



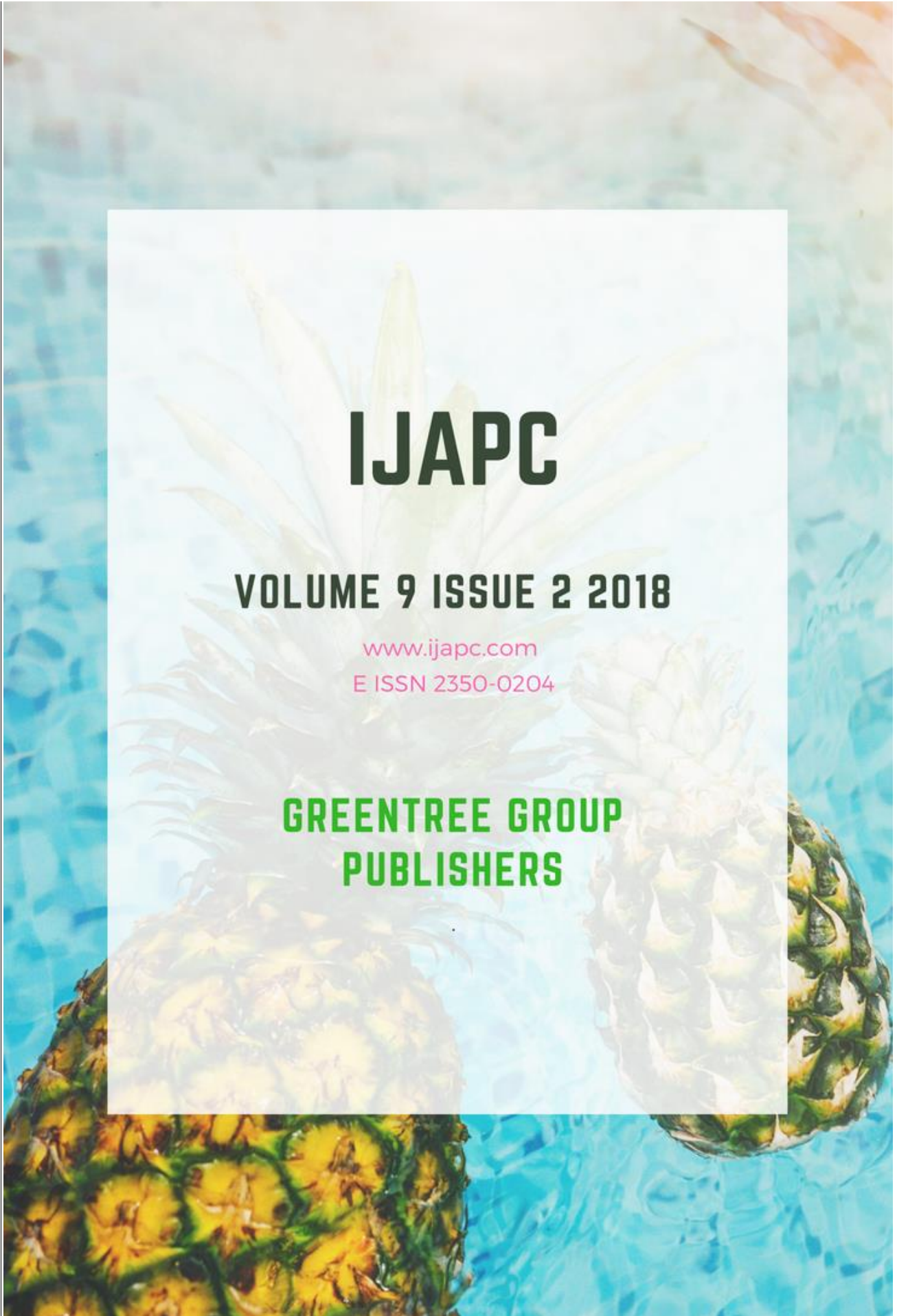
IJAPC

VOLUME 9 ISSUE 2 2018

www.ijapc.com

E ISSN 2350-0204

**GREENTREE GROUP
PUBLISHERS**





Avascular Necrosis of Femoral Head- An Ayurvedic Approach

Rajeshwari P.N,^{1*} Sharath S.G.², and Amrita M. Nandakumar³

^{1,3}Dept of ShalyaTantra (General Surgery), Amrita School of Ayurveda, Amritapuri, Amrita Vishwavidyapeetham, Clappana P.O., Kerala, India

²Dept of Rachana Shareera (Anatomy), Amrita School of Ayurveda, Amritapuri, Amrita, Vishwavidyapeetham, Clappana P.O., Kerala, India

ABSTRACT

A 39yr old, average built male patient radiologically diagnosed as a case of Avascular necrosis of left femoral head (Ficat and Arlet stage2) with sacralised L-5 vertebra, came to hospital with complaints of pain over left lower back radiating towards left lower limb (Visual analogue scale-grade 6) along with decreased range of movements in the left hip joint for last... years. In Ayurveda, it can be understood under *Asthi-majjagata vata* (musculoskeletal disorder) and treated accordingly. Initially, the patient had been administered with conservative medicines *Rasnasapthakam kashyam* and *ashtachoorna, dhanyamla dhara* (pouring liquid), *sarvanga abhyanga* (mild therapeutic massage) and *bashpa sweda*(steam) along with physiotherapy. Further, *manjishtadi ksheera* and *Guggulutikthaka ghritha*(100ml) was administered as *Yoga basti* (Medicated Enema given for 8days). This resulted in relief of pain to grade '2' on visual analogue scale and improvement in range of motion of left hip joint.

