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EFFECT OF *MANIJSTHADI KSHIRA BASTI* IN THE MANAGEMENT OF POST COVID AVASCULAR NECROSIS OF HEAD OF FEMUR W.S.R. TO *ASTHIMAJJAGATA VATA*: A CASE STUDY

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ABSTRACT:

Avascular necrosis is a disease in which there is necrosis of bone due to lack of blood supply. Due to decreased blood supply, osteonecrosis occurs and it leads to the collapse of bone. AVN mainly affects the epiphysial part of long bones like femoral and humeral head, but sometime small bones may also get involves. The hip joint is the most common joint affected by avascular necrosis. AVN is also known as osteonecrosis, aseptic necrosis, and ischemic bone necrosis. AVN can be primary or secondary on the basis of probable risk factors i.e. Corticosteroids use, sickle cell disease, gout, alcoholism, Gaucher's diseases, pancreatitis. It usually affects people between 30 to 50 years of age. A surge in the incidence of AVN is more common after covid. According to *Ayurveda* AVN can be compared with *Asthimajjagata Vata*. **Aim:** To assess the efficacy of *Manjisthadi Kshira Basti* (enema prepared out from the *Kwatha* of *Manjistha*, *Triphala*, *Vacha*, *Daruharidra*, *Guduchi*, *Nimba* and *Kalka* prepared from the *Jivaniyagana Dravya*) in the management of Post COVID avascular necrosis. The objective of the treatment includes the preservation of structure and function with relief in symptoms. **Material and Methods:** *Ayurveda* disease review is done from *Brihatrayi*, *Yogaratanakar*, *Bhavprakash Samhita*. Modern disease review is done from various books of Orthopaedics as well as the search engines like J-Gate, Google Scholar, Ayush Portal, DHARA, ARD are reviewed for obtaining the information related to Avascular Necrosis of Femoral Head and *Asthimajjagat Vata* and to evaluate the effectiveness of *ayurvedic* management for Avascular Necrosis of Femoral Head. In this case study A male patient age 30 yrs., diagnosed and non-operated case of Avascular Necrosis of head of femur after covid positive (31/05/2022 OPD NO. 32175) came to *Panchakarma* OPD of ITRA, Jamnagar with chief complaints of pain in bilateral hip region in the last 2 month with difficulty in doing normal activities such as walking, sitting, squatting etc. The pain aggravated on prolonged walking and prolonged sitting position. AVN of femoral head was treated with *Manjisthadi Kshira Basti* was done for 16 days. Assessment was done after *Basti* and *Shaman Ausadhi*. **Observation:** After treatment complete relief in pain, improvement in gait and also changes in x-ray findings. **Conclusion:** The present paper intends to highlight the *Ayurvedic* management in post covid AVN. After the treatment it can be concluded the *Manjisthadi Kshira Basti* can be used as effective treatment in the management of AVN.

Keywords: *Asthimajjagata Vata*, *Manjisthadi Kshira Basti*, *Jeevaniyagana*

INTRODUCTION:

Avascular necrosis of bone is defined as death of bone as a result of deprivation of its blood supply.^[1] Any condition that shuts off the blood supply produces avascular necrosis of bone.^[2] AVN of femoral head- The blood supply by was of the capsular vessels which enter the intracapsular cavity distally and pass proximally beneath a sub synovial reflection

