



MANAGEMENT OF AVASCULAR NECROSIS OF FEMORAL HEAD THROUGH PANCHAKARMA – A CASE STUDY

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ABSTRACT

Avascular Necrosis of femoral head is a condition caused due to loss of blood supply to the femoral head due to any injury or any occlusion nourishing the bone tissue. If not treated earlier it may leads to bone collapse. Now a days the cases are increasing, management mostly include NSAIDs, core decompression surgery, bone grafting etc in the contemporary science. In ayurveda we can correlate AVN of femoral head to asthi majjagata vata based on the signs and symptoms. The main treatment indicated for asthimajjagata vata is panchakarma mainly focusing on basti. **Materials and Methods:** A randomised single case study of a diagnosed non operated case of AVN of bilateral hip with limping gait and restricted movement of hip. An effort has been made in the present study to evaluate the efficacy of kramataha shodhana followed by rasayana in AVN of bilateral hip joint. **Results:** significant improvement was noticed after the treatment. pain was reduced significantly and there was improvement in range of motion. Patient was able to walk without any difficulty and able to stand for longer duration without pain. **Discussion:** Avascular necrosis is also called as osteonecrosis of femoral head caused due to the interruption in blood supply to femoral head in the present study. In the contemporary science surgery is the only option which is cost worthy and the prognosis is poor. In the present study, AVN of femoral head is managed successfully in the lines of asthimajjagata vata through panchakarma in the form of rookshana poorvaka kramataha shodhana and rasayana therapy. After the treatment significant result was seen symptomatically.

KEYWORDS: Avascular necrosis, Asthi majjagata vata, Shodhana, Ayurveda.

INTRODUCTION

Avascular necrosis(AVN) is the death of bone tissue due to loss of blood supply, which is also called as osteonecrosis. Avascular necrosis of hip joint is most common, which is caused by interruption in the blood supply to the femoral head. It is one of the complication of corticosteroid therapy. The main causes are traumatic and idiopathic. Idiopathic might be due to haemoglobinopathies, SLE, Antiphospholipid antibody syndrome, radiotherapy chemotherapy, steroids, excess alcohol. AVN is usually found in men aged between 35-45years. The arteries which supply the femoral head area are very tiny and thus the area is simply susceptible to injury. In the other, the arteries become occluded the reason behind it is not identified. It may be asymptomatic within the starting however later delicate to severe degree of pain is seen in conjunction with

change within the gait.^[1] AVN of femoral head presents with groin pain that radiates down towards anteromedial thigh. Change within range of motion i.e. abduction, adduction, flexion and extension are found. Xray and MRI confirms the diagnosis of AVN. The main treatment principle includes revascularisation of femoral head, protection of structure and relief from the symptoms.^[2] The treatment in the contemporary science includes NSAIDs, core decompression surgery, bone grafting etc. Once the femoral head is collapsed joint replacement and osteotomy are the choice of treatment. In ayurveda avascular necrosis of femoral head can be correlated to asthimajjagata vata due to similarity in symptoms. Wide range of treatment modalities have been mentioned in ayurveda emphasising mainly panchakarma for asthimajjagata vikara.^[3]

Table 1: Showing Signs and Symptoms of Asthi Majjagata Vata.^[4]

Sl no.	Signs and Symptoms
1	Bhedo asthiparvanam(breaking type of pain in bones)
2	Sandhi shola(joint pain)
3	Mamsa kshaya(muscle wasting)
4	Bala kshaya(weakness)
5	Aswapna Santata ruk(sleeplessness due to pain)

CASE STUDY

1. A female patient aged 41years diagnosed and non operated case of AVN of femoral head visited Panchakarma OPD of Sri kalabyraveswara swamy ayurvedic medical college, hospital and research centre with the complaints of pain and restricted movement in bilateral hip and groin region along with difficulty in walking since 1 years which used to aggravate on walking, sitting/standing for long duration and relieves on taking rest. Pt had covid in the 2nd wave on July 2021 for which she got admitted in ICU for a week later shifted to ward and treated for a month on oxygen support at home. Patient was on corticosteroids during this period. Later in September patient experienced difficulty in walkig and pain in left lower limb so patinet consulted an orthopedician and advised to get an MRI done which is suggestive of avascular necrosis of the femoral head bilaterally(stage 2 on right and stage 3 on left). Patient was advised to undergo surgery but the patient was not willing for surgery so patient came to SKAMCH&RC for management through Ayurveda.