KEYWORDS

Asthi-majjagata vata (musculoskeletal disorder); *Avascular necrosis of femoral head* (AVN); *Yoga basti* (medicated enema)



Greentree Group Publishers

[Received 26/06/18](#) [Accepted 25/07/18](#) [Published 10/09/18](#)



INTRODUCTION

Background

Avascular necrosis (AVN) (also known as *osteonecrosis*, *bone necrosis*, *bone infarction*, *aseptic necrosis*, and *ischemic necrosis*) is a condition in which the bone "dies" as a result of loss of circulation to an area of bone tissue. (The word *osteonecrosis* is Latin for "bone death.") In extreme cases, it can result in the collapse of a segment of bone. In the advanced stages it result in painful arthritis, a hip replacement may become necessary¹. Loss of blood supply to the bone leads to AVN. If not stopped, this process eventually causes bone to collapse. AVN is most common in femur head, scaphoid bone and talus bone. Management of AVN in modern medicine includes pain management and replacement therapy.

Main goals of the treatment include measures to improve or ensure the function of affected joint, to stop progression of bone damage, to reduce pain. In this case, patient was advised for surgical intervention, but he opted Ayurvedic treatment. As no specific management lines are explained in this condition, the treatment was done after explaining prognosis, with written consent of the patient. It was taken as *asthimajjagata vata vikara* and management for

asthipradoshaja vikaras explained in Charaka Samhita Vimanasthana. Significant improvement was observed on clinical presentations and evaluation done in investigations.

CASE PRESENTATION

An average built male patient aged 39 years old was presented to us. Patient was asymptomatic 2 years back. One fine day he accidentally fell on the ground hitting his back followed by mild pain over his left lower back. But he neglected the condition and got engaged in his day to day activities. Gradually the pain (Continuous type) radiated towards left lower extremity restricting the movements of his left leg which aggravates during night hours. He consulted an allopathic physician and surgical intervention was advised, which the patient refused and approached to hospital for Ayurvedic treatment for the present condition.

Personal history revealed mixed diet, reduced appetite, constipated bowel and disturbed sleep (due to pain). He had a habit of smoking cigarettes (5-6 packets a day) and occasional drinking since 20yrs. Systemic examination revealed no significant systemic illness.

Locomotor system was elicited as shown in Table No 1.

**Table 1** Examination of Bilateral hip

Range of movements	Right	Left
Flexion	Normal	Painful +++
Extension	Normal	+
Lateral rotation	Normal	++
Medial rotation	Normal	++
Straight leg raising test	-	+(active-test 30degrees)
Lasegue's sign	+	+
Femoral nerve stretch test	+	+

Investigations

MRI scan of lumbar spine and pelvis dated on 20th august 2016 revealed Avascular necrosis of left femoral head (FICAT classification stage 2), socialized L5

Table 2 Treatment Protocol

Procedures and medicines	Commenced	Time period	Dose
<i>Dhanyamla dhara (pouring medicated liquid)</i>	From first day	For 5days	Once a day
<i>Agni lepa (external application)</i>	From second day	For 3 days	Once a day
<i>Physiotherapy</i>	From first day	For 5 days	Once a day
<i>Sarvanga abhyanaaga vaashpa sweda(therapeutic massage and Steam)</i>	From sixth day	For 3days	Once a day
<i>Anuvasana basti (guggulu tikta ghritha) (retention enema with medicated ghee)</i>	From third day	For 5days	Once day (100ml)
<i>Ksheera basti (Manjishtadi ksheera basti)- (enema with herbal decoction processed in milk)</i>	From 4 th day	For 3days	Once a day (750ml)
<i>Rasnasapthaka Kashaya (herbal decoction)</i>	From first day	For 2weeks	Thrice a day (20ml +40ml boiled cooled water)
<i>Kaishora guggulu (herbal formulation)</i>	From first day	For 2weeks	One tablet thrice daily
<i>Gandha taila capsule (gelatinous capsule of medicated oil)</i>	From first day	For 2 weeks	One capsule twice daily

Outcome and follow-up

At the time of discharge condition of the patient was stable with improvement in range of movements and x-ray findings (Figure No1 and Figure No 2). He was advised to continue internal medication for 2 more weeks. Pain and range of

Vertebra, degenerative moderate diffuse annular disc bulge at L5 to S1 level causing indentation on ventral sac. Degenerative mild diffuse annular disc bulge at L3 –L4 Level causing indentation on ventral thecal sac. Neural foramina and lateral recess are narrowed on both sides with mild compression on traversing nerve roots.