toward the head, mainly along the posterior aspect of the neck, meanwhile sending branches which penetrate the neck along their course. A fracture through the femoral neck, especially in its proximal portion or a severe dislocation which ruptures the capsular and retinacular vessels, is likely to produce avascular necrosis of the femoral head.^[3] Causes of AVN other than fractures: **SCLERA** ^[4] S – Steroids, C – Caisson's disease, L – Lupus erythematosus, R – Radiation therapy, A – Alcoholism. It usually affects men aged from 35 to 45 years and is bilateral in over 50% of patients. Patient is frequently asymptomatic in early stages, as the disease progresses the patient may complain of an ache in the groin, walks with limp and clinical examination may reveal limitation of movements.^[5] AVN described in modern system of medicine closely resembles with symptoms of *Asthimajjagat Vata*. It occurs when vitiated *Vata* affects the *Asthi, Majja* at any particular place of skeletal system. When the aggravated *Vata* affects *Asthi* and *Majja Dhatu* it causes breaking type of continuous pain in the bone, loss of muscle power and muscle tone, joint pain and decreased sleep.^[6] *Acharya Charaka* has mentioned that *Panchakarma* is the best treatment for *Asthipradoshaj Vikara* and also mentioned that *Dravya Sadhit Ksheera Basti* is the most effective in that.^[7]

MATERIALS & METHODS:

Case Report: A male patient age 30 yrs., diagnosed and non-operated case of Avascular Necrosis of head of femur (31/05/2022 OPD NO. 32175) came to Panchakarma OPD of ITRA, Jamnagar with chief complaints of pain in bilateral hip region in the last 2 month with difficulty in doing normal activities such as walking, sitting, squatting etc. The pain aggravated on prolonged walking and prolonged sitting position.

Past History: H/O of COVID-19 positive before 13 months, for that he took treatment from allopathic hospital in which steroids were given according to their line of treatment. From this treatment he got relief in symptoms of covid but few months later he started feeling pain in the bilateral hip joint and radiating to knee joint. Pain was mild in the beginning but later on the severity of pain increased day by day. After few months, patient felt difficulty in walking and pain in groin region. When the pain became intense, he consulted an orthopaedic doctor. MRI was done which suggested the Avascular Necrosis of head of femur with no collapse of bilateral femur head, for which he was advised for surgical interventions, he approached ITRA hospital Jamnagar for further management. Patient was then admitted in ITRA hospital.

Examination of Patient:

The general and specific examination of the patient was conducted as per modern and Ayurveda and the details are highlighted in table 1, 2

Table no. 1: Aaturbala Pramana Pariksha (examination of the strength of the patient)

1	Prakruti (Constitution of the person)	<i>Vatapradhana Kapha, Rajas</i>
2	Sara (quality of tissue)	<i>Madhyama</i> (average) <i>Rasa, Mamsa</i>
3	Samhanana (body built up)	<i>Madhyama</i> (average)
4	Pramana (Anthropometric measurement)	Wt. 64kg Ht. 5 feet 4 inch
5	Satmya (adaptability)	<i>Uttama</i> (good)
6	Satva (mental strength)	<i>Uttama</i> (good)
7	Aaharashakti (food intake and digestion capacity)	<i>Abhyavarana:</i> (average) <i>Jarana:</i> 4-5 hrs
8	Vyayamashakti (exercise capacity)	<i>Madhyama</i> (average)
9	Vaya (age)	<i>Yuvavastha</i> (adult)
10	Desha (habitat)	<i>Sadharana</i>

Table no. 2: Asthavidha Pariksha

(Eight-fold examination):

1	Nadi (pulse)	76/Minute, Regular
2	Mutra (urine)	5-6 time /day <i>Samyaka</i>
3	Mala (stool)	Once /day <i>Samyaka</i>
4	Jivha (tongue)	Reddish pink <i>Nirama</i>
5	Shabda (sound)	<i>Spashta</i>
6	Sparsha (touch)	<i>Samsheetoshna</i>
7	Drik (eye)	<i>Spashta</i>
8	Aakriti (built)	<i>Madhyama</i>

- **Dosha:** *Vata*
- **Adhithana:** *Pakvashaya*
- **Dushya:** *Rakta, Sira, Snayu, Asthi, Majja*
- **Sthanasanshraya:** *Vankshanapradesha*
- **Samprapti (Pathology):** Due to lack of blood supply to the head of the femur, it causes weakness in the neck and head of the femur and hip joint. Due to *Vata Prakopkara hetu sevana* the aggravated *Vata* accumulates in the hip joint causing further degeneration resulting into severe pain and difficulty in the movement of hip joint.

