

A Non-Randomized Single Blind Study To Assess The Effectiveness Of Homoeopathic Medicines In The Management Of Pain In Patients Of Primary (Idiopathic)Osteoarthritis Of Knee Above The Age Group Of 40 Years

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Abstract

BACKGROUND- In terms of arthritis, osteoarthritis (OA) is the most prevalent form. It is a major contributor to old disability due to its high prevalence, particularly in the elderly and detrimental effects on physical function. The knee, hip, first metatarsal phalangeal joint (MTP), cervical spine, and lumbar spine are among the joints that are frequently impacted. Patients who do not respond well to conventional medical therapy and are unable or unwilling to undergo surgery have a particular need for such medications. The goal of this study was to find out if individuals with Osteoarthritis of knee joint pain can be successfully managed with homoeopathic medicines.

OBJECTIVE- The objective of this study is to evaluate the effect of the Homoeopathic Medicines in reducing joint pain of Patients of Osteoarthritis of Knee

METHOD- It is a non-randomized, single blind clinical study conducted at the outpatient department of Bharati Vidyapeeth (Deemed to be University) Homoeopathic College & Research Centre, Pune. Total 37 patients (Male & Female) belonging to the age group of above 40 years were enrolled in this study. Out of which, 07 patients dropped out and 30 patients completed their follow up. Osteoarthritis of Knee joint pain observed according to the Numerical Pain Rating Scale and intensity of symptoms was recorded

RESULT- The final outcome was reduction in intensity and severity, and reoccurrence of pain in the cases of Osteoarthritis of Knee joint. Homoeopathic medicine was administered based on totality of symptom presented by the patients. The most common homoeopathic medicine prescribed was Bryonia (33.33%), followed by Rhus Tox, Ruta G(16.67%), Ledum pal, Sulphur, Calcarea Carb, Apis and Causticum. A student paired "t" test was used for analysis because of the small sample size. A significant drop in Numerical Pain Rating Scale was seen after the treatment, patients reported symptom improvement, and no adverse effects were recorded. The mean reduction in intensity of symptoms in Osteoarthritis of Knee joint is 5.3 ± 1.76 and test statistics value was 16.45 and 'p' value was 0.000** which was very small after completion of study.

CONCLUSION- Pain in Osteoarthritis of knee joint can be effectively managed with homoeopathic medicines. Additional research with a larger sample size and control group will provide more evidence that homoeopathy is effective.

Key Words: Osteoarthritis, joint, pain, knee, homoeopathy, medicines

Introduction

Osteoarthritis is a long-term degenerative condition marked by cartilage loss. It has a significant impact on disability and is widely prevalent in society.⁽¹⁾ The pillars of conventional drug therapy for knee osteoarthritis are pain relief and inflammation reduction. Treatment options include systemic or topical medications with peripherally active analgesics, anti-inflammatory depending on the patient's symptoms.⁽²⁾ Some people may not respond to such therapies and NSAIDs can be toxic and have negative side effects. There seems to be a broad need for drugs with high efficacy and minimal toxicity in the treatment of OA patients. Such drugs are particularly necessary for patients who do not respond well to typical medical care and who cannot or do not wish to undergo surgery.⁽³⁾

OA is defined as joint failure, a condition in which all joint structures have undergone pathologic alteration, frequently simultaneously. The loss of hyaline articular cartilage, which manifests as a localised and initially nonuniform state, is the pathologic sine qua non (essential condition) of illness. Along with this, the subchondral bony plate thickens and becomes more sclerotic, osteophytes protrude from the joint edge, the articular capsule stretches, various degrees of synovitis develop, and the muscles that bridge the joint get weaker. Meniscal degeneration in the knees is a symptom of the illness. There are several paths that result in joint failure, but the

first one is frequently joint injury when preventive mechanisms have failed.⁽⁴⁾

Other names for osteoarthritis are:-⁽⁵⁾

Degenerative hypertrophic
senile arthritis

The primary symptom of osteoarthritis- Degeneration of the articular cartilage

The secondary symptom of osteoarthritis- Structural changes in the underlying bone

When osteoarthritis develops in young people, which happens in a very small percentage of instances (less than 5%), there is often some predisposing factor, such as a history of trauma, a congenital defect or a systemic illness such as diabetes, ochronosis, hemochromatosis, or extreme obesity.⁽⁶⁾

Secondary OA involves predisposing conditions, such as joint abnormalities, nerve supply issues, and unusual strains. Severe cases involve alterations in joint mechanics, articular surface anomalies, or strains from obesity, job demands, and sports.⁽⁷⁾

