



# A Case Study on Management of Asthigata Vata W.S.R. AVN of Femoral Head

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## Case Report

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## Abstract

Avascular necrosis of femoral head is a growing condition in the musculoskeletal clinic. This is mainly osteonecrosis caused by injury or occlusion in the blood vessels that supply bone tissue. AVN of femoral head is the most common type of necrosis because the artery that supplies this area is so narrow that it is easily injured, which then causes a lack of nutrition leading to necrosis. Modern medicine has no specific cures other than surgery. Moreover, it is expensive and unpredictable. In Ayurveda, *Vata*, *Pitta*, *Rakta Dosh*, *Asthi*, and *Majja Kshaya* play a major role in the pathogenesis of AVN. This article is aimed to nourish, repair, and regenerate *Asthi Dhatu & Vatashamana*. The current study, at the age of 28, diagnosed AVN of the femoral head was treated with *Udvardana*, *Kshara Basti*, *Ksheera Basti*, and *Shasthika Shali Pinda Sveda* which plays a significant effect in the improvement of pathology.

**Keywords:** Avascular Necrosis; Femoral Head; *Asthigata Vata*; *Panchakarma*

## Introduction

Avascular necrosis (AVN) of the femur head is a pathological process that results the rom interruption of the blood supply to the bone [1]. In 1835 Curveihier depicted femoral head morphological changes secondary to interruption of blood flow. Clinical AVN most commonly affects the ends of long bones such as the femur, humerus etc [2]. In Ayurveda, it can be correlated with the *Asthigata Vata* where the symptoms include *AsthiKshaya*, *Asthisoushiry* etc [3]. No generally good treatment has been grown, in any event, even for early disease progression. But Ayurvedic approach can give a palatable outcome with progress in quality of life.

## Aims and Objectives of Treatment

- To increase the ROM (range of movement) which plays a vital role in arresting of disease progression

- To clear the *Avaraka* and pacify the *Vata Dosh*
- To nourish, repair and regenerate *Asthi Dhatu & Vatashamana*.

## Case Report

A Patient of aged 28 years visited the OPD with chief complaints of Pain and Stiffness in the right hip joint, Unable to flex the right hip joint, Unable to sit on the floor, Unable to climb the steps and Reduced range of movements of right hip since 3 years, which was associated with difficulty in walking and heaviness in lower limb. Patient was said to be healthy before 10 years, then he had suffered from Rheumatoid arthritis for 4 years with the complaints of pain in multiple joints, morning stiffness and h/o joint oedema, for that he took corticosteroid treatment for 1 year and got relief from symptoms of rheumatoid arthritis, since 3 years he gradually started complaining of above said complaints. No any specific history regarding systemic disease and no

any specific trauma history. He was unable to lift the right limb even up to 10 degrees and his joint gait was hampered on first visit.

**Past History** – No H/o of HTN, diabetes and Hypothyroidism, H/o - Rheumatoid arthritis.

- **Family History** – Not specific
- **Treatment History** – H/o Steroid intake for RA

### Personal History

- Appetite: Moderate.
- Bowel: Constipated.
- Micturition: 6-7 times/24 hrs.
- Sleep: Sound
- Diet: Mixed
- *Kostha: Madhyama*

### General Examination

- Pallor: Absent
- Icterus: Absent
- Clubbing: Absent
- Cyanosis: Absent
- Lymphadenopathy: Absent
- Edema: Absent

### Vital Examination

- BP – 120/70 mm of Hg.
- Pulse Rate: 74 bpm
- Respiratory Rate: 18 cpm.
- Weight: 50 kg
- Temperature: 98.6 F

### Astha Sthana Pareeksha

- *Nadi: 74b/min*
- *Mala: Vibandha*
- *Mootra: Prakruta*

- *Jihwa: Liptata*
- *Shabdha: Prakruta*
- *Sparsha: Prakruta*
- *Drik: Prakruta*
- *Aakruti: Madhyama.*

### Dashavidha Pareeksha

- *Prakruti: Vata-Pittaja*
- *Vikruti: Vataja*
- *Saara: Madhyama*
- *Samahanana: Madhyama*
- *Pramana: Madhyama*
- *Satwa: Madhyama*
- *Satmya: Madhyama*
- *Ahara Shakti: Madhyama*
- *Abhyavarana shakti: Madhyama*
- *Jarana shakti: Madhyama*
- *Vyayama Shakti : Avara*
- *Vaya: Taruna*

### Systemic Examination

- Central Nervous System: Conscious, well oriented with time & place.
- Cardio Vascular System: S1 & S2 heard properly.
- Respiratory System: AEBE.
- G-I Examination: soft, non-tender