INVESTIGATION:

X-ray of Both hip joint AP view (dated 30/04/2022 & 15/08/2022)

MRI OF PELVIS WITH BOTH HIP AND S.I. JOINT (dated 07/05/2022):

- Grade II / Early Grade III Avascular necrosis of bilateral femoral head.

TREATMENT ADMINISTERED:

Both medicinal and procedural therapies was administered in the patient. The details are mentioned in table 3 & 4.

Table no.3: details of medicine administered

Sr. No.	Drug	Dose	Anupana	Duration
1	<i>Dashmoola</i> <i>Kwatha</i> <i>Manijsthadi</i> <i>Kwatha</i>	10 ml BD 10 ml BD	Luke warm water	5 weeks
2	<i>Kaishora</i> <i>Guggulu</i>	2-tab 250 mg TDS	Luke warm water	5 weeks
3	<i>Guduchi</i> <i>Churna</i> <i>Ashwagandh</i> <i>Churna</i> <i>Chopchini</i> <i>Churna</i>	2 gm 2gm 500 mg BD	Luke warm water	5 weeks

Table no.4: Details of therapies administered

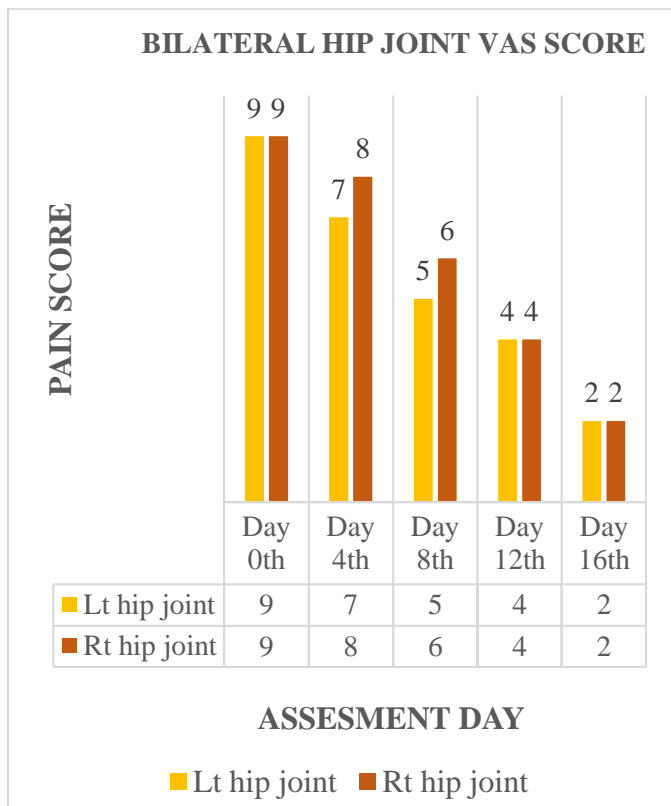
Sr.No.	Treatment	Drug used	Dose	Duration
1	<i>Sthanika Abhyanga</i>	<i>Bala Taila</i>	QS	16 Days
2	<i>Sthanika Nadi swedana</i>	Hot water	QS	16 Days
3	<i>Manjisthadi Kshira Basti</i>	<i>Madhu</i> (Honey)	60ml	16 Days
		<i>Saindhava</i>	10gm	
		<i>Manjisthadi Taila</i>	60ml	
		<i>Kalka (Jivaniyagana)</i>	25gm	
		<i>Manjisthadi Kwatha</i>	350ml	
		<i>Godugdha</i> (Cow's Milk)	150ml	



OBSERVATIONS:

Post treatment changes were noted in respect to range of hip joint movements (table 5) and pain was assessed based on Vas Numerical Pain Distress Scale (Chart 1). There was significant clinical improvement in the range of hip joint and pain post treatment.

