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Role of Ayurveda in the Conservative Management of Avascular Necrosis of Femur Head - A Case Report

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ABSTRACT

Avascular necrosis describes the death of bone due to impairment of its blood supply. Non-traumatic or idiopathic osteonecrosis is thought to be the result of an ischemic episode affecting the bone and marrow tissue and may cause a progressive collapse of the femoral head in adults. Treatment is usually surgical and is determined by the stage and extent of the disease. Here is the case of a 36-year-old female who was diagnosed with avascular necrosis one and half years ago and was admitted with chief complaints of severe pain, stiffness in the left hip with radiating pain from left hip to lower limb and occasional pain in right hip. She was given *Ksheera Vaitarana Basti* and oral medications for period of 12 days. After the treatment pain, stiffness in left hip has reduced and gait was improved. This case shows that *Ayurveda treatment* is helpful in the management of avascular necrosis and helps in improving the quality of life.

Key words: Avascular necrosis, *Ksheera Vaitarana Basti*, Ayurveda.

INTRODUCTION

Avascular necrosis (AVN) or osteonecrosis of the femoral head occurs because of an interruption in the blood supply to the femoral head, which causes bone death. The most common cause is trauma and of the non-traumatic causes, excessive alcohol intake and the use of systemic steroids are the most common.^[1] The patient is frequently asymptomatic in the early stages of the disease process and therefore a high index of suspicion is required for initial diagnosis. However, as

the disease progress, the patient may complain of an ache in the groin and clinical examination may reveal an effusion, a limp, and limitation of movement. The appropriate treatment of patients with AVN is dependent on the stage of the disease. Broadly, it can be divided into two groups: pre-collapse and collapse. In the pre-collapse group, the principle is to preserve and preferably revascularize the femoral head, whereas in the collapsed group the aim is to replace the femoral head.^[2] Conservative treatment in AVN usually leads to poor results and is therefore not recommended. The diseases which are not described in *Ayurveda* texts are termed *Anuktha Vyadhi*. Hence an effort was made to evaluate the efficiency of *Ayurvedic* conservative management of AVN of the femoral head.

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CASE REPORT

Patient Information

A female patient aged 36 years, diagnosed case of AVN of the left femoral head came to OPD of SDM Hospital, Hassan was admitted under IPD NO 061396 with chief complaints of severe pain and stiffness in the left hip

joint with radiating pain from left hip to lower limb leading to difficulty in walking and climbing steps for one and half year, associated with heaviness in left leg and occasional pain in right hip. The pain aggravates while getting up from lying down posture, prolonged walking, standing, sitting and climbing steps., she noticed pain in her left leg while prolonged walking and standing. Later she gradually developed pain and stiffness in left hip joint with radiating pain from left hip to lower limb leading to difficulty in walking and climbing steps, associated with heaviness in left leg and occasional pain in right hip. The pain and stiffness aggravate while getting up from lying down posture, Prolonged walking, standing, sitting and climbing steps which gradually began to alter her gait. She consulted a local physician for relief from these symptoms and was referred to an Orthopaedician, with the aid of an MRI she was diagnosed with AVN of left femoral head-stage 4. She was recommended for surgical intervention, but she was not willing and opted for ayurvedic management.

Clinical Findings

The general and systemic examination of the patient was conducted as per Ayurveda and Modern parameters. The details are highlighted in table 1 and 2.

Table 1: Aaturbala Pramana Pariksha

1.	<i>Prakruti</i>	<i>Vatapradhan Pitta</i>
2.	<i>Vikruti</i>	<i>Dosha: Vata</i> <i>Dushya: Rakta, Sira, Snayu, Asthi</i>
3.	<i>Sara</i>	<i>Madhyama</i>
4.	<i>Samhanana</i>	<i>Madhayama</i>
5.	<i>Pramana</i>	Weight - 69 kg, height - 160cm
6.	<i>Satmya</i>	<i>Madhyama</i>
7.	<i>Satva</i>	<i>Uttama</i>
8.	<i>Aaharashakti</i>	<i>Abhyavaharan: Madhayama</i> <i>Jarana: 5-6 hours</i>

9.	<i>Vyayamashakti</i>	<i>Madhayama</i>
10.	<i>Vaya</i>	<i>Madhayama</i>

Table 2: Asthavidha Pariksha (Eight-fold examination):

1.	<i>Nadi</i>	80/Minute
2.	<i>Mutra</i>	<i>Samyaka</i>
3.	<i>Mala</i>	<i>Samyaka</i>
4.	<i>Jivha</i>	<i>Alipta</i>
5.	<i>Shabda</i>	<i>Samyaka</i>
6.	<i>Sparsha</i>	<i>Samsheetoshna</i>
7.	<i>Drik</i>	<i>Spastha</i>
8.	<i>Aakriti</i>	<i>Madhayama</i>

General examination: The general condition of the patient was fair, and her vital signs were normal.