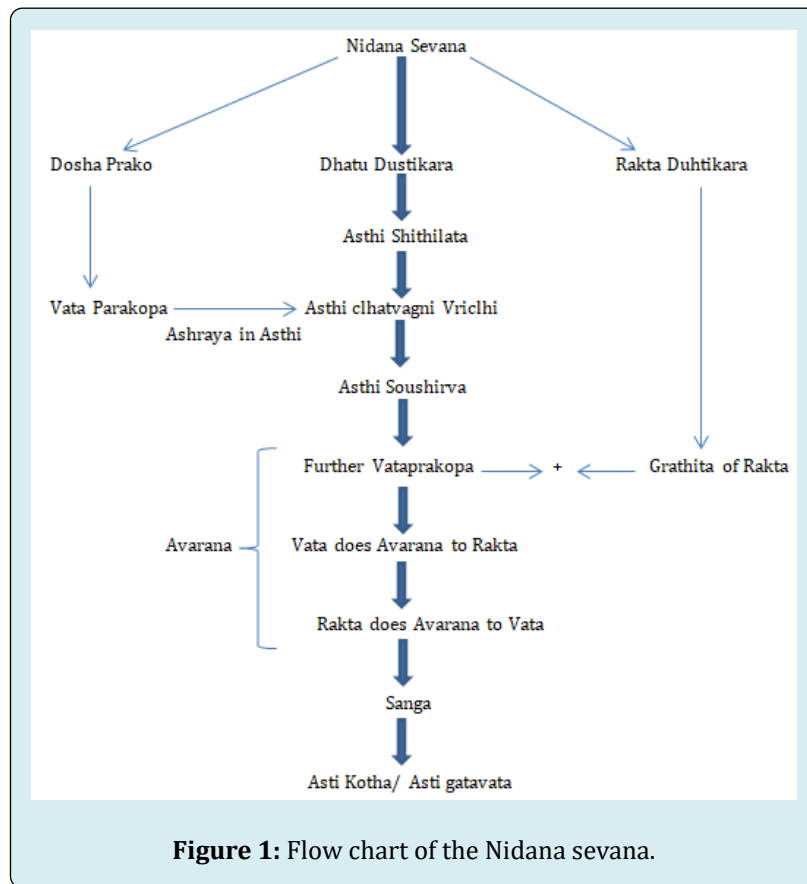
### Hip Joint Examination – Right Hip Joint

- **Inspection:** No scar mark, No swelling.
- **Palpation: Tenderness** – grade 1 tenderness was present on right gluteal region.
- **Gait :** limping gait
- **Arms:** Normal
- **Legs :** affected range of movements of right lower limb
- **Spine:** mild scoliosis

	Right hip joint examination (visit wise)						Left
	1st	2nd	3rd	4th	5th	6th	
Flexion	18 0	18 0	20 0	22 0	26 0	26 0	N
Extension	20 0	20 0	24 0	24 0	24 0	24 0	N
Abduction	10 0	10 0	18 0	25 0	30 0	40 0	N
Adduction	NPP	NPP	NPP	NPP	100	100	N
Leg-Length discrepancy	34 "	34 "	34 "	34 "	34 "	34 "	34.6"
Muscle Bulk – Calf muscles	10.8"	10.8"	10.8"	11.2"	11.2"	11.2"	11.3"
Gluteus Muscles	13"	13"	13"	13"	14"	14"	15.4"
Thigh Muscles	15.5"	15.5"	15.5"	15.5"	15.5"	15.5"	16.2"

**Table 1:** Examinations of Hip Joints.

## Samprapti



## Samprapti Ghataka:

1	Dosha	Vata
2	Dushya	Asthi, Rakta, Sira, Mamsa
3	Srotas	Asthivaha, Raktavaha, Mamsavaha,
4	Srotodushti	Sanga
5	Roga marga	Madhyama
6	Udbhavasthana	Pakwashaya
7	Vyakta sthana	Asthi, Sandhi
8	Agni	Mandya
		(Jatharagni: Mandya)
		(Bhutagni : Parthiva, Tejasa, Vayavagni :- Mandya)
9	Ama	Jatharagni; Bhutagni; Dhatwagni Mandya Janya Ama
10	Roga Prakruti	Chirakari
11	Sthanasamshraya	Vankshanapradesha

**Table 2:** Following methods include in Samprapti ghataka.

## Investigation: on 10/10/2020

• X-ray pelvis with both hip joints – AP view & lateral view.  
Avascular necrosis of right femoral head likely with secondary degenerative changes in right hip joint.

## Chikitsa

1<sup>st</sup> Phases of Treatment

- Vatahara

- *Raktaprasadana*
- *Astidhatu shodhana*.