Table no.5: Observation of pre and post treatment changes in hip joint

Sr. No.	Movement of hip joint	BT		AT		Range of Movement
		Rt. Leg	Lt. Leg	Rt. Leg	Lt. Leg	
1	Flexion	40°	40°	90°	100°	110° - 120°
2	Extension	5°	5°	10°	10°	10° - 15°
3	Abduction	20°	20°	30°	35°	30° - 50°
4	Adduction	10°	10°	15°	15°	20° - 30°
5	Medial Rotation	15°	15°	25°	30°	30° - 40°
6	Lateral Rotation	25°	20°	35°	40°	40° - 60°



Before treatment (30/04/2022)	After Treatment (15/08/2022)
	
<p>B/L HIP JOINT:</p> <p>Articular Surface – Sclerosis Present. Surface irregularity noted on Right side</p> <p>B/L SI JOINT: Joint space show mild changes of sclerosis at articular surface</p>	<p>B/L HIP JOINT:</p> <p>Articular Surface – Resolution is noted on surface irregularity. Focal sclerotic areas are increased</p> <p>B/L SI JOINT: Minimal sclerosis seen with near normal curvature noted at SI Joint</p>

DISCUSSION:

Acharya charaka has mentioned that *Tiktaksheer Basti* and *Panchakarma* is the best treatment for *Asthi Pradoshaja Vikara*.^[8] *Kwath* used in this *Basti* is *Laghumanjsthadi Kwath* which is having *Tikta*, *Katu Rasa* and *Ushna Virya* prominent drugs therefore helps in *Rakta Prasadana* and removes *Srotorodha*. Few drugs of this *Kwath* are also having *Rasayana* property which may help in rejuvenation of necrosed bone.^[9] *Jeevaniya gana* is used as *Kalka* in preparation of *Basti* which is having *Madhura Rasa*, *Sheeta Virya* and *Guru Guna*.^[10] It may help in removal of necrosed bone tissue and formation of new bone. It also has *Sthairyakara* properties therefore gives stability to the head of femur. *Kshira* having *Madhura Rasa*, *Guru* and *Snigdha Guna*, *Madhura Vipaka* and *Sheeta Virya*. It helps in *Vata Shamana* and stops degenerative process as they are having *Jeevaniya* properties hence further bone necrosis will be delayed.^[11] *Madhu* and *Saindhav* having *Yogavahi Guna* helps in quick absorption and distribution of *Basti Dravyas* through *Pakwashaya*. According to *Dalhan Purishadhara Kala* is *Asthi Dhara Kala* so drug administered through *Pakwashaya*

will reach to *Asthi Dhatu*. [12] Overall *Bahya Abhyanga* and *Swedana* gives stability to the hip region, helps in improving the hampered blood supply to the affected part. *Manjisthadi Kshira Basti* may help in *Rakta Prasadana*, removal of any clot or fat emboli from the affected blood vessels, *Bruhana* of the affected part of head of femur and rejuvenation of necrosed bone. *Shamana* drugs used were having *Shoolahara*, *Srotoshodhana*, *Raktaprasadaka*, *Medohara* and *Tridoshahara* property. They also had *Rasayana* property. Thus covering almost all the aspect causing avascular necrosis of head of femur.

CONCLUSION: On the basis of this case study, it was concluded that *Manjisthadi Kshira Basti* along with certain palliative medicine is effective in management of avascular necrosis of neck of femur. it proves that with proper diagnosis and proper treatment protocol Ayurveda can be extremely beneficial in the management of AVN. The recovery in the present case was promising and worth documenting. But other Panchakarma therapies like *Virechana Karma*, *Matra Basti* and other *Kshir Basti* having *Tikta Rasa Pradhana Dravya* can also be used in the management of avascular necrosis of neck of femur.

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