

## MANAGEMENT OF AVASCULAR NECROSIS BY AYURVEDA- A CASE STUDY.

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### ABSTRACT

**Background:** Avascular necrosis is the death of osseous cells due to stopped vascular nourishment which is commonly seen at femoral head. Avascular necrosis of bone is caused mainly by trauma, excessive use of corticosteroids, SLE, alcoholism, sickle cell disease and infiltrative disease (e.g. Gaucher's disease).<sup>[1]</sup> **Case history and Clinical concerns:** Known case of avascular necrosis (AVN) of both femoral heads confirmed by MRI in 31 years old male patient was hospitalized for 4 weeks. He has pain in both hip joints (left side more) and difficult to walk since 2 years. He was advised for hip replacement therapy which he doesn't want. **Treatment:** he was treated with *Snehapana* followed by *Virechanakarma* and oral medicaments i.e. *Kaishora guggulu* and *Manjisthadi kvatha*. Other treatment like

*Agnikarma* and *Cupping therapy* was also performed daily at the site of pain. **Result:** He got satisfactory result in pain and walking without consuming any pain killers. Internal and external rotation of both hip joints is now improved up to 20<sup>0</sup> and 30<sup>0</sup> which was not possible earlier. Abduction of right hip joint is improved up to 20<sup>0</sup> and adduction of right and left hip joints is improved respectively up to 40<sup>0</sup> and 25<sup>0</sup>. Flexion of right and left hip joints is possible respectively up to 40<sup>0</sup> and 60<sup>0</sup>.

**KEYWORDS:** Avascular necrosis, *Panchkarma*, *Cupping*, *Agnikarma*.

## INTRODUCTION

"Avascular necrosis (AVN) is also known as osteonecrosis, aseptic necrosis or ischemic bone necrosis, is a disease results from temporary or permanent loss of vascular nourishment to the bone caused by traumatic or non traumatic factor. Non traumatic factors includes excessive use of steroids, SLE, excessive alcoholism, gout, radiation, sickle cell disease, infiltrative disease. Femoral head ischemia results in the death of marrow and osteocytes and it usually results in the collapse of the necrotic segment. Radiological features of osteonecrosis generally involve collapse of the articular cortex, fragmentation, mottled trabecular pattern, sclerosis, subchondral cysts and/fracture. In AVN of femoral head we got symptoms like severe pain on affected hip joint, decreased movement of hip joint, pain referred to knee joint also, unable to walk without support. Hence, AVN is affecting the patient's quality of life, which worsens with the time. If not treated, it can cause complications like osteoarthritis, osteochondritis, pathological fracture and bone destruction, which leads to inability in joint movement and eventually patient becomes unable in to perform his day to day activities and becomes dependent to others. Because of being asymptomatic in early stage, it is often diagnosed at a later stage when the management is only possible by surgical intervention which involves a total hip replacement or arthroplasty.

Pathology of AVN suggests aggravation of all tri-dosha along with rakta, mamsa, sira and asthi dhatu vitiation according to ayurveda. In tri-dosha, vata is predominant by its *ruksha*, *vishada* and *shita guna* by vitiating mainly *asthidhatu* and *asthivahastrotasa*. The clinical features of *Asthimajagata vata* described as *bhedo-asthipravanam* (breaking type of pain in bones), *sandhishoola* (joint pain), *satata ruk* (continuous pain), *mamsabalakshaya* (loss of strength and muscles weakness) and *asvapna* (disturbed sleep) which can correlate with the symptoms of AVN.<sup>[2]</sup>

### A case study.

A 31 years old male patient was physically fit before Sept 2014. Then he started feeling pain in both hip joints. He had also complained of pain in both knee joints. With increasing pain in both hip joints, he had difficulty in walking by himself after 6 months. Then he underwent MRI of pelvis for both hip joints which suggested avascular necrosis of head of femur of both the sides in Feb'15. Then he consulted some Physicians and surgeons for it, he took NSAIDs and topical analgesic applications for longer period without satisfactory relief. Hence, he was

advised for hip replacement therapy which he didn't want. So he came at OPD of Government Akhandananda Ayurveda college, Ahmedabad in Jan'17 and hospitalized for the period of 4 weeks. At that time he had pain in both hip joints (left side more) and difficulty in walking since 2 years. He had also complained of backache since long period. He had past history of heavy weight lifting. He had also alleged history of trauma while kicking the bike 4-5 years ago. Patient was addicted to alcohol consumption since 15 years.

### **Clinical findings**

Severe pain in both hip joints (more in left side), pain in both knee joints and difficulty in walking are the main features he had since two years. Range of motion of the hip joints was severely limited and painful in all ranges mostly on abduction and internal rotation. Palpation of the hip region revealed extreme tenderness (Lt.>Rt.). Muscle palpation revealed tenderness in thigh (Lt.>Rt.) and pelvic musculatures.

