

Role of Jalaukavacharana in Janu Sandhigata Vata W.S.R. to Osteoarthritis (Knee Joint)

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ABSTRACT

Osteoarthritis, commonly known as degenerative joint disease, is a condition in which the diarthrodial joint fails. It is the most common joint disease of humans characterized by breakdown of joint cartilage. It is produced by mechanical stress on the joints and manifests as joint pain, swelling, stiffness, and other symptoms. Among elderly, knee osteoarthritis is the leading cause of chronic disability. When compared to males, the prevalence of this condition rises with age and is higher in females (25%) than in males (16%). In Allopathy, huge range of treatment such as Analgesics, Anti-inflammatory, Muscle relaxant, Calcium and Vitamin-D Supplements and Steroids along with Physiotherapy are available but, have limited prognosis due to untoward effects after prolong use. This leaves a substantial space for Ayurvedic treatment which can cope-up with the sign and symptom of degenerative Knee-osteoarthritis. This disease can be co-related with Janu Sandhigata Vata due to resemblance in sign and symptoms of Sandhigata Vata such as Sandhi Shula, Shotha, Stambha, etc. at the affected joints. Ayurveda offers various treatment alternatives for Sandhigata Vata such as panchkarma modalities Snehana, Swedana, Basti, Sthaniklepa, Raktamokshan, Agnikarma etc. Adjuvant to Vatakaphashamak (Vata-Kapha pacifier) and Dhatuwardhan herbal medicines for palliative care. Further, in Sushruta Samhita, bloodletting by means of Leech has been advocated in the management of all inflammatory painful conditions, to relieve pain and to break the pathogenesis of disease.

Keywords: Sandhigata vata; Pain; Jalaukaavacharan; Osteoarthritis; Knee joint; Pathogenesis

INTRODUCTION

Sandhigata Vata is the one of the most common Vatavyadhi which mainly occurs in Varidhavastha due to Dhatukashya and other Vataprakpoka Nidan. Main symptoms are Vatapurandritisparsh (swelling), Prasaranakunchana Vedana (pain on movement), Sandhishoola (pain in joint), Atopa (cracking sound) which limits daily life activities. In modern times, it has been linked to osteoarthritis [1-3]. Osteoarthritis is a degenerative disorder affecting the joints of the body. In Osteoarthritis, pain, swelling, restricted movements of joints are common clinical features. Knee joint is the most commonly

affected weight bearing joint Knee osteoarthritis affects twice as many women as it does males. It mostly affects women over the age of 50 who are going through menopause. Also in women, osteoarthritis tends to have a stronger association with obesity and is frequently bilateral. In men, it tends to be related to aging prior trauma or injury and is often unilateral. For some people, pain is their primary concern, while for others; trouble walking is their primary concern.

Human body is made of Panchmahabhuta. As all their attributes are up present in the rakta also, the attributes being fleshy odour, fluidity, redness, movement and lightness represents

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Prithvi, Jala, Agni, Vaayu, and Akasha respectively. Rakta is said to be the body's mula or root, and it plays a significant role in providing "Jivan" to the body. Rakta, as vital as Jiva and one of the Prayatana, requires special attention and protection. Shudhdarakta is said to be responsible for Bala, Vara, Sukha, and Ayuhya, according to Acharya Charaka. This is all of importance about rakta in human body. So if rakta gets vitiated by any hetu, it can cause Raktapradoshajavyadhi. The therapeutic intervention suggested in samhitas is Raktamokshana. It is regarded as one of the shodhana methods. The means employed for Raktamokshana vary depending on a variety of criteria. Blood should be let out by Shinga, Jalauka, and Alabu, correspondingly, in the case of Raktaduhi by Vata, Pitta, and Kaphadosha. Raktamokshana is mostly performed nowadays by Jalaukaawacharaa and Siravyadha. The Raktamokshana has been discussed in depth by Acharya Sushruta, Vagbhata. We find separate chapters of Raktamokshana in Sushruta Samhita and Ashtanga Sangraha. Among various methods of Raktamokshana, Jalaukaawacharaa is most convenient method. In ayurvedic text Jalaukaawacharaa is advised in many diseases [4].

