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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/17174

DOI URL: <http://dx.doi.org/10.21474/IJAR01/17174>



RESEARCH ARTICLE

EFFECT OF AYURVEDIC TREATMENT ON PHYSICAL AND RADIOLOGICAL PARAMETERS IN KNEE OSTEOARTHRITIS: A CASE REPORT

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Manuscript Info

Manuscript History

Received: 26 April 2023

Final Accepted: 31 May 2023

Published: June 2023

Key words:-

Osteoarthritis, Ayurveda, Knee, Joint

Abstract

Osteoarthritis (OA) is a degenerative joint disease that affects millions of people worldwide, and conventional treatment options have limitations and side effects. Ayurveda, an ancient system of medicine originating in India, offers a holistic approach to health and wellness and has been used to treat various ailments, including OA. This case study evaluated the effect of Ayurvedic treatment in a single patient with bilateral knee OA. The patient underwent Ayurvedic treatment, which included internal herbal remedies and external therapies, for four months. The patient reported a significant reduction in pain and stiffness in both knees, and the radiographic findings showed a reduction in joint space narrowing and osteophyte formation. These findings suggest that Ayurvedic treatment may be effective in reducing pain and improving physical function in patients with OA. Further research with larger sample sizes and longer follow-up periods is needed to confirm these findings. Ayurveda may provide a safe and cost-effective adjunct therapy for OA patients seeking alternative treatments.

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Introduction:-

Osteoarthritis (OA) is a chronic degenerative joint disease characterized by the breakdown of cartilage, which leads to pain, stiffness, and decreased mobility. It is the most common joint disease, affecting millions of people worldwide, and is a major cause of disability and decreased quality of life.¹ According to WHO, osteoarthritis is the second most common musculoskeletal condition in the world population (30%) after backache (50%).² Conventional treatment options for OA include non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroid injections, and joint replacement surgery. However, these treatments have their limitations and side effects, and many patients seek alternative therapies.

Ayurveda, an ancient system of medicine originating in India, offers a holistic approach to health and wellness. Ayurvedic treatment is based on the individual's constitution and imbalances, and aims to restore balance and harmony to the body and mind. Ayurveda uses various herbal remedies, dietary interventions, and external therapies to treat various ailments, including OA. Acharya Charaka has described the disease first by the name of 'Sandhigata vata' under the Vata vyadhi. He defined it as a disease, with the symptoms of swelling (Shotha), which is palpable as

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an air filled bag (Vata purna driti sparsha) and pain on flexion and extension of the joints (akunchana prasarane Vedana).³ Acharya Sushruta described pain (shula), swelling (shotha) and decrement of the movements of the joints involved (hanti sandhigatah) as symptoms of Sandhigatavata.⁴ Symptoms of Sandhigatavata are vatapurnadrutishopha, and akunchana prasarana janya Vedana described by Acharya Vagbhatta.⁵

Several Ayurvedic herbal remedies and external therapies have been traditionally used to treat joint diseases, including OA. Guggulu, Shallaki, and Ashwagandha are some of the commonly used herbal remedies in Ayurveda for treating OA. External therapies such as Pinda Sweda and Janu Basti are also used to reduce pain and stiffness in the joints. Despite the widespread use of Ayurveda in treating OA and other ailments, there is limited scientific evidence to support its efficacy. Therefore, this case study aimed to evaluate the effect of Ayurvedic treatment in a single patient with bilateral knee OA. The case study describes the Ayurvedic treatment plan and the patient's clinical outcomes after four weeks of treatment.

Case Presentation:

A 60-year-old woman presented to our clinic with complaints of pain and stiffness in both knees for the past 10 years. The pain was aggravated by walking, climbing stairs, and prolonged sitting. She was diagnosed with bilateral knee OA (more pain and swelling in Left knee) based on radiographic findings. She was earlier taking pain killers for the pain reduction but the pain was not completely subsided.

Ayurvedic Assessment:

The patient was assessed according to Ayurvedic principles, which involves evaluating the patient's constitution (prakriti) and imbalances (vikriti). Her prakriti was determined to be Vata-Pitta dominant, with a tendency towards dryness and mobility. Her vikriti was characterized by an accumulation of Vata dosha in the knee joints, leading to pain and stiffness. Ayurveda describes this condition as Sandhigata Vata. It comes under the umbrella of Vatavyadhis and its detailed treatment is also described in the ayurveda classics.

