata* in particular described in *Ayurveda*. It occurs due to the vitiated *Vata Dosha* and *Pitta Dosha* residing in *asthi* (bones). It presents with the clinical features of *Asthi pardoshaj vikara* as *Asthi-shoola* and *Asthi-toda* (pricking type of pain in bones) which correlates with symptoms of AVN [3].

### CASE REPORT

A diagnosed male patient, aged 37 years with AVN on the basis of magnetic resonance imaging (MRI) was admitted in the IPD of *Panchakarma* Department, National Institute of Ayurveda, Jaipur, India having Reg. No. 1876. By occupation history, patient was a

teacher. The patient had difficulty in prolonged standing and sitting posture since one year. Severe pain in right hip joint, pain in upper aspect of right thigh, restricted movement of right hip joint, and sleep disturbed due to pain was observed. Associated complaint was general weakness. Patient's personal history revealed that all the symptoms developed gradually for last one year. Appetite was good; on bowel habits the patient has constipation often. Sleep pattern was disturbed due to pain. No significant family history was present. The patient had H/O injury (patient fall down on floor). Surgical intervention was advised to the patient, which the patient refused and approached *Ayurveda* treatment.

### On General Examinations

BP: 130/84 mm of Hg

Pallor: Nil

Cyanosis: Nil Temp: Afebrile

RR: 18/min, Regular pulse: 70 beats/min

Lymph nodes enlargement: Not palpable

### Subjective-Objective Criteria

Assessment was done on first day of admission by Visual Analogous Scale – 7, Straight Leg Raise Test– 45° (degree) in right lower limb. There was decreased range of movement (ROM.). In right lower limb, the ROM was Flexion– 45°, Backward Extension– 5°, Adduction– 15°, Abduction– 25°. This presentation was correlated with *Asthi-Majjagata vata* (musculoskeletal disorder) and treated accordingly.

## MATERIAL & METHODS

### Treatment

*Dipana* (carminative) and *Pachana* (digestive) treatment was adapted by administration of *Panchkola Churna* [4] (half teaspoon thrice a day) and *Hingvashtaka churna* [5] 5 g twice a day for 3 days. As a *Purvakarma* of *Basti Bahya Snehana* (external oleation) *Sarvang Abhyang* with *Tila Taila* and *Sarvang Svedana* (Sudation) by *Dashamoola* decoction vapours was done. *Panchtikta ksheer Basti* was given in *Karma Basti* schedule for 30 days. Conventional drugs *Panchtikta ksheer* as *Kwatha Basti* and *Bala Guduchyadi Taila Annuvasana Basti* were administered. The *Shamana Aushadha* used were *Panchkola churna* 5 g twice a day with lukewarm water for first three days, *Hing vashtaka Churna* 5 g

before meal two times a day with lukewarm water for three days, *Kaishora Guggulu* -2 pills (500 mg) with *Dashamula Kwatha* – 40 ml BD before meal and combination of *Ashwagandha Churna* – 3 g + *Chopachini* – 500 mg + *Shtavari Churna*– 2 g BID with milk after meal (Table 1).

**Table 1: Basti Ingredients.**

<i>Anuvasana Basti</i> - 90 ml <i>Bala Guduchyadi Taila</i> (After meal)	
<i>Ksheer Basti</i> (Before meal)	
Ingredients	Dose
<i>Madhu</i> (Honey)	60 g
<i>Saindhava lavana</i> (Rock salt)	05 g
<i>Guggulu Tiktata Ghrita</i> (Medicated ghee)	90 ml
<i>Madhuyashti, Chopchini Kalka</i> (Herbal powder)	30 g
<i>Panchtikta ksheer Kwatha</i> (Herbal decoction processed with milk). The contents of <i>Kwatha</i> are <i>Guduchi, Nimba, Vasa, Nidigdigga, Patola</i>	240 ml

**Table 2: Basti Pattern (Therapeutic Schedule Pattern).**

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Basti</i>	A	A	N	A	N	A	N	A	N	A	N	A	N	A	N
Day	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<i>Basti</i>	A	N	A	N	A	N	A	N	A	N	A	A	A	A	A

Alternate day *Annuvasana Basti* and *Niruha Basti* for 30 days (Table 2).

**A** – *Annuvasana Basti* was given with medicated oil through anal route.

**KB**- *Ksheer Basti*- medicated decoction given through anal route after adding *Madhu, Saindhav, Sneha* and *Kalka* in proper quantity.

