

AVASCULAR NECROSIS W.S.R UBHAYASHRITA VATARAKTA – A CASE STUDY

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ABSTRACT

Avascular necrosis / osteonecrosis usually occur when there is lack of blood supply to that particular area due to various reasons. A case reported here was diagnosed with Avascular Necrosis of Femoral head. Treatment was given at IPD level diagnosing it as *Ubhayashrita Vatarakta* with appropriate *Chikitsa Siddhanta*. This case report provides us a guideline that, a condition like Avascular necrosis can be treated on the basis of Ayurvedic treatment principles, thereby avoiding the Hip replacement procedures and hence improving the Bone health.

Keywords: *Avascular Necrosis, Ubhayashrita Vatarakta, Chikitsa Siddhanta.*

INTRODUCTION

Every human body part needs some nutrition. Without nutrition the body decays. Same happens in case of Avascular necrosis/osteonecrosis. Blood vessels represent supply network for the body. Once this supply chain is blocked, it leads to the lack of nutrition to that particular area. Due to this, there will be joint pain, difficulty in walking, painful joint movements, limping during walk.

Avascular necrosis / osteonecrosis is the death of bone tissue due to interruption of blood supply. Initially there may be no symptoms. Gradually joint pain may develop which limits the ability to move. Risk factors include bone fractures, joint dislocations, alcoholism and the use of high dose steroids⁽¹⁾. Femoral head is the most vulnerable site for the development of Avascular necrosis. Higher incidence of Avascular necrosis is present in cases with Acute lymphoblastic leukemia/lymphoma. Risk factors for

AVN are age & treatment with chemotherapy drugs. Chemotherapy patients are at a significant risk of developing AVN compared to transplant recipients. Corticosteroids are considered to be the most important etiological factor. Gluco – corticoid therapy is associated with adipocyte hypertrophy in the bone marrow which results in elevated intraosseous pressure followed by reduced intramedullary blood flow, marrow ischemia & ultimately leading to Necrosis⁽²⁾.

The patient who approached our hospital was treated for Acute lymphoblastic leukemia with Antibiotics, Chemotherapy, Radiotherapy and High dose Corticosteroids. This history reveals the possible role of corticosteroids and chemotherapy agents in the manifestation of AVN.

In Ayurveda, According to the verse;

**“kupitaanaam hi doshaanaam
sharireparidhavatam
yatra sanga khavaigunyascha
vyaadhistatropajayate ||⁽³⁾**

The *doshas* which have attained the *Prakupita avastha* due to the various *ahitha*, *abhishyanda*, *ahara viharas* (Unwholesome food & physical activities) which the patient had undergone during her treatment for ALL like chemotherapy, corticosteroids etc has caused the *Kha-vaigunya or Raktha marga avarodha* (Obstruction to the flow of blood) of the *Srotas* in *Vankshana sandhi* (Hip joint) and these *doshas* keeps circulating in the body. Once there is a favorable condition, these *prakupita doshas* gets lodged in the *khaivagunya sthana* (vitiated / Target site) causing *Dosha dushya sammurchana* and leading to the disease manifestations i.e. *Vyana vata gati* was obstructed at the level of hip joint, leading to further *dosha prakopa* (Aggravation of *doshas*) which in turn causes *dhatu kshaya* (depletion of tissues) resulting in various *Asthi, Sandhi, Majja gata lakshanas* (Bones & Joints deformities).

CASE PRESENTATION:

An Engineer, aged 25 years Female, reported to Kayachikitsa OPD of Ayurveda Mahavidyalaya and Hospital Hubli, with *Pradhana Vedana* of Pain in Right hip joint, difficulty in walking without support, Pain during standing, difficulty in sitting with crossed legs, displacement of the right hip laterally, Shortening of Right Lower limb, Loss of strength & heaviness in right limb Since 2 years.

VEDANA VRUTTANTA:

Patient had history of ALL (Acute lymphoblastic leukemia/ lymphoma) 5 years back for which she was treated with Chemotherapy for 9months followed by Radiotherapy for a week. Then she was kept on oral medications as a part of chemotherapy treatment for almost 2 years. After a gap of 6 months, Patient gradually started feeling pain in Right hip along with difficulty in flexing her leg.