Treatment

Following medicines and treatment was advised as mentioned in Table No 2.

During admission

movements were assessed on regular basis weekly for 12 weeks. Pain was assessed by visual analogue scale; where '0' represents no pain and '10' represent severe pain. Range of movements is assessed subjectively. Pain on the day of admission was graded as '6' on VAS. After



administration of treatment pain reduced to grade '2'.

Initially, the patient was unable to stand for long duration or walk even short distance. At the time of discharge; he started to walk short distance and was able to climb stairs with comparative reduction in pain.



Fig 1 Before Treatment



Fig 1 After Treatment

DISCUSSION

Avascular necrosis of femur head is a disease which is very difficult to treat. Joint

replacement is the ultimate management indicated in modern surgery. The cost of the replacement surgery is very much high that a general population can afford. Ayurveda approach towards is non invasive and very much cost effective. The treatment planned was very much effective in terms of pain and range of movements. The probable mode of action of the drugs and therapy given may be as follows- Kṣīrabasti (medicated enema processed in milk) was planned for strengthening of asthi dhatu (skeletal tissue). Tikta rasa (astringent taste) is predominance of Vāyu (air) and Ākāśa Mahābhūta (ether-space, one among the five great elements)³. Most ingredients of Guggulutiktaka ghṛta (medicated ghee) that was administered as anuvāsana basti (retention enema) have tikta rasa (bitter taste), uṣṇa vīrya (hot potency) and madhura (sweet) and kaṭu vipāka (enhances normal functioning of dhātvagni (metabolic stage), facilitating increased nutrition of the asthi dhātu (bony tissue). As a result, degeneration of asthi (bone tissue) and majjā dhatu (bone marrow) reduced helping its regeneration. Ghṛta (ghee) pacifies vāta and pitta (vāta-pittashāmaka), increases body strength, appetite as well as metabolism, *madhura*(sweet)in rasa and śīta in vīrya (cold in potency). Thus it improves dhātu upacaya (metabolism of the tissues) and acts as a rejuvenator of the



body. It also contains vitamin D which plays an important role to utilize calcium and phosphorous from blood and helps in bone formation. Kṣīra basti (decoction enema processed in Milk) is a type of *Niruha basti* (a type of evacuation enema) containing kṣīra (milk) as the main ingredient. Madhura (sweet) and snigdha (having oleation property) are the properties of kṣīra (milk) which help to control vāta doṣa (vata -functional units of body) and acts as bṛihmaṇa (nourishing)². The *kalka dravya manjishtha* (paste form of *Rubia cordifolia*) possess *madhura* (sweet), *tikta* (bitter) and *kaṣāya* (Astringent). *Mañjiṣṭhā* (*Rubia cordifolia*) possess qualities which maintains normal blood flow and favours smooth blood supply to the bone⁴. The other *kalka dravya arjuna* (paste form of *Terminalia arjuna*) is *kaṣāya rasa* (astringent), *śīta vīrya* (cooling). It pacifies kapha and pitta. The *kaṣāya rasa* (astringent) is *sandhānakara* (improves the compactness) in nature.

While physiotherapy cannot cure avascular necrosis, in some cases it can help to slow down the progression of the disease and decrease the associated pain. It can provide proper exercises which helps to increase the strength of the muscles around the affect area (which will also decrease the weight on the joint). It was used to prevent disuse atrophy of muscles. Use of modalities such

as electrical stimulation, ultrasound, joint mobilization, and heat helps to increase blood supply to the area and help to decrease pain.

CONCLUSION

AVN is a type of diseases which is very difficult to cure. There is no permanent cure of the diseases. Joint replacement is the treatment in the end, which itself has its own limitations. In this view Ayurvedic approach to treat the diseases in a conservative mode is quite effective to prevent the spread of diseases and improve the function of the affected part of bone. The treatment given to the patient involves non invasive techniques and proved to be cost effective. Though it didn't cure the diseases completely as anatomical changes cannot be reversed, yet it can stop the progression of the disease. Patient can have normal daily routine after the completion of treatment. Further study on large sample size is required to establish the treatment protocol for avascular necrosis.

ACKNOWLEDGMENT

Author is extremely thankful to Interns and Post graduates who helped in documenting the case.

References



1. https://www.hss.edu/condition-list_avascular-necrosis.asp dated 28/05/2008
2. English Translation and Commentary by T Sreekumar, Astanga hridaya; sootrastana - . Volume 1; Published by Publication department, Harisree hospital, Trissur, Kerala: IV/2013, Page No; 112 Pp; 392.
3. AGNIVESA'S CHARAKA SAMHITHA ; Text with English Translations and Critical Exposition Based on Chakrapani Datta's Ayurveda Deepika By Dr. Ram Karan Sharma And Vaidya Bhagwan Dash Volume 1 (Sutrasthana) , Chowkhamba Sanskrit Series Office , Varanasi 1: Page No: 578-579. Pp. 619).
4. Dr. Nishteswar, Text book of DravyaGuna ; Chaukhamba Surbharati Prakashan , Varanasi. Page No. 245. Pp 670.