



## **A REVIEW ON THE ROLE OF *GUGGULU TIKTAKAM GHRITAM* WITH *GANDHA TAILAM SNEHAPANAM* IN THE MANAGEMENT OF AVASCULAR NECROSIS (AVN) OF FEMUR HEAD**

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### **ABSTRACT**

Avascular necrosis of the femoral head is a type of osteonecrosis due to the disruption of blood supply to the proximal femur. The causes are either traumatic/ atraumatic in origin. It includes fractures, dislocation, use of chronic steroids, coagulopathies and rarely by infections including tuberculosis. The disruption of blood supply to the head of femur can lead to ischemia and subsequent necrosis. If restoration of blood supply does not occur promptly, it can lead to progressive death of osteocytes which inevitably leads to the collapse of the femoral head and subsequent limb shortening. Pain is restricted to weight-bearing activities initially but tends to progress eventually to pain at rest. AVN is a progressive disorder with surgical management as the choicest intervention. It is clinically characterised by gradual onset of pain in the affected hip that may radiate down the affected limb. This condition can be effectively managed if it is diagnosed and treated early. *Acharya Susruta* explains 107 *marmas* in the purview of traumatology, injury to these vital points can lead to various effects from permanent deformity to death. The vitiated *vata dosha* clinically presents with *bheda* of *asthi* and *parvas* (piercing pain of bones and joints), *sandhisoolam* (pain of joints), *satataruk* (continuous pain), *mamsabalakshaya* (weakness of muscles) and *asvapana* (loss of sleep) all of which can be very well related to the symptoms of AVN. *Ayurveda* considers that the effective management of *vata dosha* is *snehanam*. Hence *snehapanam* with *Guggulutiktakaghritam* and *Gandhathailam* in the ratio 10:1 is taken up for the present trial. *Guggulutiktakaghrita* is mainly indicated in *asthi*, *sandhi*, *majjagatavataavikaras*. *Gandha thailam* is an exceptional restorative in fracture care and nutritional supplement in ligament injuries. Hence *Snehapanam* with *Guggulutiktakaghritam* and *Gandhathailam* is expected to bestow miraculous effects in the management of avascular necrosis.

**KEYWORDS:** AVN, Guggulutiktakam Ghritam, Gandha thailam.

## INTRODUCTION:

In most regions of the body, rich anastomoses of blood vessels provide a wide margin of safety in the event of vascular interruptions, mild or extensive. However, there are certain regions in the body with a less liberal blood supply and a narrow margin of safety. Head of femur is one such region and is in fact the most common site affected by vascular disturbance<sup>1</sup>.

Avascular necrosis (AVN) or osteonecrosis of the femoral head occurs because of an interruption in the blood supply to the femoral head that causes bone death. This leads to collapse of the femoral head and subsequent secondary osteoarthritis<sup>2</sup>. AVN can be primary (idiopathic) or secondary to other pathologies like haemoglobinopathies, SLE, steroid therapy, excess use of alcohol etc. AVN is a debilitating disease which usually leads to osteoarthritis of hip in relatively young adults. Higher incidence is found in 4<sup>th</sup> to 5<sup>th</sup> decade of life with male: female ratio being 8:1.

AVN is clinically characterised by gradual onset of pain and limited range of movements. Pain may be localised to groin area but may radiate down the affected limb or ipsilateral buttock, knee or greater trochanter. Pain is exacerbated with motion or weight bearing and relieved by rest. Passive range of motion of hip is painful, especially forced internal rotation. Atrophy of the proximal muscles may be associated with<sup>3</sup>. Limping, which may be unilateral or bilateral is also seen.

Vitiated *vata dosha* clinically presents with *bheda of asthi* and *parvas* (piercing pain of bones and joints), *sandhi soolam* (pain of joints), *satataruk* (continuous pain), *mamsabalakshaya* (weakness of muscles) and *aswapna* (loss of sleep) which can be very well correlated to with symptoms of AVN<sup>4</sup>. Acharya Vagbhata explains that the management protocol of *Vata dosha* includes *snehanam*, *swedanam*, and *mrdu sodhanam*<sup>5</sup>. Hence in the present trial, *Snehapanam* with *Guggulutiktakamghritam* and *Gandha thailam* in the ratio 10:1 is attempted in patients suffering from symptoms of AVN.

