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Review Article

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Ayurveda Perspectives of Avascular Necrosis (AVN) and its Management through the Ancient Practices

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Abstract

Avascular necrosis (AVN) is a complex disease influenced by various factors, primarily affecting a younger demographic. If not treated properly it can lead to femoral head collapse and severe joint pain. The characteristics of Avascular necrosis can be correlated with *Asthimajjavruta vata* according to Ayurveda science. *Bhedo-Asthiparvanam*, *Sandhishula*, *Satata Ruk*, *Mamsabalakshaya* and *Asvapna* are major symptoms of disease. Ayurvedic medications and non-medicinal therapies of *Panchkarma* may help to halt further necrosis and revitalize bone health. *Guggulu*, *Giloy*, *Kantkari*, *Patol*, *Vasa*, *Babbula*, *Shunthi*, *Pippali*, *Maricha*, *Amalaki*, *Haritaki* and *Vibhitaki*, etc. are drugs which offers anti-inflammatory and pain-relieving effects in AVN. The *Agnikarma* as thermal cauterization can stimulate healing if heat applied to the skin or superficial tissues. The other therapies of *Panchkarma* reduce muscle tension and enhance relaxation thus contributing towards the therapeutic management of AVN.

Keywords: Ayurveda, Avascular Necrosis, AVN, *Asthimajjavruta Vata*, Pain

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1. Introduction

Avascular necrosis (AVN) is a condition when blood vessels get blocked which supplying bone. This usually affects people of middle age groups and associated with necrosis which involve condition of reduced blood flow. In severe case cell death may occurs especially bone marrow cells. It mainly appears in the long bones like femur, symptom of pain appears in later stage when condition progresses. Flattening of the joint surface also occurs when joint space gets reduced.

The clinical similarities of Avascular necrosis (AVN) can be compared to the Ayurvedic concept of "*Asthimajjagatavata*," which falls under the category of "*Vatavyadhis*". *Asthi dhatu* acts as the *Asharaya* for *Vata dosha*; similarly increase in *Vata dosha* can lead to *Asthi kshaya*. *Moolasthan* of *Majjavaha srotasa* is *Asthi*, particularly housing *Sandhi majja* in *Sthulaasthi*, *Majja*

provides strength and nourishment to the *Sharira*. *Asthi* coexists with *Majja* within *Asthi dhatu*. The *Vataprakopaka nidanas* disrupts *Asthi dhatu* causing *Majja* to reside within *Asthi* which finally results *Majjakshaya*. These disruptions of *Vata* and *Asthi* can lead to clinical manifestations like AVN, where compromised blood flow to bone causes bone cell death. This condition further results conditions like AVN, *Bhedo asthiparvanam*, *Sandhishula*, *Satataruk* and *Mamsabalakshaya*, etc. These symptoms reflect the impact of disrupted *Vata* and *Asthi dhatu* balance, leading to bone and muscle problems. (1-4)

Asthimajja gata vata according to Ayurveda related to bone and nerve tissue which mainly arises due to the *Aharaja*, *Vihara* and *Manasaja Nidana*, etc.

2. Nidana of *Asthimajjagata vata* (AVN)

❖ *Anashana*

- ❖ *Alpashana*
- ❖ *Katu and Kashayarasa pradhana ahara*
- ❖ *Ati Shrama*
- ❖ *Ati-Chinta & Shoka.*

These factors cause *Dhatukshya*, *Margavarana*, *Atipravarti* and accumulation of *Dosha*. *Vata* aggravation results in confluence of *Dosha* and tissues within *Asthi-Majja*, which finally leads to tissue depletion of bony structures. The primary symptoms of bone and nerve tissue depletion include following symptoms (4-6):

- *Saushirya*

- *Daurbalya*
- *Laghuta*
- *Alap Shukrata*
- *Vedna & Daha*

The imbalance in *Dhatvagni* related to *Asthi Dhatu* disrupts the formation and nourishment of bone tissue which further alter process of formation of *Majja*. The symptoms associated with progressive stage of *Asthimajjagata vata* (AVN) is depicted in **Figure 1**. *Aswapna*, vision problems, dizziness, hollow bones and bone fragility, etc. also arises with untreated state of AVN. (6-8)



Figure 1. Symptoms associated with progressive stage of *Asthimajjagata vata* (AVN)

3. Treatment

Udvardana and *Vashpa Swedana* help to eliminate *Srotorodha* and promote *Sthiri karaṇa* of *Angas*. *Rukshana* can be employed to remove *Avarana* caused by *Kapha* which improves efficacy of subsequent treatments by improving bioavailability of drugs. *Mrudu Shodhana* is recommended for *Vatadosha* and *Brimhana* therapy also suggested for nourishment purpose. *Patra Pinda Sweda* offers *Sandhichestakara*, *Srotosuddhikara* and *Kapha-Vatanirodhana* properties. This treatment can reduce pain, stiffness and provides analgesic effects by alleviating *Vata Dosha*. *Yoga Basti* can be employed due to its *Vatashamana* properties. Oil and *Ghruta* used in *Anuvasana Basti* mainly indicated for *Asthi Aashrita Vikara* since its offers *Tikta Siddha*. The oil's properties such as *Snigdha* and *Guru* help to pacify *Vata Dosha*.

