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Management of Osteoarthritis by Agnikarma: A Case study

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Abstract:

Most common cause of knee joint pain is osteoarthritis specially in old age patients. It is a degenerative condition which cause the disability in old age people. Even though Osteoarthritis is considered as a non-inflammatory arthritis, increasing evidence has shown that inflammation tends to occur as agents such as cytokines and metalloproteinases are released into the joint. It is characterised by growth of osteophytes at the articular ends, which make movements limited and painful. Patients present with pain and stiffness in joints, worsened activity and relieved by rest. Nearest correlation of this disease is janugata sandhivata, in which there is a manifestation of vitiation in vata dosha along with anubandha of Kapha dosha. Agnikarma can be considered as the best line of management of this disease as it mitigates both vata and kapha dosha. This paper is an effort to show the usefulness of Agnikarma in osteoarthritis. For this, the paper includes a case study of 68-year-old female patient who came with complaints of pain in both knees with having difficulty in walking, standing, not able to climb stairs, felt stiffness in joint after sitting and standing for some time for 5 years. Patient had taken various treatment including allopathic, physiotherapy treatments but got only temporary relief. Agnikarma was planned for her management. And in 3 sittings of 7 days interval she had shown marked improvement in her symptoms.

Keywords: Osteoarthritis, janugata sandhivata, Agnikarma

Introduction:

One of degenerative joint disease is osteoarthritis (OA). The multifaceted aetiology is yet unclear. It is commonly believed to be age-related joint wear and tear. There are two recognized forms of OA: Primary and Secondary.

Primary OA: This de novo condition affects a joint. It mainly affects the weight-bearing joints (hip and knee) in elderly age. The thumb's trapezio-metacarpal joint and the fingers' distal interphalangeal joints are also impacted in a generalized form. Compared to secondary OA, primary OA is more prevalent.

Secondary OA: In this kind, the joint degenerates as a result of an underlying main illness, frequently years later. After adolescence, it can happen at any age, and it usually happens in the hip. The following are risk factors: (i) congenital maldevelopment of a joint; (ii) abnormalities of the joint surfaces due to prior trauma; (iii) previous disease resulting in a damaged articular surface; (iv) internal knee derangement, such as a loose body; (v) mal-alignment (bow legs, etc.); and (vi) obesity and excess weight.[1]

Osteoarthritis is a condition characterized by the progressive loss of articular cartilage and remodelling of the underlying bones. It is a disease of old age, characterised by growth of osteophytes at the articular ends, which make movements limited and painful. Patients present with pain and stiffness in joints, worsened activity and relieved by rest. The knee joint is the largest and most complex joint of the body. It is formed by fusion of lateral femorotibial, medial femorotibial and femoro patellar joints. It is a compound synovial joint, incorporating two condylar joints between condyles of femur and tibia and one saddle joint between the femur and the patella. The knee is supported by 11 ligaments. The capsule of knee joint is lined by synovial membrane and has around 13 bursae.[2] Osteoarthritis generally considered as a degenerative joint disease is noted as prime cause of disability in the old age population. Knee joint is one of the major sites affected by this condition. In Indian population, knee osteoarthritis is the most common form of arthritis. Osteoarthritis primarily affects the articular cartilages of the synovial joints, and Pathophysiologic changes occur in the synovial fluid, subchondral bone, the overlying joint capsule and other joint tissues. Even though Osteoarthritis is considered as a non-inflammatory arthritis, increasing evidence has shown that inflammation tends to occur as agents such as cytokines and metalloproteinases are released into the joint. These changes result in hyaline articular cartilage loss, accompanied by increasing thickness and sclerosis of the subchondral bony plate. There will be outgrowth of osteophytes at the joint margin, also stretching of the articular capsule, mild synovitis in many affected joints, and weakness of muscles bridging the joint. In knee joints, meniscal degeneration is part of the disease. Radiological findings which can be observed are focal narrowing of joint space, presence of marginal osteophytes, with varying degrees of subchondral sclerosis, bone 'cysts', osteochondral 'loose' bodies, and eventually bone attrition and deformity.[3]

Agnikarma is an ancient Ayurvedic paramedical tool for pain management which was documented in classical texts about 3000 years ago. Among its counterparts (kshar (alkali) and jaloka (leech)), Agnikarma is said to be most efficient by Acharya Sushruta.[4] It is indicated by Acharya Sushruta that, in vayu prakopa of asthi and sandhi and sandhigat roga one should do Agnikarma.[5] Agnikarma is a thermal, minimally invasive Para

surgical procedure for pain of different origins. It is simple, safe, cost effective, drugless and day-care procedure.[6] In this article a case study of osteoarthritis has been done to see the effects of Agnikarma.