In Primary (Idiopathic) Osteoarthritis It is a chronic degenerative disorder associated with ageing but not caused by it. Patients far into their nineties who show no clinical or functional symptoms of the condition. Because there is less proteoglycan in cartilage as a person ages, the water content of the cartilage declines, making it less resistant. The collagen fibres in the cartilage are vulnerable to deterioration without the proteoglycans' protective properties, which worsens the degeneration. The surrounding joint capsule can also become inflamed. This may take place as the cells lining the joint try to eliminate cartilage breakdown chemicals that have been released into the synovial area. On the edges of the joint, spurs or osteophytes, new bone growths, might develop.⁽⁵⁾

It appears to be a collagen network weakening, most likely brought on by a reduction in the local production of type II collagen.⁽⁵⁾

According to Epidemiology of the Rheumatic Diseases 22% to 39% population in India is suffering from Osteoarthritis of Knee. Women are more likely than men to have OA, although as people get older, their frequency rises significantly.⁽⁸⁾

And in Maharashtra, According to ACR clinical criteria, the prevalence of OA was estimated at 10.2%, with women in the 60–79 age range substantially more likely to have the disease (11%) than males (7%) do. Comparing on the basis of sex, the female to male ratio is 65.7% vs. 34.3%, or almost 2:1.⁽⁹⁾

Osteoarthritis used to be thought of as a condition that would eventually grow and become degenerative. A range of environmental, genetic, and biomechanical factors cause the synovial joints to adapt, which distinguishes this varied group of illnesses.

Type II collagen, water, chondrocytes, and proteoglycans make up the articular cartilage structure. Any defects in the cartilage are fixed by the synthesis and healthy articular cartilage is preserved. Due to an imbalance proteoglycan and collagen loss occurs in OA. Chondrocytes often increase proteoglycan synthesis. In spite of increased synthesis, higher water content, an unorganized collagen structure, and a loss in the flexibility of articular cartilage, the imbalance results in a lower amount of proteoglycans. These changes control cartilage fissure and cracking, which ultimately leads to articular surface abrasion.⁽¹⁰⁾

The two main elements causing the development of OA are joint vulnerability and joint loading.

The greatest risk factor for OA is age. All joints in older women have a high risk of OA. ⁽¹¹⁾Constitutional susceptibility includes- high bone mineral density, gender/hormonal status, genetic, and obesity. Mechanical factors includes usage, both professional and recreational alignment, joint form, and trauma

SIGN AND SYMPTOMS:

Pain-

- gradual start over months or years;
- variable or intermittent over time;
- primarily associated with activity and weight bearing, eased by rest;
- only brief (15 minutes) morning stiffness and brief (5 minutes) gelling after rest;
- One or more joints are painful.

Clinical symptoms –

- limited range of motion caused by capsular thickening or osteophyte obstruction;

- palpable and occasionally audible coarse crepitus;
- bony swelling around joint margins;
- deformity, typically without instability;
- jointline or periarticular tenderness;
- muscle weakness and wasting; and
- mild or absent synovitis.

The treatment of OA is aimed at minimizing pain, optimizing function and reducing disability. ⁽¹¹⁾

Investigations that can be done are:-

- The first sign is joint space narrowing, which is best seen in weight-bearing radiographs of the knee
- Osteophytes are the disease's defining feature.

The other modifications include

- loose bodies (Joint Mice also k/a foreign bodies- detached fragments of cartilage in joint spaces)⁽¹³⁾
- deformities
- subchondral cysts
- calcification [linear due to calcium pyrophosphate dihydrate (CPPD) deposition, patchy due to hydroxyapatite deposition], and
- subchondral bone sclerosis
- Using computed tomography, the axial joints can be evaluated
- In order to evaluate changes in periarticular structures, such as Baker's cysts, ultrasound is helpful
- Magnetic resonance imaging (MRI) may reveal bone marrow oedema, cartilage abnormalities, meniscal tears, osteophytes, subchondral cysts, sclerosis, synovitis, and synovial effusions. ⁽¹²⁾

General management:

The treatment of OA involves non-pharmacological, pharmacological, and surgical therapies to minimize pain, improve function, and reduce impairment. It includes patient awareness, joint protection strategies, daily routine adjustments, weight-bearing movements, weight loss, and low-intensity exercise for muscle strength, mobility, and overall wellbeing. ⁽¹²⁾

HOMOEOPATHIC MEDICINES

Indications of few Homoeopathic Medicines for the affections of joints given in our Homoeopathic Materia Medica are as follows:-