The French orthopaedic Surgeon Paul Ficat and Professor Jacques Arlet devised a system of staging idiopathic avascular necrosis of femoral head in the late 1970's based on two fundamental concepts a) a standard radiograph shows only the shadow of the

mineralised portion of a bone. b) Bone necrosis is the end result of severe and prolonged ischemia.

Stage 0: Normal appearance in radiographs

Stage 1: Inconspicuous abnormality or minor osteopenia changes

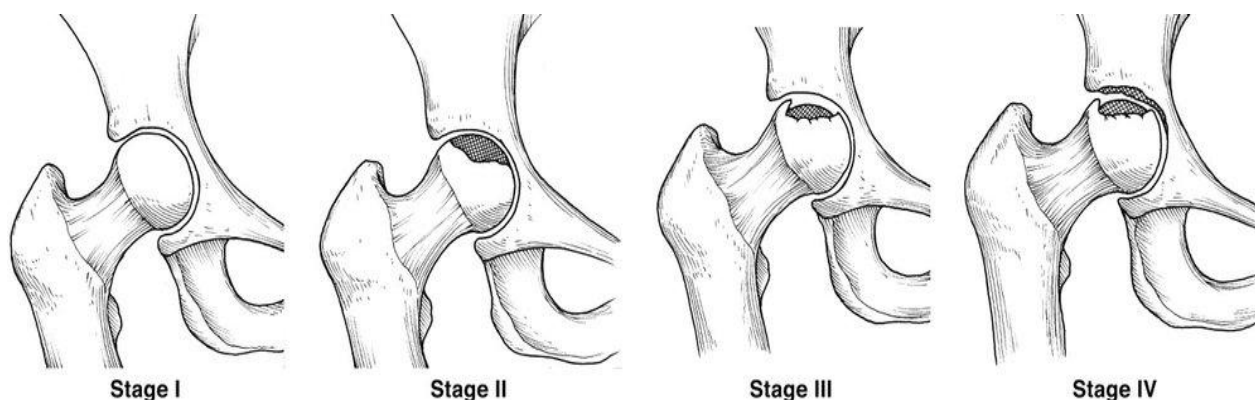
Stage 2: Sclerotic or cystic lesions

2a. Focal radiological changes

2b. Crescent sign without flattening of the femoral head.

Stage 3: Flattening of femoral head or femoral head collapse, joint space normal

Stage 4: Femoral head collapse and osteoarthritis of the hip.



## METHODOLOGY

Diagnosis was made using complete blood examination, physical examination, family history, history of steroid or alcohol use is the first step in identifying AVN. This helps us to identify abnormalities like inflammation, autoimmune disease etc. AP and lateral view radiographs of the affected bone should be taken. MRI, Bone scan, CT scan can be used to determine the amount of bone affected, as well as to know the progression of the disease. The selected patients were administered *Snehapanam* with *Guggulutiktakamghritam* and *gandhathailam* taken in the ratio 10:1. Depending on the *agnibala* of the patient 15-25ml of the drug can be given during morning for a period of 45 days.

Patients were strictly advised to take *laghuahara* and *yavagu*. Avoid *vidahiahara* and strenuous activities.

## DISCUSSION

Avascular necrosis of femur head is the condition which occurs primarily due to loss of blood supply. *Guggulutiktakamghritam* is specially indicated in the management of *asthimajjavikaras* which comprises of *tikta rasa dravyas*<sup>6</sup>. *Tikta rasa sadhitaghrita* and *ksheera* is especially indicated in *asthimajjakshaya*. *Gandha thailam* is specially mentioned in fracture restorative care and best calcium supplement. *Gandha thaila* is best *asthisthiryakara yoga* and serves the purpose of *asthiposhana* and minimises pain and weakness<sup>7</sup>. Hence a combination of both these drugs taken in the form of *vicharanasneha* can effectively bring about *rogasamana*. Hence *Snehapanam* can effectively bring about symptomatic pain relief and revert the symptoms of AVN.

## CONCLUSION

Avascular necrosis can be well managed when identified and treated during earlier stages. Synergistic action of *Guggulutiktakamghritam* and *gandhathailam* works well in the management of AVN when administered in *hraswamatra*. It serves as an effective remedy to improve the QOL of the suffering and minimizes the disabilities.

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