Case study description: A 68 years old lady visited Shalya Tantra outpatient dept. with complaints of pain in both knees. Patient was having difficulty in walking, standing, not able to climb stairs, felt stiffness in joint after sitting and standing for sometimes for 5 years. Patient had taken various treatment including allopathic, physiotherapy treatments but got only temporary relief. No history of trauma and accident was there. Swelling was present on both knees. X-Ray of B/L knee joint showed joint space reduction and joint alignment was not proper. The patient was diagnosed with osteoarthritis (janugata sandhi vat). This case was planned with the aim to evaluate the effect of Agnikarma. Informed consent was obtained from the patient.

Clinical findings: Chief complaints of the patient were:

1. Severe pain and tenderness in both knees.

2. Patient was unable to stand, climb stairs and difficulty in walking.

3. Swelling in both knees.

History of present illness: Patient was asymptomatic before 5 years. Then gradually she was having pain and other presenting complaints in B/L knee joint. She had taken treatment for the same many times from various allopathic and physiotherapists but got only temporary relief. The condition is getting progressing day by day, and as age is progressing the symptoms are getting more worse. So, the patient came to GBAC&H Shalya tantra O.P.D for her management.

History of past illness:

No any specific surgical history and history of trauma.

No history of hypertension, Diabetes or any other Chronic illness.

General examination: This includes Ashtavidha pariksha

Nadi	75/M Regular, Volume Good	Aakruti	Madhyam
Mala	Samyak	Prakriti	Vataj Kapha
Mutra	Samyak	Weight	80 Kg
Jivha	Sama	BP	120/85mmhg
Shabda	Sapsha	Temp	97.6F
Sparsha	Samshitoshna	Gait	Antalgic Gait
Druka	Sapshta		

Investigation: X-Rays of both knee joint (AP &L) showed the improper alignment and reduced joint space.

Assessment Criteria:

Table 1: Grades of pain

No pain	0
Mild pain (exaggerated by movement and subside by rest)	1
Moderate pain (not relieved by rest but not disturbing sleep or other routine activities)	2
Severe pain (disturbing sleep and other routine activities and relieved by analgesic)	3

Table 2: Grades of tenderness

No tenderness	0
Mild tenderness (patient complains of pain on touch with mild pressure)	1
Moderate tenderness (patient complains of pain and on touching, withdraws knee joint)	2
Severe tenderness (patient does not allow to touch the knee joint)	3

Table 3: Grades of swelling

Rarely	0
Occasionally	1
Frequently	2
Almost constant	3

Table 4: Difficulty and pain while walking and standing

No pain	0
Mild pain present but no difficulty in walking and standing	1
Slight difficulty in walking and standing	2
Much difficulty in walking and standing	3

Table 5: Stiffness

No stiffness	0
Mild stiffness	1
Moderate stiffness	2
Severe stiffness	3

Therapeutic Intervention:

The procedure was performed in 3 stages as purva karma (preparatory procedure), pradhan karma (main procedure) and paschata karma as mentioned by Acharya Sushruta. Tamra shalaka was used for this purpose. Bindu (point) type of agnikarma was performed.

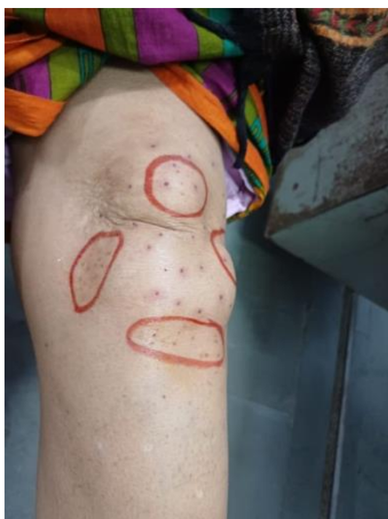
Purva karma (preparatory procedure): Snigdha and picchila anna-pana was given prior to the procedure. The site was washed with luke warm water, wiped with a dry swab. Tamra Shalaka was heated up to red hot and Ghritakumari (aloe Vera) pulp already kept ready for dressing.