Ayurvedic Treatment:

The patient was prescribed a customized Ayurvedic treatment plan based on her prakriti, vikriti and Vyadhi. The treatment included internal herbal remedies and external therapies.

Internal Remedies:

The patient was prescribed herbal remedies to reduce inflammation and pain, improve digestion, and strengthen the joint tissues. After that herbal remedies including Swarna Guggulu, Asthi poshak Tablets and ashwagandharishta was given.

External Therapies:

The patient was advised to undergo external therapies to relieve pain and stiffness in the knee joints. The therapies included Abhyanga with Nadi Sweda and Janu Basti (knee joint oil pool treatment).

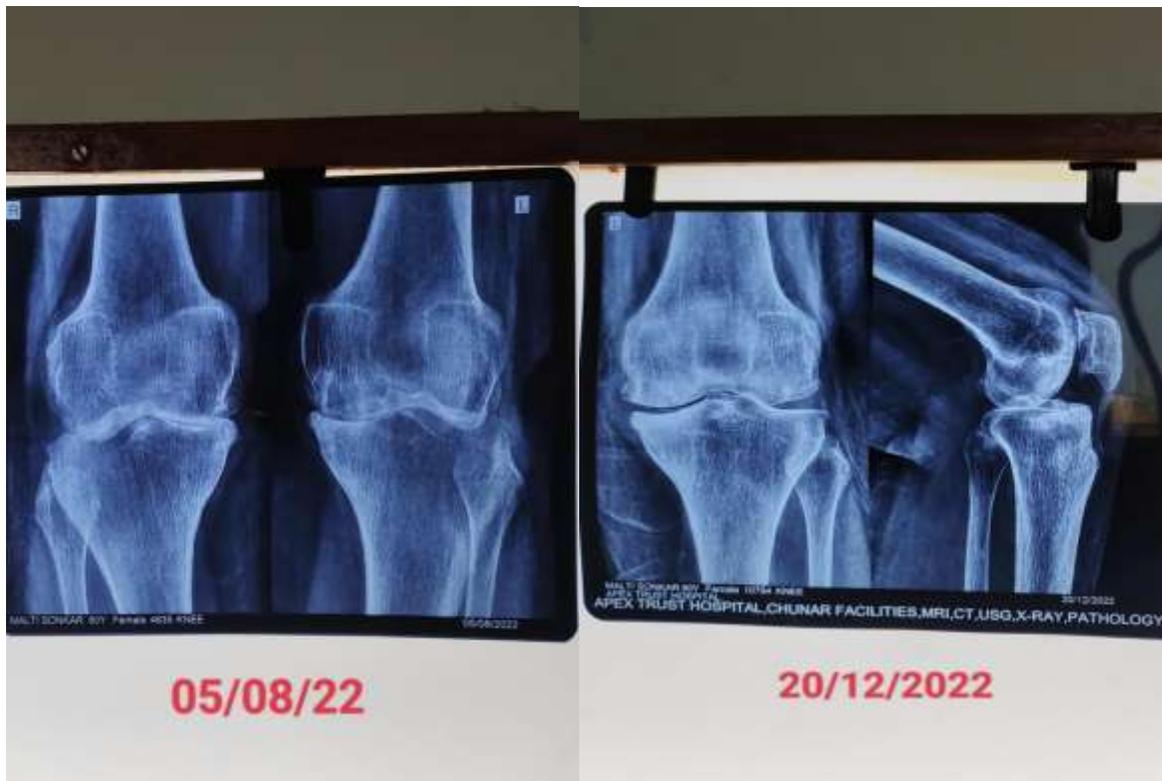
Table No. 1:- Timeline of the treatment given.

Date	Treatment Done
07/08/2022 to 06/10/2022	<ol style="list-style-type: none"> 1. Tab.Swarna Guggulu 1 tablet twice daily empty stomach with warm water 2. Tab. Asthiposhak 1 tablet twice daily with milk 3. Oil Sandhika for local massage and fomentation 4. Syp. Lohasava 20 ml twice daily with water after meals.