Past History - No H/O HTN, Type 2DM, BA, TB

Infected with covid in 2021

Personal History - Diet – Vegetarian

Appetite - Good

Bowel – once/day

Micturition – Regular

Sleep - sound

Family History - Nothing significant

Treatment History - H/O corticosteroid intake for covid

General examination – Pallor -absent

Ictrus - absent

Cyanosis - absent

Clubbing - absent

Lymphadenopathy – absent

Edema – absent

Vitals – BP - 130/70mmHg

Pulse Rate - 72bpm

Respiratory Rate - 161cpm

Weight – 82kg

Height – 158cm

Table 2: showing Dashavidha pariksha.

Prakruti	Kapha pitta
Vikriti	Madyama
Sara	Meda sara
Samhanana	Avara
Pramana	Madyama
Satva	Madyama
Satmya	Sarva rasa
Ahara shakti	Madyama
Vyayama shakti	Avara
Vaya	Parihani

Table 3: Showing Ashtasthana Pariksha.

Nadi	72bpm
Mala	once/day
Mutra	5-6/day
Jihva	Lipta
Shabda	Prakruta
Sparsha	Anushnasheeta
Drik	Prakruta
Akriti	madyama

Systemic Examination

- Central Nervous System – Concious, well oriented to time, place and person
- Cardio vascular system – S1and S2 heard properly
- Respiratory System – Normal vasicular breath sounds heard
- Gastro intestinal System – Soft, non tender

Hip joint Examination

Inspection – no swelling or scar mark.

Palpation – Tenderness present at bilateral hip joint, raise in temperature

Gait – Limping Gait

Table 4: Showing Range of Movement of Hip Joint Before And After Treatment.

Range of movement	Right hip(in degrees)		Left hip(in degrees)	
	BT	AT	BT	AT
Flexion	70	100	70	100
Extension	10	10	10	20
Abduction	30	35	15	30
Adduction	15	20	10	20
Internal rotation	25	30	10	30
External rotation	30	40	20	30

Febers test – Positive on both sides

Investigation – MRI of hip joint on 26/03/23 suggests features of Avascular Necrosis of Femoral Head Bilaterally (Stage 2 on the right and Stage 3 on the left).



Chikitsa

Table 5: Showing Treatment Given.

<p>Phase 1 – Rookshana purvaka Vamana Karma</p>	<p>Purvakarma – Sarvanga udwartana with triphala churna and kolakulattadi churna followed by sarvanga takradhara with musta, amalaka and asanadi siddha takra for 14 day Orally – Gandharva Hastadi taila 20ml with milk empty stomach in morning Snehapana with Panchatikta ghrita for 4days Vishrama kala – Sarvanga Abhyanga with murchita taila followed by bashpa sweda Kaphotklehsakara Ahara advised Pradhana Karma –Sarvanga abhyanga with murchita taila followed by bashpa sweda Akanta pananwas given with ksheera followed by Madanaphala pippali Kashaya Vamanopaga – Yashtimadhu phanta Total number of vega 6 Paschat Karma – Samsarjana Krama given for 5 day</p>
	<p>After 8 days</p>
<p>Phase 2 – Rookshana poorvaka virechana karma</p>	<p>Poorva Karma - Sarvanga udwartana with triphala churna and kolakulattadi churna followed by sarvanga takradhara with musta, amalaka and Asasnadi siddha takra for 14 day Orally – Gandharva Hastadi taila 20ml with milk on empty stomach in morning Snehapana with Panchatikta ghrita for 3 days Vishramakala – Sarvanga abhyanga with murchita taila followed by bashpa sweda for 3 days Dadima rasa was advised on the last day of vishrama kala Pradhana Karma – Sarvanga abhyanga with murchita tila taila followed by bashpa sweda ✓ Trivrut lehya – 70g given</p>
	<p>✓ Total number of vega – 16</p>

	• Paschat Karma – Samsarjana krama given for 5 days
	After 8 days
Phase 3 – Erandamooladi Kala basti	Poorva Karma – Sarvanga abhyanga with moorchita taila followed by bashpa sweda Pradhana karma – Anuvasana - Murchita tila taila – 80ml Niruha – Honey – 50ml Saindhava lavana – 10g Murchita taila – 80ml Rasna kalka – 25g Erandamooladi kwata – 350ml Ksheera – 150ml
Phase 4 - Rasayana	• Vardhamana pippali Rasayana for 1 month

OBSERVATION

The assessment of flexion, extension, abduction, adduction, internal rotation, external rotation were made before and after the treatment. Improvement in range of movement of hip is as shown in table No. 4.