She took treatment for the same with homeopathic system and did not feel much difference. Patient gradually started limping and later after 8months, was diagnosed with AVN (Avascular necrosis).

PURVA VYADHI VRUTTANTA: H/O Lymphoblastic Lymphoma of Right Cervical lymph node N/H/O HTN, DM or other systemic disease.

PURVA CHIKITSA VRUTTANTA:

Patient was treated for Lymphoma with Chemotherapy and Radiotherapy. And initially had taken treatment for AVN from contemporary science with Corticosteroids, Antibiotics, NSAID'S which gave temporary relief to the patient and she was advised to undergo Hip replacement. Patient not willing for the replacement approached our hospital for further management.

GENERAL EXAMINATION: Limping Gait is observed & other parameters are normal

SYSTEMIC EXAMINATION:

Respiratory system: NAD

Cardiovascular system: NAD

Gastrointestinal system: NAD

Locomotor system:

• **Inspection :**

- Limping gait is seen
- Blackish discoloration of the skin near right inguinal area
- Displacement of the right hip laterally
- Shortening of Right Lower limb
- No localized swelling

• **Palpation:**

- Slight tenderness elicited at the hip joint

• **Joint movements:**

- Painful & restricted movements [Flexion, extension, abduction, external rotation]

ASHTASTHANA PAREEKSHA:

- *Nadi* : 70/min
- *Mala* : *Prakruta* (1 time/day)
- *Mutra* : *Prakruta* (4-5times/day)
- *Jihwa* : *Alipta*
- *Shabda* : *Prakruta*

- *Sparsha* : *Sparsha asahatwa* on the affected area
- *Drk* : *Prakruta*
- *Akriti* : *Madhyama*

DASHAVIDHA PAREEKSHA

- *Prakriti* : *Vata kaphaja*
- *Vikruti* : *Dosha – Vata pradhana, madhya pitta, hina kapha*
Dushya – Rasa, Rakta, Mamsa, Meda, Asthi, Majja
Upadhatu – sira, snayu, kandara, Sandhi, twacha
- *Sara* : *Madhyama*
- *Samhanana* : *Madhyama*
- *Pramana* : *Madhyama*
- *Satmya* : *Madhyama*
- *Satva* : *Madhyama*
- *Aharashakti*: *Madhyama*
- *Vyayama shakti* : *Avara*
- *Vaya* : *Madhyama*

INVESTIGATIONS:

X-Ray Hip Joints:

- Erosion of right femoral head with mid superior dislocation involving right femur – s/o Avascular necrosis

MRI Hip Joints:

- Changes of Avascular necrosis involving the femoral heads bilaterally, slightly more advanced on the right side with subchondral fracture & early structural collapse.
- Bilateral hip joint effusion.
- Large areas of marrow edema involving femoral necks & intertrochanteric regions bilaterally.

SAMPRAPTI GHATAKAS:

- *Dosha*: *Vata pradhana, Pitta madhya & Hina kapha*
- *Dushya*: *Rasa, Rakta, Mamsa, Meda, Asthi, Majja*
- *Agni*: *Jatharagni, Dhatwagnimandya*
- *Aama*: *Jatharagni, Dhatwagnimandyajanya*
- *Srotas*: *Rasavaha, Raktavaha, Asthivaha, Majjavaha*
- *Srotodushti*: *Sanga*
- *Udbhava sthana*: *Aama pakwashaya*
- *Sanchara sthana*: *Adhakaya*
- *Vyakta sthana*: *Vakshana sandhi(hip joint)*
- *Rogamarga*: *Bahya & Madhyama*
- *Roga prakriti*: *Chirakari*

