Effect of Panchtikt 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 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 Ksheera 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 maijagat 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 4th or 5th 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 majja gata 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-Majajagata 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. Panchtikt ksheer Basti was given in Karma Basti schedule for 30 days. Conventional drugs Panchtikt ksheer as Kwatha Basti and Bala Gudachyadi Taila Anuvvasana 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 + ShtavariChurna– 2 g BID with milk after meal (Table 1).

Table 1: Basti Ingredients.

<table>
<thead>
<tr>
<th>Basti</th>
<th>Ingredients</th>
<th>Dose</th>
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<tbody>
<tr>
<td>Abhyang</td>
<td>Madhu (Honey)</td>
<td>60 g</td>
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<tr>
<td></td>
<td>Saindhava lavana (Rock salt)</td>
<td>05 g</td>
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<tr>
<td></td>
<td>Guggula Tiktata Ghrita (Medicated ghee)</td>
<td>90 ml</td>
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<tr>
<td></td>
<td>Madhuvashi,Choppchini Kalka (Herbal powder)</td>
<td>30 g</td>
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<tr>
<td></td>
<td>Panchtikt ksheer Kwatha (Herbal decoction processed with milk).</td>
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Table 2: Basti Pattern (Therapeutic Schedule Pattern).

<table>
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<th>Day</th>
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</table>

Alternate day Anuvvasana Basti and Niruha Basti for 30 days (Table 2).
A – Anuvvasana 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.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Before treatment</th>
<th>After treatment</th>
<th>After follow up</th>
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<tbody>
<tr>
<td>VAS</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>SLR test</td>
<td>45°</td>
<td>60°</td>
<td>80°</td>
</tr>
<tr>
<td>Flexion</td>
<td>45°</td>
<td>60°</td>
<td>70°</td>
</tr>
<tr>
<td>Backward extension</td>
<td>5°</td>
<td>10°</td>
<td>20°</td>
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<tr>
<td>Adduction</td>
<td>15°</td>
<td>15°</td>
<td>15°</td>
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<tr>
<td>Abduction</td>
<td>25°</td>
<td>30°</td>
<td>30°</td>
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</table>
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 bhedaa with Asavpana, Santataruka, Mansbalakshaya, similar to Asthi Pradosaj Vikara in general and Asthi majja gata Vata as a particular Vatayadhi [7, 8].

Occupation history of patient suggested long hours of standing which triggered the past Abhighbata 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 Vatamoolamana (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 Panchiktika 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 Ashwgandha 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 Bhahya Abhyantra 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 Saghrit 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 Panchiktika 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. Anuvasana Basti with Bala Gudduchyadi Taila–Vatashamak & Tikta Rasa best for Astipradushya janya Roga. During the

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

REFERENCES