Rhus Tox

Tearing pains in tendons and ligaments. Joint swelling that is hot and painful. The nape of the neck, the loins, and the extremities all experience widespread rheumatic symptoms; mobility is improved. Pain in the condyles of the bones. Paralysed, rigid limbs. It is unbearable because the cold, fresh air irritates the skin. Tearing in thighs. After overworking and exposure, numbness and formication. Following exercise, trembling and paralysis. Discomfort in the knee joint. Loss of strength in the fingers and forearm, the tips of the fingers feel like they are crawling. Tingling in feet. < After mid night, wet rainy weather, on first moving, getting up in the morning. > By walking and continued motion. ⁽¹⁴⁾⁽¹⁵⁾⁽¹⁶⁾

Bryonia

Tight and sore knee. Feet swelled up hot. Joints are heated, swollen, red, and torn, and they get worse with even the slightest movement. Tension and sticking sensation in joints; drawing pains. The left patella is hurting like stitches. Walking causes popping and sticking in the hip joints. Hip pain that travels from the hip to the knee along the front of the leg. When walking, the knees are weak. Pain running the length of the tibia and tension in the bend of the knee. Knee stiffness that hurts Pressure causes pain in every area. Movement of the left arm and leg nonstop. < Warmth, any motion, early dawn, eating, hot weather, exertion, and touch. Cannot stand up; becomes dizzy and ill. > Pressure, rest, sleeping on the sore side, cold objects. ⁽¹⁴⁾⁽¹⁵⁾⁽¹⁶⁾

Ledum Pal

Joint cracking is made worse by bed warmth. Rheumatism starts in the lower limbs and progresses up. Joints, as well as the foot and limb, experience sharp pain. Can hardly step on the hurting soles. > Better to submerge your feet in cold water to warm up. < Worse at night and from bed heat, night, walking. ⁽¹⁴⁾⁽¹⁵⁾⁽¹⁶⁾⁽²⁰⁾

Ruta G

Acts on the uterus, eyes, and cartilages, as well as the periosteum. Complaints about flexor tendon strain in particular. Tendency for deposits that develop in the periosteum, tendons, and around joints, particularly the wrist. Bruises feel in the limbs and spine. Back and loins discomfort. Hips and thighs are so weak that they give out while standing up from a chair (Phos; Con). fingers contracting. Hands and wrists are painful and inflexible. Knees that are heavy and uneasy. Fatigue and leg weakness after walking. Stepping causes the bones in the foot to burn and erode. Painful exhaustion with light activity, bruised sensation, < Touch, sitting, ascending, night, cold weather. > lying down, rubbing. ⁽¹⁴⁾⁽¹⁵⁾⁽²⁰⁾

Calcarea Carb

Joint swelling, particularly in the knee. Fragility of the extremities. nodosities of arthritis. Feet's soles are raw. At night, feet feel chilly and lifeless. An old sprain. Rupture of muscles and cartilages. Rheumatoid arthritis pain, as after contact with moisture. Sharp sticking, as though components had been strained or wrenched. Feels like damp stockings were worn, cold, moist feet. < From mental or physical exhaustion; climbing; any kind of cold; water, washing, moist air, or rain; full moon; and standing. > lying on sore side, dry climate. ⁽¹⁴⁾⁽¹⁵⁾⁽²⁰⁾⁽²¹⁾

Causticum

Its effects are primarily seen in chronic rheumatic, arthritic, and paralytic illnesses, which are characterised by ripping, pulling pains in the muscles and fibrous tissues, as well as deformities around the joints; a gradual loss of muscular strength; and tendinous contractures. Degeneration in seniles. Dull pains. Weakness and weightin joints. Shattering joints. Tensed up tendons. Weak ankles. Unable to walk pain-free. Rheumatic limb ripping is improved by warmth, particularly the heat of bed. Joints that are burning. Walking with instability and prone to falling. Leg tremors at night. Knee pain, stiffness in the knee hollow, and cracking. Dorsum of feet itches.< Straining. Stooping. Exertion. Lifting. Running > by warmth, particularly bed heat. ⁽¹⁶⁾⁽²²⁾⁽²³⁾

Kali Carb

Knee discomfort. Pain in hips to knees. Legs and backs start to fail. Discomfort, heaviness, tearing in the limbs, and jerking. Swelling and tearing pain in the limbs. Pressure-sensitive limbs. Knee swelling that is white. Arms that are torn from shoulder to wrist. Wrist joint laceration. Elderly people who are paralyzed and diseases of the dropsy. Legs are readily put to sleep. Painful finger and toe tips. Very sensitive soles. The great toe itches and hurts < in cold weather, lying on left and painful side > in warm weather. ⁽¹⁴⁾⁽¹⁶⁾⁽²³⁾