### **Diagnostic findings**

#### **MRI pelvis for both hip joints: [25/02/2015]**

MRI findings suggest possibility of AVN of bilateral femoral heads with subchondral bone marrow edema of the right acetabulum. Mild left hip joint effusion and minimal right hip joint effusion are noted.

### **Ayurvedic management**

- *Snehpana* first four days with *Panchatikta ghrita* started from 40 ml twice and reached up to 90 ml twice.
- *Sarvang abhyanga* with *Narayan taila* and *Sarvang svedana* with *Nirgudi patra* on 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> day of hospitalization followed by *Mrudu virechana* karma. *Mrudu virechana* karma was performed with 40 ml *Eranḍa oil* plus 5 grams *Dinadayal churna* with warm water.
- After the *samsarjana* karma, following treatment was given-
  1. *Sarvangabhyanga* with *Narayantaila* and *Sarvangsvedana* with *Nirgudipatra* every day once in the morning
  2. *Niruha basti* of *Dashmula Kwatha* and *matra basti* of *Narayan taila* alternately.
  3. *Daily Cupping* therapy and modified *agnikarma* with arka leaves was also performed.
  4. *Jalaukavacharana* was done once on both sacro-iliac joint.
  5. Following oral medicaments were given daily after completion of *mrudu virechana*

1. *Manjishthadi kwath* 40 ml twice a day.
2. *kaishor guggulu* 3 tablets thrice a day with warm water.
3. *Panchatikta ghrita* 20 ml twice as *abhyantar shaman snehapana*.
4. *Yograj guggulu* 3 tablets thrice a day with warm water.

## RESULT

After 4 weeks, he got satisfactory result in pain and walking without consuming any pain killers. Range of motion of both the hip joints was increased and pain during movement was less and bearable. Internal and external rotation of both hip joints is now improved up to 20° and 30° which was not possible earlier. Abduction of right hip joint is improved up to 20° and adduction of right and left hip joints is improved respectively up to 40° and 25°. Flexion of right and left hip joints is possible respectively up to 40° and 60°.

Symptoms	Before Treatment	After Treatment
Pain in both hip joint(more in left side)	Severe pain on any kind of movement and bed rest also	Mild pain on any kind of movement
Pain in both knee joints	Severe pain on any kind of movement and bed rest also	Mild pain
Difficulty in walking	Walk with support	walk without support
Lumbago	Severe pain on any kind of movement and bed rest also	No pain in lower back

Movement of hip joints	Before Treatment		After Treatment	
	Right side	Left side	Right side	Left side
Internal rotation of hip joints	25°	15°	45°	35°
External rotation of hip joints	20°	15°	35°	40°
Flexion of hip joints	30°	25°	40°	60°
Extension of hip joints	15°	10°	30°	20°
Adduction of hip joints	20°	15°	40°	25°
Abduction of hip joints	10°	10°	20°	20°

Here all the measurements were taken by the help of goniometer.

## DISCUSSION

According to Ayurveda, AVN is *Vata* predominant *Tridoshaja vyadhi* and *Asthidhatu* is main *Dushya* along with *Asthivahastrotasa* and *Sira*. In treatment of *Vata*; *snehana*, *swedana*, *mridu virechana*, *basti* are considered as main line of treatment.<sup>[3]</sup> *Basti* is also mentioned as *ardha* or *sampurna chikitsa* of *vata*vyadhi.<sup>[4]</sup> *Niruhabasti* acts on *doshas* accumulated in entire body and eliminates them.<sup>[5]</sup> Thus *shodhana* is done with *niruha basti*. After this, *anuvasana basti* is given which has *taila* as its content. *Taila* pacifies *ruksha*, *laghu*, *shita guna* of *vata* by its *sneha*, *guru*, *ushnagunas*.<sup>[6]</sup>

For treatment of *asthi dhatu dushti*; *panchakarma*, *basti* with *tikta rasa aushadhis* and *snehapana* with *tiktaghrita* are advised in classics.<sup>[7]</sup> *Snehpana* and *Abhyanga* as *purvakarma* followed by *Mruduvirechana*, alternate *Niruha* and *Anuvasana basti*, and *Tikta-ghritpana* were beneficial as line of treatment of *Asthidhatu dushti*. *Sira* is *upadhatu* of *rakta*. So, for treatment, *raktashodhaka aushadhis* should be given. Therefore, *manjishthadi kwatha* and *kaishora guggulu* are given. *Agnikarma* and *cupping* are beneficial in pain management of AVN of femoral head.

## CONCLUSION

Hence, here we can conclude by study of this case, that AVN of femoral head can very well managed by *procedures* and *medicines* of *Ayurveda*. Further clinical trials are needed to establish a standard management of AVN.

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