#### 2<sup>nd</sup> Phases of Treatment

- *Vatahara*
- *Asthi Prasadana*
- *Brimhana* (SSPS)

#### Panchakarma Procedures (Phase 1 treatment- Part A)

- **Udwartana** : *KolkulathadiChoorna + Haridra Choorna +*

*Triphala Choorna + YastimadhuChoorna*

- **Sarvanga Abhyanga** with *Kottamchukkadi Taila f/b Bhaspa Sweda*.
- **Manjistadi Kshara Basti**: *Madhu- 80 ml Saindhava Lavana - 6gm Nimbambrutadi Eranda Taila- 80 ml Kalka – Guduchi, Shatava, Rasna, Musta, Vacha- each 5 gm Manjistadi Kashaya - 200ml Gomutra Arka – 100ml.*
- **Anuvasana Basti** : *Nimbambrutadi Eranda Taila- 80 ml*

11-Mar	11-Apr	11-May	11-Jun	11-Jul	11-Aug	11-Sep	11-Oct	11-Nov	11-Dec	13/11
UDW		UDW	UDW		UDW	UDW	-	-	-	-
Sr.Ab BS		Sr.Ab BS	Sr.Ab BS		Sr.Ab BS	Sr.Ab BS	Sr.Ab BS	Sr.Ab BS	Sr.Ab BS	Sr.Ab BS
	Kosta Shodhan			No procedure		AB		AB		AB
		MKB	MKB		MKB		MKB		MKB	

**Table 3:** Panchakarma Procedure Chart of phase 1.

(UDW- Udwartana, Sr.Ab BS – Sarvanga Abhyanga, Bhaspa Sweda, AB – Anuvasana Basti, MKB- Manjistadi Kshara Basti)

#### Shamana Medications:

- *Tab Panchatiktaka Ghrita Guggulu 1 Bd , A/F*
- *Tab Lakshadi Guggulu 1 Bd, A/F*
- *Cap Gandha Taila 2 Bd*
- *Mahatikthaka Kashaya 10 ml, Bd.*
- *Amrutaballataka leha ½ tsf bd*

#### Panchakarma Procedures (Phase 1 treatment –Part B)

- **Sarvanga Abhyanga** with *Balashvagandha Taila*
- **Shasthika Shali Pinda Sveda**

- **Anuvasana Basti** with *Guggulu Tiktaka Ghrita – 30ml + Manjisthadi Taila – 30ml*
- **Panchatiktaka Niruha Basti**
- **Madhu** – 80 ml
- **Saindhava Lavana** – 6 gms
- **Sneha** – *Nimbamrutadi Eranda Taila – 60ml*
- **Kalka** – *Manjistha + Musta + Guduchi + Arjun – 30gms*
- **Kashaya** – *Panchatiktaka Kashaya + Guduchi, Nimba and Vasa Kashaya – 250ml*
- **Gomutra Arka** – 50ml

22/12	23/12	24/12	25/12	26/12	27/12	28/12	29/12
Sr,Ab	Sr,Ab	Sr,Ab	Sr,Ab	Sr,Ab	Sr,Ab	Sr,Ab	Sr,Ab
SSPS	SSPS	SSPS	SSPS	SSPS	SSPS	SSPS	SSPS
AB		AB		AB		AB	AB
	PTNB		PTNB		PTNB		

**Table 4:** Panchakarma Procedure Chart of phase 1.

(SSPS - Shasthika Shali Pinda Sveda, PTNB - Panchatiktaka Niruha Basti)

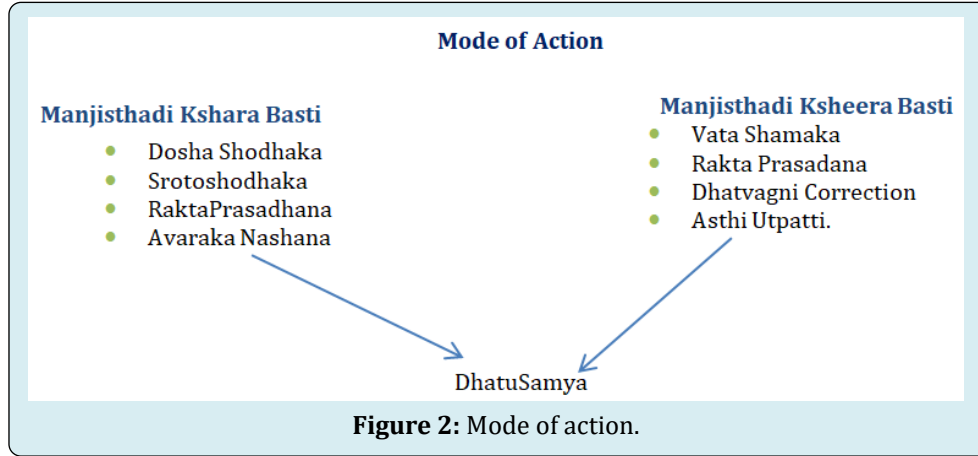
#### Panchakarma Procedures (Phase 2 treatment)