SADHYASADHYSATA: *Krcchrasadhya*

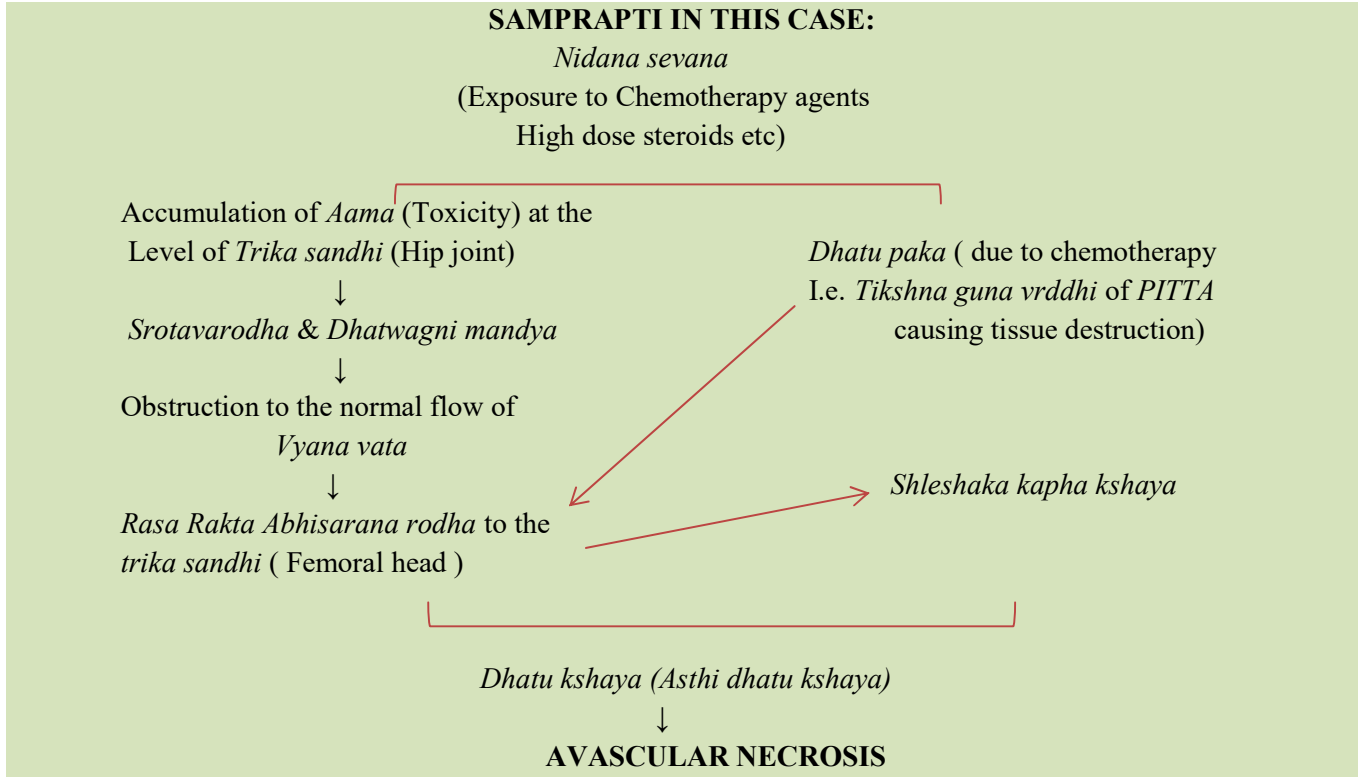
VYADHI VYAVACHEDAKA NIDANA:
Raktavrta vata, Raktagata vata, Asthyavrata vata, Asthimajjagata vata

VYADHI VINISCHAYA:

Ubhayashrita Vatarakta

ROGA PAREEKSHA:

- *Nidana*: Exposure to the chemotherapy agents, High dose Cortico – Steroids, Antibiotics used during the cancer treatment
- *Roopa*: *Vedana* (Pain in the Right hip), *Shyava Vaivarnyata* of *Twacha* (Blackish discoloration of skin) near the right hip, *Sphurana* (Throbbing sensation), *Stabdhata* (stiffness) in the joint, Cutting type of pain in bone & joint along with lateral Displacement of the Right hip.
- *Upashaya*: *Ushnopachara, Snehana*
- *Anupashaya*: *Diwaswapna* (Day sleep), *Atapa sevana* (Exposure to sun), *Ativyayama* (Excess Physical activity), *Atimaitihuna* (Excessive indulgence in Sex), *Katu, Ushna, Lavana, Amla, Abhishyandi ahara* (Hot & Spicy food items)



