

**A REVIEW ON SYMPTOMS AND TREATMENT OF
OSTEOARTHRITIS: DEGENERATIVE JOINT DISEASE****P. Sandhiya* and P. Yasotha**

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ABSTRACT

Osteoarthritis, a degenerative joint disease in which the tissues associated with joints break down, more commonly seen with older people. Osteoarthritis patients usually go through Joint pain, temporal joint stiffness and loss of muscular strength. As reported by World Health Organization indicates about 528 million people are affected by Osteoarthritis as on 2019, indicating an increase of 113% when compared to the stats published in 1990, about 73% of total affected population is comprised of people older than 55 years and 60% of the affected people are female. Osteoarthritis affects the parts such as bone joints, hips and hands. An effective way of treatment for this condition includes the affected person being bedridden almost 24 hours a day, so that the patient's joint surface is in contact with the healing lubricant/oil. Ageing populations and increasing rates of obesity and injury, the prevalence of osteoarthritis has become an inevitable

consequence and is expected to continue at an increased proportion globally. Despite the method being effective, we need to consider the strain with usual activities of the patient, skin burns and irritation. Henceforth, we propose a contemporary way of treatment, which includes using a hot oil/lubricant patch inside a jacket applying heat to affected joints, potentially easing stiffness and promoting relaxation. This way of contemporary approach enhances the blood circulation, providing temporary relief for sore muscles and joints of the affected person. The products that are available in the market to overcome osteoarthritis are knee cap, elbow cap and neck pad which support and add grip to the joints and provide a temporary relief. Depending on their intended purpose knee cap and elbow cap are usually

composed of different materials such as spandex, nylon, neoprene and occasionally latex. This paper brief about the osteoarthritis cause, symptoms, therapy and remedies.

KEYWORDS: Osteoarthritis, healthcare, jacket, hot oil treatment, joint pains, knee cap, elbow caps, remedies.

INTRODUCTION

Human health is a vast subject that includes a person's entire state of mind, body, and social interactions. Numerous factors, including as genetics, lifestyle decisions, environmental influences, access to healthcare, and socioeconomic status, have a role in maintaining good health.^[1] Humans suffer from osteoarthritis due to chronic joint pain and stiffness, leading to reduced mobility and impaired quality of life. In Ayurveda oil treatments for osteoarthritis, medicinal oils like mahanarayan oil, ksheerabala oil, or dhanwantharam oil are typically massaged into the body.^[2] To lessen pain and inflammation in the afflicted joints, these oils are made with herbs that have analgesic and anti-inflammatory qualities, applying these oils to the joints through massage enhances blood flow, lubricates the joints, and reduces stiffness. Ayurveda doctors may also suggest particular oils depending on the severity of the ailment and the patient's dosage. In the past, knee and joint pain were frequently treated with traditional herbal oil massages. During these massages, particular herbal oils—often heated—were applied to the afflicted joints.^[3] The goals of the massage treatments were to ease pain and stiffness, enhance circulation, and lessen inflammation. This method is still used today in many cultures to treat joint-related problems. It has long been a component of many traditional medical systems, such as ayurveda and traditional chinese medicine. In recent innovations in knee and elbow braces include braces made with 3D printing that are tailored to each person's anatomy to provide better support and comfort. Braces with temperature and compression control that may be adjusted for specific pain alleviation and muscle healing. Ergonomic designs and lightweight, breathable materials improve comfort throughout prolonged use. Braces equipped with ultrasound or electromagnetic technologies to promote faster healing and non-invasive pain relief.

Symptoms and treatment of osteoarthritis

Degenerative joint disease called osteoarthritis (OA) is classified by the deterioration of joint cartilage.^[4] The most prevalent type of arthritis, osteoarthritis affects millions of people globally, particularly in older age. Weight-bearing joints like hands, hips, knees, and spine are the main parts affected. Joint discomfort, stiffness, edema, and decreased range of motion

are the symptoms. Origin of osteoarthritis is unknown, age, heredity, joint traumas, and obesity are important risk factors. Bone-on-bone friction brought on by cartilage degradation results in pain and inflammation. Physical examination, assessment of medical history, imaging tests (MRI, X-ray), and occasionally joint fluid study are all part of the diagnosis process.^[5] The goals of treatment are to lessen joint dysfunction, reduce discomfort, and delay the course of the illness. Medications (anti-inflammatories, pain relievers), physical therapy, dietary adjustments, exercise, and assistive technology are among the options. Surgery, such as a joint replacement, can be required in extreme circumstances. Since osteoarthritis is a chronic condition, symptom control and long-term care are key components of therapy regimens. Osteoarthritis management requires lifestyle changes like keeping a healthy weight and engaging in physical activity. In addition to the therapy complementary therapies including such as oil massage, acupuncture, and nutritional supplements may offer more assistance.^[6] Research is still being done to identify the underlying causes of osteoarthritis and create better therapies.^[7] Osteoarthritis-related pain and impairment can be reduced with early diagnosis and treatment. Encouraging people to effectively manage their osteoarthritis and preserve their quality of life requires patient's education and assistance.