Sulphur

Impact of sulphur on joints, tendons, ligaments, and muscles. In both acute and chronic rheumatism, sulphur is most helpful when the inflammatory swellings appear to ascend, that is, when they start in the feet and move up the body. In the morning and at night, the pains are worse. Due to the blistering heat of their feet, the patient uncovers. Sulphur is particularly helpful for that annoying symptom of acute inflammatory rheumatism, jerking of the limbs when one falls asleep. In synovitis, particularly following exudation, we may utilise it. Sulphur here causes absorption, and it does it quickly, especially in the knee. < washing, bathing, in the morning, at 11 o'clock, at night, from alcoholic stimulants, and occasionally. > dry, warm weather, lying on right side, from drawing up affected limbs. ⁽¹⁴⁾⁽¹⁶⁾⁽²³⁾

OBJECTIVES

Many patients suffer from knee osteoarthritis, relying on pain-relieving balms and painkillers. Homeopathy effectively treats knee joint osteoarthritis, reducing pain and swelling, with no side effects and cost-effectiveness. The objective of the present clinical study is to study homoeopathic medicines efficacy in managing knee osteoarthritis pain, reducing joint pain recurrence and intensity, limiting joint disability, improving mobility, and enhancing quality of life in patients.

MATERIAL & METHOD

This non-randomized single blind study is based on information about the homoeopathic treatment given to patients between above the age group of 40 years in the outpatient department, along with their follow-up. All of the patient necessary data has been obtained and documented in the case papers as part of the study's Postgraduate Research Project. Following an in-depth assessment, the mentioned observed data was analyzed, the proper statistical significance tests were performed, and the results are presented in this work. CTRI registration number CTRI/2022/01/039202

Case definition:

Cases which have complaints of pain, tenderness, stiffness, grating, or grinding sensation (crepitus), swelling regarding knee joints without invasive trauma will be included for research.

Inclusion Criteria:

- Cases fulfilling the diagnostic criteria.
- Patients of both sex were included in the study.
- Patients above 40 years of age.
- Patient without any other systemic diseases.
- Patient given written consent form.

Inclusion Criteria:

- Invasive Trauma.
- Malignancy cases.
- Recent major surgery
- Immunocompromised cases.
- Patients requiring emergency medical care.
- Patients who have participated in any other Research study in last 6 months.
- Those under other medications.
- Diagnosed Rheumatoid Arthritis

Selection of Remedy:

30 patients with Osteoarthritis of knee pain, in both sexes and age above 40 years were enrolled for this study. Case taking was done according to homoeopathic principles, and the medicines were given as per the indication on the basis of totality of symptoms.

Selection of potency:

Potency selection was done according to the rules of posology as per 6th edition of Organon of Medicine.

Storage of Drugs:

Drug was stored in Bharati Vidyapeeth Homoeopathic Hospital pharmacy, Katraj, Pune as per the rules of Pharmacopoeia (HPI), under appropriate temperature. Log no. & batch no. was maintained. In cases where medicine was not necessary, only placebo was prescribed, in the form of sugar of milk globules.

Follow up:

Each case was followed up for 3 months approx.

All the patients were duly followed up and details of the symptomatic and clinical changes were recorded and prognoses were studied.

Follow up differed from patient to patient.

Standard Follow-up was prepared giving details.

It was based on Homoeopathic principles

Criteria for Assessment:

Numerical Pain Rating Scale

Table- 1 Numerical Rating Scale Pain Criteria

Rating	Pain
0	No pain
1-3	Mild pain (Nagging, annoying, interfering little with Activities of Daily living. ADLS)
4-6	Moderate pain. (interfere significantly with ADLS)
7-10	Severe pain (disabling, unable to perform ADLS)

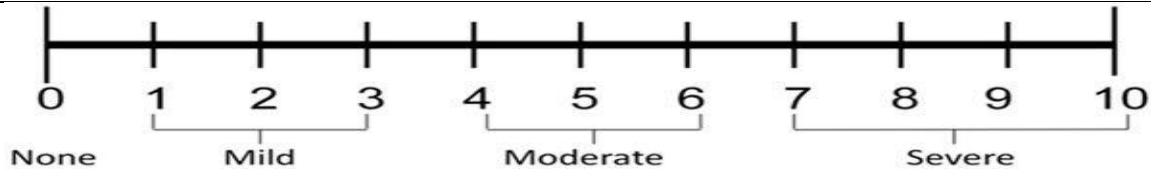


Table- 2 Improvement Criteria in Numerical Rating Scale

Criteria	Rating
Marked Improvement	0
Moderate Improvement	1-3
Mild Improvement	4-6
No Improvement	7-10
Worse	Aggravation of subjective and objective symptoms
Dropped Out	The patient opts out of the study or attending physician does not want to keep the patient under study for any valid reason

Outcome Assessment

Outcome assessment was done on the basis of data collected from scales before and after case study. To determine whether the treatment was effective or not, these results were compared with the initial values, and the difference was then analyzed using statistical tests. This test assisted in determining the significance of the differences between the changes that were noticed before and after treatment.