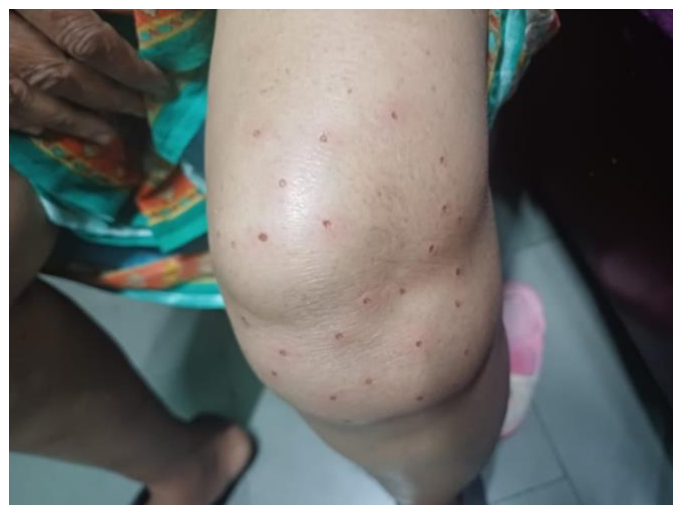
Pradhana karma (main procedure): In this procedure, sitting position was adopted. Patient felt comfortable in sitting position, so it was preferred. Agnikarma was done with 8- 10 bindu at maximum tender sites. After Agnikarma, fresh Ghritakumari pulp was applied on Dagdha site to relieve burning pain.

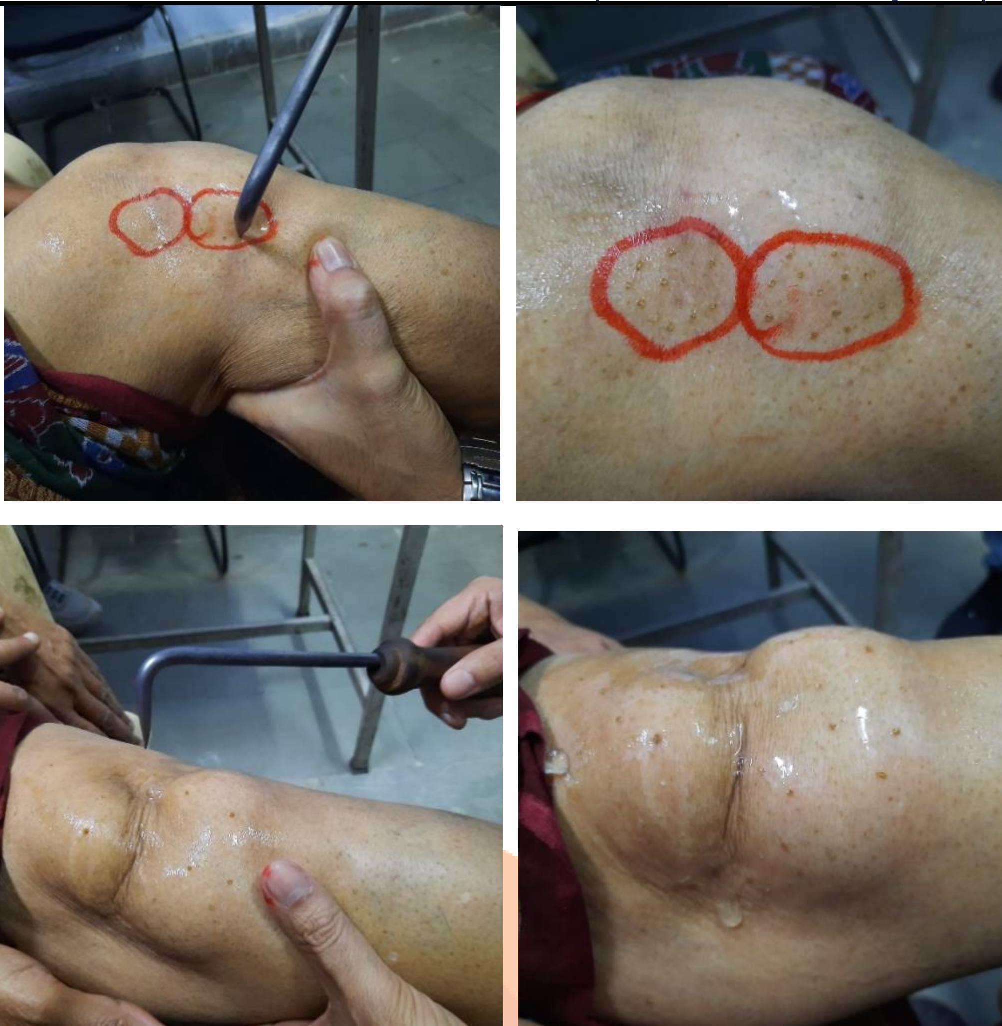
Paschat karma: After wiping Ghritakumari, honey and ghee was applied on the dagdha site. Patient was observed for 30 mins and advised pathyapathya until the healing of vrana. Patient was strictly advised not to allow water contact at the site for at least 24 hours.