- **Sarvanga Abhyanga** with *Kottamchukkadi Taila f/b Bhaspa Sweda*.
- **Manjistadi Kshara Basti: First day for Shodhanarth,**
  - *Madhu- 60 ml*
  - *Saindhava Lavana - 6gm*
  - *Nimbambrutadi Eranda Taila- 60 ml*
  - *Kalka – Vaishwanara, Shatava – 20 gm*
  - *Manjistadi Kashaya+ Triphala kashaya - 400ml*

- *Gomutra Arka – 50ml.*
- **Anuvasana Basti:** *Nimbambrutadi Eranda Taila- 60 ml*
- **Manjistadi Ksheera Basti:**
  - *Madhu- 60 ml*
  - *Saindhava Lavana - 6gm*
  - *Nimbambrutadi Eranda Taila- 60 ml*
  - *Kalka – Vaishwanara, Shatava – 20gm*
  - *Manjistadi + Triphala ksheera Paka - 400ml*

22/4/21	23/4/21	24/4/21	25/4/21	26/4/21	27/4/21
Sr Ab, bs	Sr Ab, bs	Sr Ab, bs	Sr Ab,bs	Sr Ab,bs	Sr Ab, BS
AB	Manjistadi Kshara Basti	Manjistadi Ksheera Basti	Manjistadi Ksheera Basti	Manjistadi Ksheera Basti	Manjistadi Ksheera Basti
-	-	-	-	-	AB

**Table 5:** The following record was notices in the mentioned dates.



## Discussion

### Chikitsa Sootra

- भेदोऽस्थपिर्वणां सन्धिशूलं मांसबलक्षयः अस्वप्नः सन्त ता रुक् च मज्जास्थकिृपतिऽनलिः॥ C१ Ch 28/33.[3]
- असुथ्याशरयाणां व्याधीनां पञ्चकर्माणं भेषजम् बस्त्यः क्शीरसर्पीषितकितकोपहतानि च॥ C१ Su 28/27.[4]

### Mode of Action of Kshara Basti

- *Raktavaha Srotorodha* becomes prime cause leading to *Asthi Dhatu Kshaya* in AVN. To counter this *Rakta Dushti*, *Manjishthadi Kshara Basti* was administered.
- *Manjishthadi Kwatha* is *Tikta, Katu Rasa Pradhana* and *Ushna Virya* which acts as *Raktaprasadaka*. [5]

### Mode of Action of Ksheera Basti

- *Ksheera Basti* is indicated as a treatment modality in *Asthi Pradoshaja Vikara's*.
- The decoction made in *Ksheera* which is having *Madhura* and *Snigdha* properties help to control *Vata Doṣa* and acts as *Brimhana*. [5]

### Mode of Action of SSPS

- It is a kind of *Brimhana, Vatahara Sweda*.
- By virtue of its ingredients like *Godugdha* and *Shashtikashali*, it nourishes and gives strength to muscle tissues. [5]
- *Shashtikashali Pinda Sweda* improves the strength of tissues which in turns increase movements and flexibility. It also helps in the nourishment of muscle tissue, increases muscle bulk and reduces muscle wasting.

### Symptomatic assessment

Rt Hip	Before treatment	After treatment
Pain in hip joint	+++	-
Stiffness of hip joint	++++	++
Heaviness in lower limbs	+++	-
Difficulty in walking	++++	++
Difficulty in sitting (chair)	Unable to sit on floor, Able to sit on chair with support.	He can sit over table, chairs without support.

**Table 6:** Symptomatic assessment.

## Assessment Right Hip joint

	Before Treatment	After Treatment
Flexion	18 degree	26 degree
Extension	20 degree	24 degree
Abduction	10 degree	40 degree
Adduction	Not possible to perform	10 degree
Leg-Length discrepancy	34 inches	34inches
Muscle Bulk –Calf muscles	10.8 inches	11.2 inches
Gluteus Muscles	13 inches	14 inches
Thigh Muscles	15.5 inches	15.5 inches

Table 7: Assessment Right Hip joint.

### Conclusion

- Necrosis is a condition where in cellular death occurs thus the aim was to check the progression of the disease to bring about symptomatic relief in the subject.
- Initial treatment of *Udvardana* and *Kshara Basti* plays an important role in the reduction of stiffness at hip joint and improvement in the range of movements
- *Kshara Basti*, *Ksheera Basti* and *Shasthika Shali Pinda Sveda* helps in *Samprapti Vighatana* of *Asthigata Vata*.
- Use of *Tikta Rasatmaka* drugs plays a significant effect in the improvement of pathology.
- Conventional medicine system has a costlier health care approach in AVN without any assurance, but Ayurveda acts like the miracle in restoration of daily activities of the patient.

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