Reason for joint pain

Several factors, including diseases and traumas, can result in joint discomfort. Acute joint pain can result from various injuries, including fractures, sprains, and strains.^{[8],[9]} On the other hand, persistent joint discomfort frequently points to a health problem. One major cause is arthritis, which includes gout (inflammatory arthritis), rheumatoid arthritis, and osteoarthritis. When cartilage in the joints deteriorates, it causes osteoarthritis, which causes pain and inflammation. The inflammatory disease rheumatoid arthritis results in inflammation of the joint lining.^[10] The accumulation of uric acid crystals in the joints causes gout. Joint pain can also be brought on by other illnesses such infections, fibromyalgia, lupus, bursitis, and tendinitis. Joint soreness can also be caused by lifestyle choices like weight, inactivity, bad posture, and repetitive stress.

Ayurvedic Treatment oil for osteoarthritis

Maharasnadi Kwath: This traditional ayurvedic concoction is created from several herbs that have anti-inflammatory and pain-relieving qualities.^{[11],[12]} Rasna (*Pluchea lanceolata*), Guduchi (*Tinospora cordifolia*), and ashwagandha (*Withania somnifera*) are common herbs utilized in Maharasnadi Kwath.

Bala (*Sida cordifolia*) Oil: Bala is well renowned for its ability to strengthen and nourish joints and muscles. It aids in lowering osteoarthritis-related pain and inflammation.

Ashwagandha (*Withania Somnifera*) Oil: An adaptogenic herb that aids in pain and inflammation reduction is ashwagandha. This oil is applied affected in affected joints.

Procedure for application and preparation

In a dry, clean container, mix equal portions Maharasnadi Kwath, Bala oil, and Ashwagandha oil.^[13] The oil mixture should be gradually heated to lukewarm. Make sure the temperature isn't too high to risk burns. Ten to fifteen minutes, gently massage the afflicted joints with this warm oil combination in circular motions. Make sure the skin is penetrated by the treatment oil.^[14] Let the oil stay on the skin for a minimum of half an hour after the massage. The patient will benefit from being able to rest throughout this period. In addition to oil treatment for added relief, you may choose to wrap the joint in a warm towel or apply a warm compress. Repeat this oil therapy once or twice a day, ideally right before taking a bath or right before bed. Osteoarthritis-related pain and inflammation may be reduced with this Ayurveda oil therapy.^[15] Individual outcomes, however, could differ, thus for individualized care, it's crucial to adhere to the advice of a licensed ayurvedic practitioner. Osteoarthritis-related pain and inflammation may be reduced with this Ayurveda oil therapy. Individual outcomes, however, could differ, thus for individualized care, it's crucial to adhere to the advice of a licensed ayurvedic practitioner.

Allopathy products that support osteoarthritis joint pain

The following are some advantages that knee and elbow caps—also referred to as elbow sleeves and knee caps, respectively—offer to users who use them for therapeutic or physical activities:

Compression and Support: By applying compression to the elbow or knee joint, caps can lessen edema and enhance blood flow.^[16] Additionally, they provide support to the surrounding muscles and joint, which helps to stabilize movement.

Pain Relief: Knee and elbow caps provide compression that can help reduce pain related to tendinitis, arthritis, and overuse issues.^[17] Caps can assist lessen discomfort during physical exertion or regular duties by lowering swelling and offering support.

Warmth and Increased Blood Flow: Keeping the joints warm it encouraging better blood flow, knee and elbow caps can assist and maintain body heat.^[18] This may improve joint flexibility and lower the chance of injury, making it especially helpful before and during exercise.

Protection: Caps can serve as a barrier to protect the knee and elbow joints from small scrapes, bumps, or friction when engaging in activities like running, weightlifting, or contact sports.^[19] In some activities, they can also aid in preventing the joints from being overextended or hyperextended.

Improved Performance: By adding more stability to their joints and muscles, sportsmen can improve their performance by using knee and elbow caps. This may result in more effective movement patterns and enhanced athletic performance, especially in high-impact or repetitive motion exercises.

Post-injury Rehabilitation: After an injury or surgery, knee and elbow caps are frequently utilized as a part of a rehabilitation program.^[20] They can lessen swelling, support the joint while it heals, and apply light compression to speed up healing. During the healing process, caps may also offer a psychological advantage by boosting trust in the stability of the afflicted joint.

CONCLUSION

There are no scientific evidence linking to the origin of osteoarthritis. Studies suggest that the main factors for the occurrence of osteoarthritis is ageing, climatic condition and poor food habits. Allopathic and ayurvedic medications can help reduce the risk of osteoarthritis up to 80% lack of adequate lubrication of the bones can also cause osteoarthritis. So, the oil treatment could be a finite solution to overcome or to reduce the percentage of the occurrence of these kind of long term medical illness. As a proven fact allopathic and Ayurveda combinations work well with many treatment in medical domain. The support provided by the knee and elbow braces can be infused with oil pouches adds value to the existing products.

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