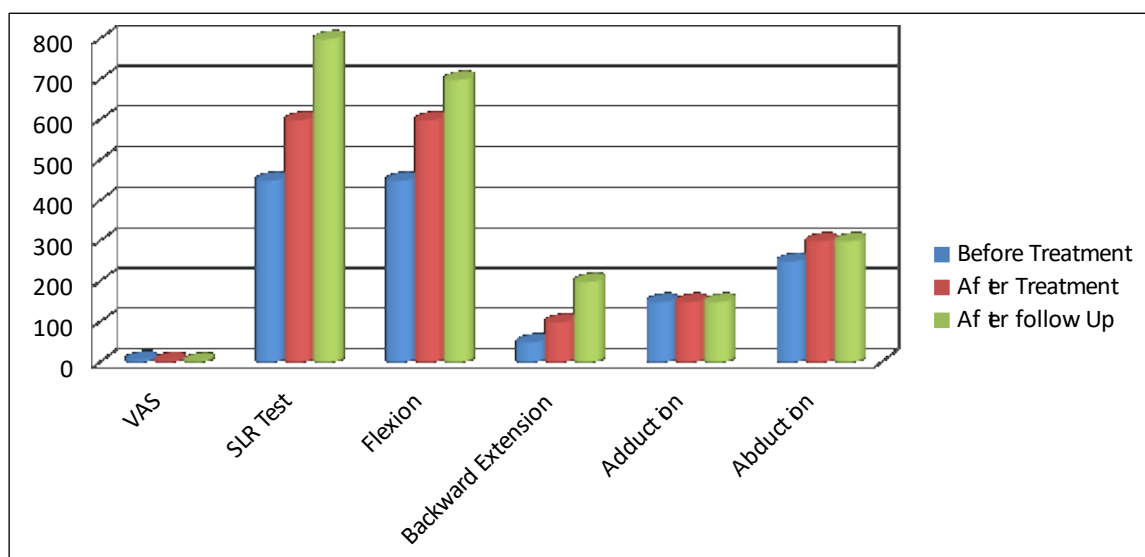
## RESULT AND DISCUSSION

### Outcome & Follow-Up

On observations and examination before treatment, after completion of *Panchakarma* procedure (after *Karma Basti*) and after follow up of 2 months the results were as given in Table 3.

**Table 3: Outcome & Follow-Up.**

Parameters	Before treatment	After treatment	After follow up
VAS	7	5	3
SLR test	45°	60°	80°
Flexion	45°	60°	70°
Backward extension	5°	10°	20°
Adduction	15°	15°	15°
Abduction	25°	30°	30°



**Fig. 1: Outcome & Follow-Up.**

After completion of the treatment, patient showed substantial recovery in all parameters. After follow up functional ability of patient were improved markedly. Walking ability also improved. Patient showed good response to the treatment (Figure 1).

## DISCUSSION

Patient had history of *Ghat* (trauma) over hip joint that is the specific cause of *Asthi* and *Majja Pradoshaj Vikara* [6]. Due to that patient gradually developed sign and symptoms of *Asthi shoola* and *Asthi bheda* with *Asavpana*, *Santataruka*, *Mansbalakshaya*, similar to *Asthi Pradosaj Vikara* in general and *Asthi majja gata Vata* as a particular *Vatavyadhi* [7, 8]. Occupation history of patient suggested long hours of standing which triggered the past *Abhighata Janya Nidana*. As a result *Vyadhi* (diseases) was developed. Patient came with *Sama Jivha* (coated tongue) so we started with *Ama Pachana* with *Panchkola Churna*. In order to relieve *Ama* (a state where metabolism is hampered) symptoms, the treatment was aimed at *Ama Pachana* (digestion of *Ama*) and *Vatanuolamana* (downward movement of *Vata Dosha*) effect. *Hing vashtaka churna* for pacifying *Apana Vayu* and to digest *Ama* as they contain ingredients such as *Hingu*, *Trikatu* (*Pippali*, *Maricha*, *Shunthi*), *Ajamoda*, *Saindhava*, *Jiraka*, *Krishna Jiraka* which predominate in *KatuRasa* (pungent taste), *Ushna Virya* (hot in potency). These qualities increase *Jatharagni* (digestive power) and help to regulate *Apana Vayu* (a type of *Vata dosha*)

in downward direction. After *Niramavastha* (corrected state of metabolism) later *Panchtikta kshira basti* (therapeutic medicated enema with milk and ghee) was planned. *Kaishor Guggulu* one tablet thrice daily, possesses advised with *Anupana* of *Dashmoola Kwath* having *Shothahara* property (capacity to reduce edema) and *Tridoshara*, combination of *Ashwagandha churna*, *Chopchini* and *Shatavari churna* with lukewarm water. *Ashwagandha Shatavari* are *Balya*, *Rasayana* (rejuvenator) and *Dhatuposhaka*. *Chopchini* is *Vedanahara*, *Shothahara* and able to carry drugs in *Sukshma Srotas*. Line of treatment for *Asthi Majjagata Vata* is *Bahya Abhyantara Sneha* [9]. *Basti Karma* is mentioned as the best treatment for *Vata Dosha*. *Acharya Charaka* specified that in the diseases related to *Asthi*, we should give *Basti* using *Tikta Rasatmaka Aushadhi Dravya* along with *Ghrut* (ghee) and *Ksheer* (milk) that is *Saghrat Tikta Ksheer Basti* (enema of bitter drugs with ghee and milk) [10]. *Tikta Ras* is dominant in *Akash* and *Vayu Mahabhuta*. So we planned for *Panchtikta Ksheer Basti*. *Guggulu tiktaka Ghruta* mainly indicated in *Asthi* (bony tissue), *Sandhi* (joints), *Majjagata Vikaras* (diseases of bone marrow). It also contains *Tiktaraspradhana dravya* (drugs predominant in bitter taste), possesses *Prthvi Mahabhuta* (earth element) which helps in bone formation and nourishment hence administered as *Sneha Basti*. It has *Snigdha guna*, *Balya* and *Brimhna* actions. *Anuvastana Basti* with *Bala Gudduchyadi Taila-Vatashamak & Tikta Rasa* best for *Astipradushya janya Roga*. During the

follow-up, patient presented with a significant improvement by subjective assessment.

## CONCLUSION

Ayurveda Panchkarma management of AVN of the femoral head showed significant result in this case. Moderate improvement was found in pain and stiffness, range of movement of hip joint and difficulty in walking. This case study suggested that *Bastikarma* may provide a significant result in *Asthi Majjagat Vata* i.e., AVN.

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