Locomotor system examination

- Limping gait was observed
- Spine curvature - within normal limits
- Tenderness present at L4-L5 level
- Examination of left hip joint

On inspection - No discoloration and no swelling

Range of movements - Joint movements were painful and restricted (flexion, extension, abduction, adduction, internal and external rotation)

- Examination of right hip joint

On inspection - No discoloration and no swelling

Range of movements - normal

- Straight leg raising test

Left leg positive at 30 degrees

Right leg - negative

- Lasegue's test - left leg positive
- Schober's test - positive

- Trendelenburg sign - left leg positive

Specific Investigations

Magnetic Resonance imaging (MRI) Scan of Hip joint on 28/06/2022 showed Suggestive of left femoral head avascular necrosis - stage - 4

Magnetic Resonance imaging (MRI) Scan of lumbar spine on 28/06/2022 showed Disc bulge at L4, L5 levels indenting the anterior thecal sac

Diagnosis

AVN of left femoral head stage 4

Table 3: Therapeutic Intervention

Date	Medication/Procedure	Dose and time of administration
05/10/2022 To 06/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> <i>Tab. Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i>	OD
07/10/2022	<i>Sadyovirechana with Gandharvahastadi Taila</i>	60ml at 7:00am
<i>Kala Basti</i> schedule was planned from 08/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> <i>Tab. Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 80ml in afternoon (immediately after lunch) - day1
09/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i>	1TID B/F 15ml TID A/F

	<i>Trayodashanga Guggulu</i> <i>Tab. Anuloma DS</i>	1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Niruha Basti with Ksheera Vaitarana</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 360ml on empty stomach (morning) - day 1 80ml in afternoon (immediately after lunch) - day 2
10/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> <i>Tab. Anuloma DS</i> <i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Niruha Basti with Ksheera Vaitarana</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F OD 360ml on empty stomach (morning)- day 2 80ml in afternoon (immediately after lunch)- day 3
11/10/2022	<i>Dhanwantara vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> <i>Tab. Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola kwatha</i> <i>Niruha basti with Ksheera Vaitarana</i> <i>Anuvasana basti with Moorchita tila taila</i>	OD 360ml on empty stomach (morning)- day 3 80ml in afternoon (immediately after lunch)- day 4
12/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i>	1TID B/F 15ml TID A/F

	<i>Trayodashanga Guggulu</i> Tab. <i>Anuloma DS</i>	1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Niruha Basti with Ksheera Vaitarana</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 360ml on empty stomach (morning)- day 4 80ml in afternoon (immediately after lunch)- day 5
13/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> Tab. <i>Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Niruha Basti with Ksheera Vaitarana</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 360ml on empty stomach (morning)- day 5 80ml in afternoon (immediately after lunch) - day 6
14/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> Tab. <i>Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Niruha Basti with Ksheera Vaitarana</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 360ml on empty stomach (morning)- day 6 80ml in afternoon (immediately after lunch)- day 7
15/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i>	1TID B/F 15ml TID A/F

	<i>Trayodashanga Guggulu</i> Tab. <i>Anuloma DS</i>	1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 80ml in afternoon (immediately after lunch) - day 8
16/10/2022	<i>Dhanwantara Vati</i> <i>Rasna Erandadi Kashaya</i> <i>Trayodashanga Guggulu</i> Tab. <i>Anuloma DS</i>	1TID B/F 15ml TID A/F 1 TID A/F 1 HS A/F
	<i>Sarvanga Parisheka with Dasamoola Kwatha</i> <i>Anuvasana Basti with Moorchita Tila Taila</i>	OD 80ml in afternoon (immediately after lunch) - day 9
17/10/2022	Discharged with following medications <i>Dhanwantara Vati</i> <i>Trayodashanga Guggulu</i> <i>Rasna Erandadi Kashaya</i> Tab. <i>Anuloma DS</i>	1TID B/F 1TID A/F 15ml TID A/F 1 HS A/F