They are of two types Savisha (Poisonous), Nirvisha (Nonpoisonous). Savisha are born from the urine, excrete and putrefied (decayed) dead bodies of poisonous fish, insects in dirty water. Nirvisha have large body. They are strong, they drink blood quickly. They are voracious. They are born from putrefied (decayed), Padma (Lotus), Utpala (white lotus), Nallina (slight red lotus), Kumuda (lily), Sayandhika (highly fragrant lily), Kuvalaya (red lily), Pundanke (very white lotus), Saivata (algae). They live in clean water. These live in places where more amount of fragrant water is found. They do not feed on dirty foods. There are no direct references to samprapti of januandhigatavata in Ayurvedic literature. For a better understanding of the Samprapti of Januandhigatavata, we can look at the general Samprapti of Sandhivata-Vatavyadhi. As indicated by Acharya Charaka, the Samprapti-Nidana sevana aggravates Vata, and Prakupita Vata accumulates in Riktasrotas, causing generalized and localized diseases. As the pathogenesis proceeds, the patient may acquire clinical indications of Janu Sandhigata Vata (Osteoarthritis). When vitiated Vata Dosha forms Sthana Samsraya in the Janusandhi Knee (joint), it produces inflammation in the knee joints, resulting in discomfort, dislocation, and loss of function [5].

Samprapti of janu sandhigata vata

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Pathogenesis of Janu Sandhigata Vata	
Nidana	Vata Prakopaka Nidana
Dosha	Vata Vyanavayu, Shleshaka Kapha
Dushya	Asthi, Majja, Meda
Srotas	Asthivaha, Majjavaha /Medovaha
Srotodusti	Sanga
Agni	Mandagni
Dosha marga	Marmasthi Sandhi
Roga marga	Madhyama
Udbhavasthana	Pakvashaya
Vyaktasthana	Asthi-Janusandhi

Table 1: Showing pathogenesis (Samprapti Ghataka) of Janu Sandhigata Vata.

Treatment

In Ayurveda, Janusandhigatavata therapy attempts to balance the Shleshaka Kapha Dosha and diminish the Vata Dosha so that the joint spaces are adequately lubricated for unrestricted knee joint mobility. Many techniques have been listed, including Snehana, Swedana, Mridu Samshodhana, Basti, Vatahara Aushadha Prayoga, Ahara, and Vihara. Several books describe Upanaha, Agnikarma, Bandhana, Mardana, and other procedures. Internal medications include various Ghritas, Guggulu, and Shallaki formulations by Nikose, et al. [7]. The following techniques were utilized exclusively as primary therapy in the treatment of the disease:

Reduction of weight: Obesity is known to be a contributing factor to knee Osteoarthritis (OA). Excess weight puts a strain on the joint, which can lead to injury. Weight loss of 11 pounds reduces the risk of osteoarthritis by 50%. In overweight people, a 5% weight loss results in an 18% improvement in total function. As a result, weight loss is critical in the treatment of osteoarthritis. After determining the Dosha and Dushyas, the procedures Udwartana and Lekhana Basti should be carried out with caution.

Basti: Matra Basti and Tikta Ksheera Basti, significantly reduced pain and other issues. This therapy has been the subject of numerous investigations.

Leech therapy: The use of leeches as a symptomatic therapy for osteoarthritis of the knee is regaining popularity. Leech treatment is equally effective in current treatment of pain.

Rasayana: Dhatukshya causes Janusandhigatavata to occur more frequently in Vriddhavastha. Dhatus is nourished and Dhatukshaya is conquered with the help of a Rasayana medication. As a result, it should be utilized to treat Sandhigata Vata.

Agni karma: In Sandhigata Vata, agnikarma is a nonpharmacological, parasurgical treatment for pain relief (OA of knee joint).

Upanaha sweda: Sandhigata Vata (OA of the knee joint) is a kind of Vatavyadhi, and one of the best therapies is Upanaha sweda. The Vatavyadhihara Upanaha is much beneficial in the patient of Sandhigata Vata (OA knee joint) by relieving the local pain as it contains all Ushnaviryatmak, Tikshna, Vataghna, Vedanasthapana and Shothahara Dravyas.

Physiotherapy: OA is more common in the elderly. Knee OA treatments such as shortwave diathermy, ultrasound, and hot packs can be used wisely. Leech therapy alleviates discomfort in people with knee osteoarthritis and is as effective as TENS therapy in treating the condition.