EXPLANATION OF UBHAYASHRITA VATARAKTA:

A chronic disease is defined as a condition which develops gradually through years because of the frequent & continuous exposure to the abnormal dietary, lifestyle or environmental factors. Initially there may be absence of diseased symptoms, but at later stages, complex manifestations involving one or more organ leading to derangement of bodily functions will takes place. *Vatarakta* is considered to be one such chronic illness. It is caused by vitiated *vata* and *rakta*. Vitiated *vata* obstructs the path of vitiated *rakta* initially and then gets vitiated by *rakta*, further leading to a condition called *Vatarakta* .

Acharya Charaka describes a condition called *Ubhayashrita vatarakta* where the symptoms of both *Utthana* & *Gambhira vatarakta* are seen along with other symptoms like Pain, Burning sensation, cutting type of pain, deformities in the body due to the aggravated *vata* traversing along *Sandhi*, *Asthi*, *Majja* and when this aggravated *Vata* circulates all

over the body it gives rise to *Khanjatva* & *Pangulyata*.⁽⁴⁾

As in this case, most of the symptoms of *Ubhayashrita vatarakta* are present along with the symptoms of *utthana* & *gambhira vatarakta*, the disease was diagnosed & treated considering *Ubhayashrita Vatarakta*.

CHIKITSA SIDDHANTA:

The condition being *Ubhayashrita Vatarakta*, the treatment modalities mentioned for both *Utthana* and *Gambhira vatarakta* were adopted.⁽⁵⁾

CHIKITSA GIVEN AT OUR HOSPITAL:

- *Abhyanga* with *Kottamchukadi* & *Murivenna taila* followed by *Sarvanga swedana* x 7 days
- *Ksheera basti* in *Kala basti* schedule (16 Days) with
 - *Ashwagandha*, *Yashtimadhu*, *Guduchi* as *Kashaya churna*
 - *Musta* for *Kalka*

- *Guggulutiktaka ghrta & Balaguduchyadi taila* as *Sneha dravya*
- *Ksheera*
- *Saindhava*
- *Kukkutada pinda sweda* x 7 days
- *Parisheka* with *Dashamoola kashaya* x 7 days

ORAL MEDICATIONS

- *Kokilaksha kashaya* (6) + *Balaguduchyadi kashaya* (7) - 10ml each TID (Before Food)
- Tab *Guggulutikta kashaya* (8) – 1 BD (Before Food)
- *Ashwagandha balalakshadi taila* (9) - (Local Application)
- Herbo- mineral combination of *Pravala bhasma, Ajasthi bhasma, Shankha bhasma, Kamadugha rasa, Kukkutanda twak bhasma, Amrta satva, Lakshadi churna, Shringa bhasma*

–
1 pinch BD with honey (After Food)

(The above mentioned herbo-mineral combination is mainly rich in calcium compound i.e. the *Sudha vargeeya dravya* in *Ayurveda* and will work at the level of *Asthi, Majja dhatu* thereby improving the *Asthi kshaya* condition).

RESULTS OF TREATMENT:

- ✓ Strength in right leg is improved.
- ✓ Pain is reduced.
- ✓ Able to walk without support.
- ✓ Range of movements improved.

DISCUSSION

Probable mode of action of *Sarvanga abhyanga* and *Swedana*:

As a *Sthanika chikitsa* & a specific treatment mentioned in *Uthana vatarakta*, *Abhyanga* was adopted for the treatment. In general, *Abhyanga* increases oxygenated blood supply to the muscles & organs and aid the drainage of venous blood, promoting the removal of waste products from the body. *Swedana* produces hyperthermia which improves the blood and lymphatic circulation & thereby improves local

tissue metabolism⁽¹⁰⁾. Probably in this case of AVN, *Abhyanga* and *Swedana* might help improve the circulation locally at the hip joint and even all over the body. *Kottamchukadi & Murivenna taila* were selected as both have *Shothagna* and *Shoolahara* properties.