Patient is able to walk without support.

Patinet is able to stand and sit for longer duration without any pain.

DISCUSSION

Discussion on disease

Avascular necrosis of femoral head is mainly caused by interruption of blood supply to the femoral head. The Main causes of AVN of femoral head incudes post traumatic and idiopathic. The arteries which supply the femoral head area are very tiny and thus area is susceptible to injury. In the other, the arteries become occluded the reason behind it is not identified. The obstruction of blood might be due to fat embolism or thrombus formation. In the present case there was no history of trauma and there is a history of corticosteroid usage. Studies shows the usage of corticosteroids may lead to atherosclerosis.^[5] In contemporary sciences the treatment mostly include surgery, NSAIDs, lipid lowering agents etc.

In Ayurveda there is no direct correlation but we can correlate the signs and symptoms of avascular necrosis of femoral head to asthi majjagata vata, as there is vikruti of vata and asthi dhatu is seen. We can consider this as avarana janya vata vyadhi leading to dhatu kshaya. As there is margavarodha to rakta by vata we can also treat AVN of femoral head to vatarakta as the samprapti is similar.^[6] Addition to this, Acharya vagbhata while explaining bhesaja dweshi, illustrate about dosha upalipata avastha and the need of vamanadi karma to reduce the dosha upalipata in the rasavahini siras.^[7] We can correlate it to atherosclerosis leading to reduced blood supply in tiny vessels. Based on the avastha of the disease we can treat the condition in these lines of management. Shodhana karma ultimately does sroto vishuddhi. Hence the disease is directly indicated for panchakarma therapy after which rasayana therapy is planned.

Discussion on treatment

Treatment is mainly planned to slowdown the progress of necrosis, protect the structure and to relieve the symptoms. We consider avascular necrosis of femoral head as asthi majjagata vata, hence panchakarma is directly indicated for the treatment of asthi majjagata vata. If we see AVN of femoral head, We can correlate interruption causing AVN of femoral head to the upalipata of rasavaha sira which is nourishing the asthi dhatu. Even here vamanadi karma is the first line of management. Panchakarma does sroto shodhana there by encourages good circulation leading to proper nourishment of dhatus, which can be accelerated by the addition of rasyana therapy.

Phase 1

Sarvanga udwartana is adopted here along with sarvanga takradhara as vishishta poorva karma before vama karma. Udwartana is a form of rookshana therapy which removes the avarana caused by medha and kapha also facilitates better action of subsequent therapies as it Does siramukha vivikta, increases dhatvagni, ama pachana, helps in liquification of kapha and medha.^[8] Gandharva hastadi taila is advised for vatanulomana^[9] to bring vata dosha to normalcy.

Vamana karma does srotoshodhana, urdhwabhaga dosha harana, laghutva, murdha and indriya Shuddhi.^[10]

Phase 2

After 8 days Rookshana poorvaka virechana karma is done for adhobhaga dosha harana, for sroto vishuddhi.^[11]

Phase 3

After 8 days Erandamooladi kala basti is administered. For the treatment of asthi majjagata vata basti is the choice of treatment, as basti is considered as ardha chikitsa and the best for vataroga.^[12] erandamooladi basti is administered in the kala basti pattern considering the bala of the patient. Erandamooladi kwata is having deepana and lekhana guna.^[13]

Phase 4

Patient was advised with vardhamana pippali rasayana for 1 month which is indicated for vatarakta in the first place by acharya sushruta.^[14] Even in case of avascular

necrosis there is margavarodha to rakta dhatu by vata which is similar to vatarakta samprapti. So here vardhamana pippali rasyana is adopted. Pippali vardhamana rasayana is administered in Kashaya form with ksheera for 1 month in ascending and descending dose. Pippali vardhamana rasayana is also having brimhana, vayah sthapana and ayushya effect.^[15]

CONCLUSION

AVN of femoral head is treated by ayurvedic treatment modality including panchakarma and rasayana therapy. For the treatment of AVN only surgical treatment is available in contemporary science which is expensive. This is a case of AVN of B/L femoral head (Stage 3 and stage 2) which is treated successfully by panchakarma treatment by protecting the structure and relieving the symptoms. The best part about panchakarma and rasayana therapy is that it improves the overall health, cleanses all the channels thereby improves circulation all over the body and nourishes the tissues of the body.

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