Pathyapathy: Due to Vata Prakopaka Ahara Vihara, Sleshaka Kapha Kshaya and Vata Prakopa, Dhatu Kshaya, Sthoulya, and Vardhaka have a vital role to play in Janusandhigata Vata manifestation. Vagbhata calls it a Vatavyadhi, one of the Ashta Maharoga. Godhuma (Wheat), Masha (Blackgram), Raktashali (Redrice), Draksha (Grapes), Badara (Dry jujube), Madhuka (Sweet), Ushnajala (Hot water), Shritashita Jala are some of the diets that are suggested (Hot and cold water). Atapa Sevana is the Pathya Viharas (Sitting in sunlight). Yava (Barley), Chanaka, Gadarbha Dugdha, Sheetajala (Cold Water), Naveena Madya (New Fermentation), Shushka Mamsa (Dry Meat), Jambu are all recommended by Apathya for Sandhigata Vata. Chinta (Tension), Ratrijagarana (Waking late at night), Vega Sandharana (Holding natural desires), and Chankramana are some of the Apathya Vihara listed in Sandhigata Vata (Walking).

Mechanism of action of leech therapy

The most painful portion surrounding the knee joint is treated with Nirvish Jalauka (Nonpoisonous Leeches-*Hirudo medicinalis*). According to the 'gate control theory,' the overwhelming sensory stimulus supplied by the pain and burning sensation of a Leech bite can help to alleviate the patient's symptoms. Hirudin slows blood coagulation by binding to thrombin, according to the research of the components of Medicinal Leech saliva. Calin prevents platelet aggregation caused by collagen. Fibrin is dissolved by destabilase. Hirustasin inhibits kallikrein, trypsin, and neutrophilic cathepsin G, while bdelin inhibits trypsin and functions as an anti-inflammatory; Eglin has anti-inflammatory properties and inhibits the function of cathepsin G, also known as carboxypeptidase. Histamine like chemical, acetylcholine serves as a vasodilator, and anaesthetic substance induces anaesthesia at the bite site [8].

Aim: The role of Jalaukaavacharana in Janusandhigata Vata.

Objective: To observe the function of Jalaukavacharana in Janu Sandhigata Vata. To study the different modes of management of Janu Sandhigata Vata.

MATERIALS AND METHODS

This article contains an organized literature search of PubMed, Google Scholar and FDA database. Research work from different articles and thesis which shows the role of

Jalaukavacharana in Janu Sandhigata Vata. Because this is a research study, all relevant content is searched for disease and treatment aspects in Ayurvedic classics like the Samhitagranthas, Sangrahas, Nighantus, and other books, which is then considered and analyzed to arrive at a comprehensive concept in the management of Janu Sandhigata Vata. Leech therapy provided quick symptomatic alleviation in pain and swelling in this clinical case study, and the patient was pleased with the results. Tenderness and restricted joint movements were also eased gradually but totally with this unique Ayurvedic treatment, as were symptoms such as crepitation and stiffness in joints. Furthermore, the observation demonstrated that combining Leech therapy (locally) with Ashwagandha-Ghanvati, Yograj Guggulu, and Gandharv Haritaki-powder (internally) in the prescribed dose offered substantial alleviation in the management of Janu Sandhigat Vata symptoms (knee-osteo arthritis). Given the rising cost of healthcare for knee osteoarthritis and the risks of long-term use of NSAIDs, steroids, and analgesics in modern medicine, this traditional alternative treatment should be tested in larger randomised controlled trials with longer follow-up periods to establish and prove its efficacy in the treatment of Janu Sandhigat Vata. On the basis of this, it can be concluded that Janudhara was advantageous in the treatment of Sandhigata-Vata. Rakta serves as a sthiti for the human body, according to the Utpatti-Sthiti-Laya (Generation-Operation-Destruction) principle. "Raktam Jivam ITI Sthiti," says the author. When the rakta is vitiated, the sthiti is destructed as well, resulting in Vikruti. When the dushtarakta leaves the body, sthiti re-establishes itself. And Rakta is Prakrut karma in and of itself. As a result, in such Raktdushtijanyavikaras, Raktmokshana is most effective. Leech therapy provided quick symptomatic alleviation in pain and swelling in this clinical case study, and the patient was pleased with the results. Tenderness and restricted joint movements were also eased gradually but totally with this unique Ayurvedic treatment, as were symptoms such as crepitation and stiffness in joints. Furthermore, the observation demonstrated that combining Leech Therapy (locally) with Ashwagandha-Ghanvati, Yograj Guggulu, and Gandharv Haritaki-powder (internally) in the prescribed dose offered substantial alleviation in the management of Janu Sandhigat Vata symptoms (knee-osteo arthritis). Given the rising cost of healthcare for knee osteoarthritis and the risks of long-term use of NSAIDs, steroids, and analgesics in modern medicine, this traditional alternative treatment should be verified in higher randomised controlled trials with longer follow-up periods to establish and prove its efficacy in the treatment of Janu Sandhigat Vata with special reference to Knee-osteo arthritis. Leech therapy could be an effective way to reduce pain associated with osteoarthritis of the knee joint quickly. Many acute and chronic illnesses benefit from Jalaukavacharan (leech therapy), which has no negative side effects. As a result, more time is required for research into this therapy in order to verify its efficacy in a scientific manner. This conceptual study could aid researchers in their investigations into leech therapy [9,10].