Importance of *Ksheera basti* in *Vatarakta*:

Basti has always been a *Shreshta chikitsa* for any *Vatavyadhis*.

- a) *Acharya Charaka* mentions for any *Asthirogas, Panchakarma chikitsa* and *Basti* with *ksheera, ghrta & tikta dravyas* are indicated.⁽¹¹⁾ And in this case, the condition being AVN of femoral head *Ksheera basti* would be more beneficial.
- b) According to *Acharya Sushruta*, *Basti* has always been proven to be beneficial in *Vataja, Pittaja, Kaphaja, Raktaja, Samsargaja* and *Sannipataja* conditions.⁽¹²⁾
- c) *Acharya Charaka* has mentioned, *Ghrta yukta Ksheera basti* would be more beneficial in cases of *Vatarakta*. In the same verse there is a mention about *Vankshana sandhi* i.e. the Hip joint involvement in this case. Hence, *Ksheera basti* was selected for the Treatment.⁽¹³⁾

Probable Mode of Action of *Basti*:

The drugs used for the preparation like *Ashwagandha* (*Withania somnifera*), *Guduchi* (*Tinospora cordifolia*), *Musta* (*Cyperus rotundus*) having *Tikta rasa* helps in balancing the aggravated *Vata dosha*. The *Kashaya* thus prepared with *Ksheera* having *Snigdha & Madhura guna* helps to control *Vata & Pitta dosha* and acts as *Brmhana, Jeevaniya, Rasayana, Balya. Saindhava* due to its *sukshma guna* reaches the minute *srotases* of the body & helps to open fresh blood supply to the *Asthi, sandhi* etc. *Guggulutikta ghrta & Balaguduchyadi taila* used as *sneha* having *tikta rasa, ushna virya, madhura & katu vipaka* favours normal functioning of *Dhatvagni*, facilitating increased nutrition to the *Asthi dhatu*. *Ghrta* having *Vata – Pitta shamaka, Rakta prasadaka, Balya, Agnivardhaka, Madhura, Shita virya* properties, thereby pacifies *Vata*, improves *dhatu upachaya* and

acts as a *Rasayana* (www.jahm.in > viewFile > pdf_178) . Also vitamin D3 being a fat soluble vitamin easily gets absorbed from the blood & helps in bone formation. Thereby helps in *Samprapti vighatana* of *Asthi kshaya* and helps improving Avascular Necrosis.

Probable mode of action of *Kukkutanda pinda sweda*:

Ingredients used were *Nimbuka* (Citrus limon), *Kukkutanda*(boiled egg), *Methika* (Trigonella foenum-graecum), *Saindhava lavana* (Rock salt), *Agnimantha* (Cleodendrum phlomidis), *Eranda* (Ricinus communis), *Nirgundi patra* (Vitex negundo), *Sarshapa taila* (Mustard oil).

Kukkutanda sweda has *Snehana*, *Swedana* & *Brmhana* effect. It acts by increasing the temperature causing Vasodilation which improves the *Rasa – Rakta Paribhramana* all over the body and locally at the *necrosed site* thereby improving the blood circulation to the femoral head by enhancing the transformation of necessary nutrients & oxygen (*Dhatu poshana*) and by the absorption of protein and albumin present in the egg into the blood necessary for the Bone Health. Hence, improving the condition of *Asthi Dhatu kshaya*.

Probable mode of action of *Parisheka*:

Parisheka is mentioned in the treatment of *Utthana Vatarakta*. It reduces pain, inflammation, provides stability to the organs, improves circulation, reduces stiffness of joints, and hence was chosen for the treatment. *Dashamoola kashaya*⁽¹⁴⁾ was used for *Parisheka* as it contains, *Vilwa* (Aegle marmelos), *Kanthakari* (Solanum xanthocarpum), *Gokshura* (Tribulus terrestris) which has anti-inflammatory (*shothaghna*) and analgesic (*vedanashamaka*) properties, which can help reduce the spasm in muscle. *Agnimantha* (Cleodendrum phlomidis), *Shyonaka* (oroxylum indicum) and *Patala* (*Stereospermum suaveolens*) reduces the over excitation of nerves, by this way it relaxes the muscles and relieves the pain.