OBSERVATIONS AND RESULTS

Range of Movements of the left Hip joint and gait significantly improved

Table 4: Range of movement before and after treatment

Range of Movement	Before Treatment (In Degree) Left Hip Joint	After Treatment (In Degree) Left Hip Joint
Flexion	30°	70°
Extension	0°	5°
Abduction	20°	30°
Adduction	10°	20°
Internal rotation	10°	20°

External rotation	20°	30°
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Table 5: Assessments before and after treatment

Assessments	Before Treatment	After Treatment
Straight leg raising test	30°	60°
Lasegue's test	Positive	Positive
Schober's test	Positive	Negative
Trendelenburg sign	Positive	Positive
Gait	Limping	Improved
Stiffness	Present	Reduced by 60%

Hip Joint VAS Score

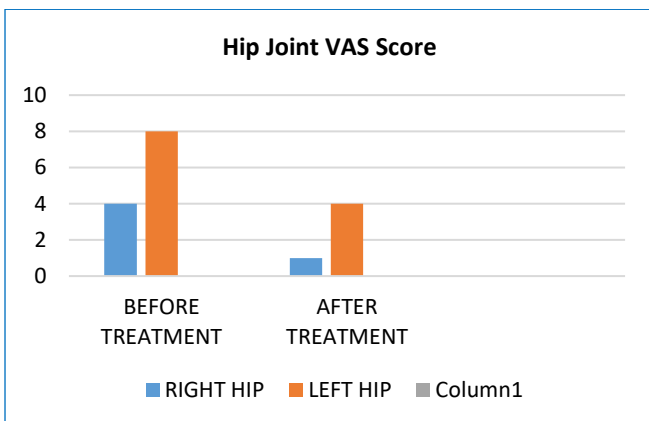


Table 6: Showing Improvement in Oxford Hip score

Assessment	Before Treatment	After Treatment
Total Score (60)	48	29

DISCUSSION

According to Ayurveda point of view there is no direct co-relation with avascular necrosis but clinical presentation indicates towards dominance of *Vata Dosh*a and *Vikruti* of *Asthi Dhatu*. In AVN, the blood supply to the femoral head is decreased due to any type of *Margavrodha* (occlusion of blood vessels) ultimately leading to necrosis. In advance stage, due to continuous *Vata Dosh*a (due to necrosis) imbalance which is further responsible for causing vitiation of *Pitta* and *Kapha*. As *Basti* is first line of treatment for

*Vata Dosh*a, here *Ksheera Vaitarana Basti* and *Tila Taila* as *Anuvasana Basti* was selected.

Mode of action

***Ksheera Vaitarana*:** *Vaitarana Basti* works by the virtue of action of ingredients present in it. The ingredients are *Chincha*, *Saindhava*, *Guda*, *Tailam*, *Ksheera*. The action of each ingredient can be described as follows.^[3]

***Saindhava (~rock salt)*:** Due to its *Sukshma* and *Tikshna* properties, it helps to pass the drug molecule in systemic circulation through mucosa. Thus, it helps the *Basti Dravya* to reach up to molecular level. It also helpful for the elimination of waste due to irritant property. It is capable of liquefying the viscid matter and breaking into minute particles.^[4]

***Guda (~jaggery)*:** In this *Basti* instead of *Madhu*, jaggery is used. It along with *Saindhava* makes homogenous mixture, to form a solution having properties to permeable the water easily. The retention of the irritative substances may be favoured by making its solution as nearly isotonic as possible by using colloidal fluids. Here, *Purana Guda* should be taken as it is *Laghu*, *Pathya*, *Anabhishtyandi*, *Agnivardaka* and *Vatapittaghna*. It also helps in carrying the drug up to microcellular level.^[5]

***Taila (~ medicated oil)*:** *Tila Taila* is of *Madhura Rasa* and *Vipaka*, *Balya* and *Rasayana* in *Karma*, it nourishes and strengthens all *Dhatu*s by alleviating *Vata Dosh*a by virtue of its *Ushna Virya*. *Snigdha* and *Guru Guna* decreases the *Rukshata* of *Vata*, *Vikasi Guna* reduces the *Stambha*.^[6]