RESULTS AND DISCUSSION

The therapeutic assessment was based on a broad assessment of the therapy's effectiveness. The following day, the pain and swelling in the knee joint subsided, and the effect continued until the end of the treatment. However, it wasn't until the end of treatment that the patient felt completely relieved (i.e. day 30). Tenderness around the knee joint and knee joint discomfort are two further signs. The movements were also gradually reduced to Grade 0 by the conclusion of treatment. In addition, the therapy gave minor relief for joint stiffness and crepitation. Furthermore, the current case study found that adjuvants Ashwagandha Ghanvati, Yograj Guggulu, and Gandharv-Haritaki powder (locally) with Leech Therapy (intravenously) was helpful and beneficial in the treatment of Janu Sandhigata Vata, especially in the case of knee osteoarthritis.

Osteoarthritis can affect any joint, including the weight-bearing joints of the knees, hips, lower spine, as well as lumbar spondylosis, which is osteoarthritis of the intervertebral joints. Despite the fact that Sandhigata Vata is not a fatal illness, it severely restricts the patient's mobility and renders him or her dependent on others. According to a principle of Utpatti-Sthiti-Laya (Generation-Operation-Destruction), Rakta plays role of sthiti for human body. "Raktam Jivam ITI Sthiti". When rakta gets vitiated, sthiti also gets destructed and it is called as Vikruti. When this dushtarakta gets out from body, sthiti getting again established and Raktaplayesprakrut karma of itself. As a result, in such Raktdushtijanyavikaras, Raktmokshana is most effective. Osteoarthritis becomes more symptomatic and radiographic as people become older. In girls, the age-related rise is more pronounced. Girls with more symptoms, a larger involvement, and a higher prevalence of knee pain have a more severe case of the illness. When it came to occupation, extra physical interest in the individual and household activities in girls, there was a link between the onset and worsening of this illness. Physical elements involved in employment, according to epidemiological investigations, are important determinants of the disease.

CONCLUSION

According to a principle of Utpatti-Sthiti-Laya (Generation-Operation-Destruction), Rakta plays role of sthiti for human body. "Raktam Jivam ITI Sthiti". When rakta gets vitiated, sthiti also gets destructed and it is called as Vikruti. When this dushtarakta gets out from body, sthiti getting again established and Raktaplayes Prakrut Karma of itself. Therefore, Jalaukavacharana is most effective in such Raktdushtijanyavikaras. After the overall assessment of the procedure for their efficacy on Janu Sandhigata Vata, there has shown in edge in Jalaukavacharana method for overall other methods of management. There were no complications and adverse reactions reported in the above trial validating the safety of methods. Hence these procedures are found to be very much

safe, simple, cost-effective, easily administered in the patients of Janu Sandhigata Vata. The energetic chemicals in leech saliva, as well as their close release (inside the synovial fluid), are worth investigating further. No other pharmacologic drug now has such long-term effects following a single local dosing.

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More research into the anti-inflammatory substances found in leech saliva should help to improve the effectiveness of recently developed strong materials for treating osteoarthritis. On the premise of the above pilot take a look at us will finish that leech remedy is useful in discount of pain, tenderness, stiffness, crepitus, and swelling with inside the sufferers of osteoarthritis. With the assist of leech remedy we will enhance the first-class of existence of the arthritis sufferers. We can keep away from the risks of lengthen use of analgesic, anti-inflammatory pills with the aid of using the usage of leech remedy.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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