Raktavaha Srotorodha becomes the primary cause of depletion of *Asthi Dhatu* therefore *Manjishthadi Ksheera Basti* advocated for addressing issue of *Rakta Dushti*. The *Madhura* and *Snigdha* properties of *Basti Dravyas* help in controlling *Vata Dosha* and nourishes *Rasadi Dhatu*. *Manjishthadi Kwatha* can also be used for its *Raktaprasadaka* and *Tridosha* balancing properties. (5-7)

4. Drugs/Formulation for AVN:

- ✓ ***Panchtikta Ghrut Guggulu*:** This formulation offering anti-inflammatory and detoxifying properties helps in purifying blood.
- ✓ ***Abha Guggulu*:** This drug relieves pain in muscles, ligaments, bones and joints, also imparts anti-inflammatory property.

- ✓ ***Rasarajeswar Rasa*:** This formulation enhances muscle and bone strength, serves as an pain reliever and anti-inflammatory agents.
- ✓ ***Rasnasaptak Kwatha*:** This drug is considered effective in reducing joint pain, stiffness and swelling, etc.
- ✓ ***Brihat Vatachintamani Rasa*:** This formulation targets *Vata dosha*, providing relief from pain and stiffness.

Agnikarma, as thermal cauterization or heat therapy plays a limited role in AVN due to the nature of the condition and the areas affected. AVN primarily affects the bones, since *Agnikarma* involves applying heat to superficial tissues; its direct application to the affected bone tissue is not feasible therefore less effective. However, *Agnikarma* may not directly address AVN, it can be used as an adjunct therapy for managing pain associated with the condition. Stimulating nerve endings and promoting the release of endorphins, heat therapy can provide temporary relief from pain and discomfort. *Agnikarma* may be considered as a complementary therapy alongside other treatments for AVN. It reduces muscle tension, enhance relaxation and have some benefits in managing pain.

Pathya

- a) *Nidana Parivarjana*
- b) *Ahara*:
 - *Snigdha Ahara*
 - *Madhur Ahara*

- *Guru Ahara*

c) *Vihara*:

- Avoiding staying awake at night
- Moderate physical exertion
- Avoiding suppression of natural urges

d) *Apathya*:

- *Anupathya Parivarjana*
- *Ahara*:
- *Ruksha*
- *Amla*
- *Tikshna*

e) *Vihara*:

- Overeating or fasting for prolonged periods
- Excessive physical exertion

5. Conclusion

Avascular necrosis (AVN) can be correlated to the *Asthimajagata vata* which is a disorder deeply rooted in tissue imbalance and considered as *Asadhya Vyadhi*. However, if it arise *Chirasamutthitha*, then it can become *Sadhya*. Avascular necrosis is influenced by various factors, including *Anashana*, *Alpashana*, *Katu* and *Kashayarasa pradhana ahara* and *Ati-Chinta & Shoka*, etc. The features of AVN include *Bhedo-Asthiparvanam* and *Sandhishula*, etc. Ayurvedic treatments and non-medicinal *Panchkarma* therapies may prevent further necrosis and improve bone health. Medications like *Guggulu*, *Giloy* and *Kantkari*, etc. offers anti-inflammatory and pain-relieving effects. *Panchkarma* therapies can also ease muscle tension and promote relaxation, thus helps in the AVN's therapeutic management.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

References

1. Longo D, Fauci A, Kasper D, Hauser S, Jameson J, Loscalzo J. Hand book of Harrison's Principles of General Medicine. 18th ed. United States: McGraw Hill Professional; 2011. p. 1098.
2. Solanki B, Jena S, Bhatted S, Prasanth D. A conceptual study on avascular necrosis of femoral head: An Ayurveda perspective and management. Int J Health Sci Res 2020; 10:105-12.
3. Acharya YT, Acharya NR. Susruta Samhita of Susruta. Reprint ed. Varanasi: Chaukhambha Orientalia; 2013. p. 67.
4. Mont MA, Hungerford DS. Nontraumatic avascular necrosis of the femoral head. J Bone Joint Surg Am 1995; 77: 459-74.
5. Agnivesha, Charakasamhita, Ayurveda dipika - commentary of Chakrapanidatta and Nirantarapada - vyakhya by Jejjata vol.2 prolougue by Prof. R. H. Singh, Choukambhasubharatiprakashan, Varanasi, edition, 2017.
6. Joshi A, Mehta CS, Dave AR, Shukla VD. Clinical effect of Nirgundi Patra pinda sweda and Ashwagandhadi Guggulu Yoga in the management of Sandhigata Vata (Osteoarthritis). Ayu. 2011; 32(2): 207-212.
7. Govind Kumar Prajapati et al: Ayurveda Management Of Asthimajagata Vata W.S.R. To Avascular Necrosis Of Femoral Head – A Case Study. International Ayurvedic Medical Journal, 2022, 1376.
8. Kabra D, Jena S, Bhatted SK et.al. Avascular necrosis of femoral head - ayurveda management: a case study. Int J Health Sci Res. 2020; 10(11):22-27.