***Chincha (~ tamarind pulp)*:** *Chincha* is having *Vata-Kaphashamaka*, *Ruksha* and *Ushna* properties. These properties of the *Chincha* make it useful for the disease *Katigraha (~stiffness of low back)*.^[7]

***Ksheera*:** In *Ksheera Vaitarana Basti*, *Go Ksheera* is chief content, which is owing to its *Madhura Rasa*, *Madhura Vipaka*, *Sheeta Virya*, *Snigdha Guna*. Milk contains all the elements necessary for the growth and nutrition of bones, nerves muscles and other tissues. It is rich in proteins, fats, carbohydrates, vitamins, and minerals.^[8]

Dhanwantara Vati: The major ingredients are *Ela*, *Shunti*, *Haritaki* and *Jeeraka*, helps in *Deepana* and *Vatanulomana*.^[9]

Rasna Erandadi Kashaya: The major ingredients are *Rasna*, *Eranda*, *Bala* and *Sahachara* has anti-inflammatory, analgesic properties may help in reducing compression of nerve by reducing inflammation of articular cartilages.^[10]

Trayodashanga Guggulu: *Haritaki*, *Ashwagandha*, *Guduchi*, *Shatavari*, *Gokshura* and *Guggulu* being the major ingredients possess anti-inflammatory and antioxidant properties.^[11]

Anuloma DS: It is a combination of *Swarnapatri*, *Ajamoda*, *Jeeraka*, *Haritaki*, *Yashtimadhu*, *Shunti* and *Saindhava Lavana* helps in *Anulomana Karma*.^[12]

REFERENCES

- Henry Hamilton Bailey, Bailey & loves, Short Practice of Surgery, Chapter 35, Edition- 25th, Pg No.515.
- Maheshwari J. Essential orthopaedics, Miscellaneous Affections of the Bone. 3ed. New Delhi: Mehta Publishers; 2003, p.270
- Vangasena, Bastikarmadhikara; chapter 83, verse 186-190, Nirmal Saxena(editor), Vangasena Samhita, vol.2, 2nd ed; Varanasi (India), Chaukambha Sanskrit Sansthan. P.1165.
- Sushma. Mahendrakumar S. Dr Manorama: A Comparative clinical study on the effect of Ksheeravaitarana and Dashamoola Ksheera basti in the management of Katigraha w.s.r to Lumbar Spondylosis-A pilot study; International Journal of Advanced research:2018; 6(1), 269-275
- Sushma. Dr Mahendrakumar S. Dr Manorama: A Comparative clinical study on the effect of Ksheeravaitarana and Dashamoola Ksheera basti in the management of Katigraha w.s.r to Lumbar Spondylosis-A pilot study; International Journal of Advanced research:2018; 6(1), 269-275
- Sharma PV. Dravyaguna Vijnana, Chaukambha Bharati Academy, Varanasi, 1991; p-35, 55, 60, 121, 277, 333, 456,639
- Sushma. Dr Mahendrakumar S. Dr Manorama: A Comparative clinical study on the effect of Ksheeravaitarana and Dashamoola Ksheera basti in the management of Katigraha w.s.r to Lumbar Spondylosis-A pilot study; International Journal of Advanced research:2018; 6(1), 269-275
- Kulkarani S, Itnal SR. Conceptual study on Goksheera as Ajasrika Rasayana, International Ayurvedic Medical Journal, 2019; 1124 – 1127
- Nishteswar K and Vaidyanath R. Sahasrayogam; Sanskrit text with English Translation, Gutika Prakarana chapter 9, verse 54, Reprint; Varanasi; Chaukambha Sanskrit series office, 2020; p. 346.
- Neetu dixit and Dr. Babita dash, effect of *erandamooladi niruha basti* with *Rasnaerandadi kashayam* in the management of *Katigraha* w.s.r. To lumbar disc herniation – a pilot Clinical study, world journal of pharmaceutical research, volume 9, issue-8, 2020, Pg:1880
- Priyanka, Yadu nandan, In-vitro antiinflammatory and antioxidant activities of an ayurvedic formulation- Trayodashanga Guggulu, Journal of herbal medicine, vol 23, oct 2020.
- Varuni B G, An Open-labeled Clinical Study to Evaluate the Safety and Efficacy of Anuloma DS in Improving Constipation, Indian Journal of Clinical Practice, Vol.34, No.2, July 2023.

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