Outcome: After 3 sittings of Agnikarma, in 7 days interval; there is an improvement seen in the symptoms of pain, tenderness, swelling, difficulty in movement and stiffness.

Examination	Before treatment	After treatment
Pain	3	1
Tenderness	2	0
Difficulty and pain while walking and standing	3	1
Swelling	3	0
Stiffness	2	1







Discussion: Patient had marked relief in pain, tenderness, swelling, stiffness, and patient was able to climb stairs. There was minimal pain during long standing and walking. But no any annoying effects of therapy were seen. Osteoarthritis we closely relate with sandhigat vata. Which is caused by vitiated vata dosha along with anubandha of Kapha dosha. Agnikarma can be considered as the best line of management of this disease because it mitigates both vata and kapha dosha. The ushna, teekshana, sookshama and ashukari guna of Agni are just opposite to the guna of vata and kapha. Due to the Vata Vriddhi and Anubandha of Kapha, Agnimandya develops at Dhatwagni level. Due to the Ushnaadi Gunas of Agni, Agnimandya can be corrected thus the Ama Pachana can be ensured. Due to Vriddhi of Poorva Dhatus, Uttara dhatus like Asthi and Majja get Poshana (nourishment) which are mainly involved in Sandhigata Vata[7].

The Sheeta Guna of Vayu and Anubandha Kapha can be pacified by Ushna Guna of Agni hence symptoms like Vedana and Stambha were relieved.[8]

The theory of vasodilatation suggests that superficial heating agents such as hot packs or hot baths have the greatest effect on cutaneous blood vessels, resulting in the greatest temperature change within the first 1 cm of the tissue depth[9]. The increased superficial tissue temperature activates release of chemical mediators such as histamine and prostaglandin which results in vasodilatation. The stimulation of cutaneous thermo receptors that synapse on the cutaneous blood vessels causes the release of bradykinin to relax the smooth muscle walls also resulting in vasodilation[10]. The reduction in sympathetic activation via spinal dorsal root ganglia to reduce smooth muscle contraction, results in vasodilatation at the application site and at the cutaneous blood vessels

of the extremities. These factors altogether act for increased blood flow to the area enhancing the delivery of nutrients, more efficient removal of waste products and reduction of ischaemia of injured tissue, there by hastening the natural process of repair.[11]

Conclusion: Agnikarma is a non-pharmacological outpatient procedure, which required minimum equipments. Scars of dagdha vrana produced by Agnikarma disappeared within 3 weeks. The severity and duration of the illness determine how many Agnikarma sessions are required. In this case study, it was observed that only Agnikarma has reduced the symptoms. No internal medicines were given to this patient, as she denied to take oral medicines. Since, three sittings of Agnikarma showed marked improvement in this case, we can conclude that Agnikarma procedure proves to be one of the easiest ways to reduce the Janu sandhigata Vata Symptoms.

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