CONCLUSION

AVN is a vasculopathy and there is no such effective conservative treatment in other system of medicines. Ayurveda treats diseases at the cellular level i.e. at the level of *Agni, Dosha, Dhatu* etc. there by helps to improve the overall health of the body. Hence, in Avascular necrosis *Ayurvedic* treatment principles provide significant relief in *Samprapti vighatana* and *Dhatu poshana*.

REFERENCES

1. https://en.m.wikipedia.org/wiki/Avascular_necrosis
2. <https://www.nature.com/articles/2405032>
3. Sushruta Samhita by Kaviraj Ambikadatta Shastri , Published by Chaukhambha Sanskrit Sansthana, Varanasi – 2005, Sutra sthana 24 / 10
4. Charaka samhita by Siddhinanda Mishra, Harischandra Singh Kushwaha (ed.)Ayurveda Dipika's Ayushi Hindi Commentry, Published by Chaukamba Orientalia Varanasi – 2012 , Chikitsa sthana 29 / 19 – 23 .
5. Charaka samhita by Siddhinanda Mishra, Harischandra Singh Kushwaha (ed.)Ayurveda Dipika's Ayushi Hindi Commentry, Published by Chaukamba Orientalia Varanasi – 2012 , Chikitsa sthana 29 / 43 .
6. Bhaisajya Ratnavali of Govinda Dasji Bhisagratna commented upon by Vaidya shri Ambika datta shastri, English translation by Dr.Kanjiv Lochan, Chaukhambha Sanskrit sansthan, Varanasi - 2009, Vatarakta adhikara – 27/13
7. Sahasra yoga by Dr. K.Nishteshwar & Dr. R. Vidyanath , published by Chaukhambha Sanskrit series office , Varanasi - 2014 , Taila prakarana.
8. Sahasra yoga by Dr. K.Nishteshwar & Dr. R. Vidyanath , published by Chaukhambha Sanskrit series office , Varanasi - 2014 , Ghrta prakarana.
9. Sahasra yoga by Dr. K.Nishteshwar & Dr. R. Vidyanath , published by Chaukhambha Sanskrit series office , Varanasi. Edition : 2014 , Taila prakarana.
10. Vaishali Kuchewar. Management of Avascular Necrosis through Ayurveda – A Case study, J of Ayurveda and Hol Med (JAHM).2015;3(2):41-44
11. Charaka samhita by Siddhinanda Mishra, Harischandra Singh Kushwaha (ed.)Ayurveda

Dipika's Ayushi Hindi Commentry, Published by Chaukamba Orientalia Varanasi – 2012 , Sutra sthana 28 / 27.

12. Sushruta Samhita by Kaviraj Ambikadatta Shastri , Published by Chaukhambha Sanskrit Sansthana, Varanasi – 2005, Chikitsa sthana 35 / 6
13. Charaka samhita by Siddhinanda Mishra, Harischandra Singh Kushwaha (ed.)Ayurveda Dipika's Ayushi Hindi Commentry, Published by Chaukamba Orientalia Varanasi – 2012 , Chikitsa sthana 29 / 88.
14. Bhaisajya Ratnavali of Govinda Dasji Bhisagratna commented upon by Vaidya shri Ambika datta shastri, English translation by Dr.Kanjiv Lochan,

Chaukhambha Sanskrit sansthan, Varanasi - 2009,
Kasarogadhikara 13-15

Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Sayeda Nikhat & Prashanth A. S: Avascular Necrosis W.S.R Ubhayashrita Vatarakta – A Case Study. International Ayurvedic Medical Journal {online} 2018 {cited September, 2018} Available from: http://www.iamj.in/posts/images/upload/2199_2205.pdf