<p>07/10/2022 to 27/10/2022</p>	<ol style="list-style-type: none"> 1. Janu Basti with Prasaran tail was done for 30 minutes daily 2. Nadi swedana after Janu Basti was done for 15 minutes. 3. Same internal medicines were continued during this time.
<p>28/10/22 to 20/12/2022</p>	<ol style="list-style-type: none"> 1. Swarna Guggulu 1 tablet once daily empty stomach with warm water. 2. Tab Asthi poshak 1 tablet once daily with milk 3. Syp. Ashwagandharishta 20 ml twice daily with equal water after meals. 4. Oil Sandhika for local massage and fomentation
<p>Details of Drugs used. 1. Swarna Guggulu - proprietary medicine of Dabur Pharmacy. 2. Asthiposhak - proprietary medicine of Dhootpapeshwar. 3. Sandhika Oil - proprietary medicine of Surya Pharmaceutical 4. Lohasava & Ashwagandharishta - Classical Ayurveda medicine 5. Prasaran tail- Classical Ayurveda Medicine</p>	

Outcome:

The patient underwent Ayurvedic treatment for four months. At the end of the treatment, the patient reported a significant reduction in pain and stiffness in both knees. She was able to walk and climb stairs without any discomfort. The radiographic findings also showed a reduction in joint space narrowing and osteophyte formation in the knee joints.



Discussion:-

OA is a chronic degenerative joint disease characterized by the breakdown of cartilage, which leads to pain, stiffness, and decreased mobility. Conventional treatment for OA includes non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroid injections, and joint replacement surgery. However, these treatments have their limitations and side effects, and many patients seek alternative therapies. Ayurveda, an ancient system of medicine, offers a holistic approach to health and wellness. Ayurvedic treatment is based on the individual's constitution and imbalances, and aims to restore balance and harmony to the body and mind. Ayurveda uses various herbal remedies, dietary interventions, and external therapies to treat various ailments, including OA.

Acharya Charaka has mentioned the use of snehana, svedana, Vasti and mridu virechana as the treatment of Vatavyadhi.⁶ He has not mentioned the treatment of Sandhigataavata separately. Acharya Sushruta has described specific treatment for the Sandhigataavata first time i.e. snehana, upanaha, agnikarma, bandhana and unmardana.⁷

The herbal remedies used in this case study have been traditionally used in Ayurveda to reduce inflammation and pain, improve digestion, and strengthen the joint tissues. Amalaki, in combination with other herbs has been shown to have antioxidant and anti-inflammatory properties, and has been used to treat various ailments, including OA. Guggulu, a resin extract from the Commiphora mukul tree, has been shown to have anti-inflammatory and analgesic effects and has been used to treat joint diseases. Shallaki, an extract from the Boswellia serrata tree, has been shown to inhibit inflammation and pain, and has been used to treat OA. Ashwagandha, a herb from the Withania somnifera plant, has been shown to have anti-inflammatory, analgesic, and antioxidant properties and has been used to treat various diseases.

The external therapies used in this case study, Nadi Sweda and Janu Basti, have been traditionally used in Ayurveda to relieve pain and stiffness in the joints. Nadi Sweda involves applying a steam made of herbal decoction to the affected joints. This therapy helps to improve circulation and reduce inflammation and pain. Janu Basti involves creating an oil pool around the knee joint using dough, and filling it with warm herbal oil. This therapy helps to nourish the joint tissues, reduce inflammation and pain, and improve mobility.

The present case study evaluated the effect of Ayurvedic treatment in a single patient with bilateral knee OA. The patient underwent four months of Ayurvedic treatment, which included internal herbal remedies and external therapies. The patient reported a significant reduction in pain and stiffness in both knees, and the radiographic findings showed a reduction in joint space narrowing and osteophyte formation. These findings suggest that Ayurvedic treatment may be effective in reducing pain and improving physical function in patients with OA.

Conclusion:-

Ayurveda offers a holistic approach to treating OA, which may be particularly appealing to patients seeking alternative therapies to conventional treatment options. Ayurvedic treatment is individualized and based on the patient's constitution and imbalances, which may lead to a more personalized and effective treatment plan. The use of Ayurvedic herbal remedies and external therapies may also have fewer side effects compared to conventional treatments. The patient underwent four months of Ayurvedic treatment, which included internal herbal remedies and external therapies. The patient reported a significant reduction in pain and stiffness in both knees, and the radiographic findings showed a reduction in joint space narrowing and osteophyte formation. These findings suggest that Ayurvedic treatment may be effective in reducing pain and improving physical function in patients with OA. This case study provides preliminary evidence that Ayurvedic treatment may be a safe and effective alternative therapy for patients with OA. However, further research with larger sample sizes and longer follow-up periods is needed to confirm these findings. The integration of Ayurveda with conventional medicine may provide a more comprehensive approach to treating OA, and future studies should investigate the potential synergistic effects of combining Ayurvedic and conventional treatments.

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