Results

This study includes 30 cases above the age group of 40 years as sample (n=30), who has been diagnosed with Osteoarthritis of Knee. All these 30 cases were followed up on for a period of 4 months. Data from these 30 cases were gathered and statistically analyzed. In this section, tables and charts are used to describe the information from 30 cases. The highest percentage of patients belonged to the age group of 45-50 years (46.67%) and lowest from the age group below 45 years. 7 participants were male (23.33%) and 23 were female (76.67%). Distribution of patients according to their occupation shows that 13% of the patients were in service, 23% were workers, 17% were in Business and the remaining 47% were housewives in the study. Distribution of patients according to their Knee-joint affected shows that 60% patients had both their knees affected, 13% patients had their left knee affected and 27% patients had issue with right knee. Distribution of patients according to the duration of OA joint pain shows 63% of patients had OA joint pain below 2 years 20% of patients had OA joint pain between 2-5 years and the remaining 17% of patients had OA joint pain above 5 years.

Demographic data given in Table below.

Table 3: Distribution of patients according to demographic variables (n=30)

Demographic Variables		Number of patients(f)	Percentage (%)
Age	40-45	4	13.33%
	45-50	14	46.67%
	50-54	8	26.67%
Gender	Female	23	76.67%
	Male	7	23.33%

Occupation	Business	5	16.67%
	Housewife	14	46.67%
	Service	4	13.33%
	Worker	7	23.33%
Knee Joint Affected	Both	18	60.00%
	Left	4	13.33%
	Right	8	26.67%
Duration of OA Joint Pain	Above 5 Yrs	5	16.67%
	2Yrs - 5Yrs	6	20.00%
	Below 2 Years	19	63.33%

Table 4: Distribution of patients according to Medicine-prescribed

Remedy	No of Patients (f)	Percentage (%)
Apis Mel	1	3.33%
Bryonia	10	33.33%
Calcarea Carb	2	6.67%
Causticum	1	3.33%
Ledum Pal.	3	10.00%
Rhus Tox	5	16.67%
Ruta G	5	16.67%
Sulphur	3	10.00%

Table 4 shows the distribution of patients according to Medicine Prescribed shows the Bryonia was prescribed to 33% of patients under study. Rhus Tox was prescribed to 17% of patients; Ruta G was also prescribed to 17% of patients under study. Sulphur was given to 10% of patients under study.

Table 5: Descriptive statistics and Paired t-test of NRS before and after Homoeopathic Medicine treatment

NRS	N	Mean+ SD	T Value	P-Value	Mean difference 95% CI for Mean difference
Before Treatment	30	6.7+1.66	16.45	0.000**	5.3±1.76 (4.64, 5.95)
After Treatment	30	1.4+1.45			

P Value <0.001, Considered to be statistically highly significant. Hence there is a significant difference in the NRS before and after the intervention of treatment for Osteoarthritis of Knee. A test used: Paired t-test, **: Highly Significant Difference, T Statistic-value: Test Statistic value, 95% CI: 95% Confidence Interval for the mean difference.

Table 5 show the paired t-test and descriptive Statistics of the NRS before and after the intervention of treatment for Osteoarthritis of the Knee. Before treatment, the Numerical Rating Scale (NRS) of pain was 6.7 + 1.66 (mean+ SD) which reduces to 1.4+1.4 after treatment. To test the hypothesis of whether Homoeopathic Medicine in cases of Osteoarthritis of the Knee has any effect on reducing the intensity of pain of the patient, the Paired t-test is used. The t-statistic value is 16.45 with a p-value of 0.000** highly significant. We reject Ho and conclude Homoeopathic Medicine in cases of Osteoarthritis of the Knee had an effect on reducing the intensity of pain of the patient.

Table 6: Descriptive statistics of NRS before and after treatment for Osteoarthritis of the Knee, according to improvement in patients

Improvement	No of Patients	NRS before treatment	NRS after treatment
		Mean ±Sd	Mean±Sd
Marked	12	6.17±1.74	0.08 ±0.28
Moderate	13	7.00±1.52	1.61±0.65
Mild	5	7.20±1.78	4.00±0.00

Table 6 shows the Mean ± SD of NRS before and after treatment for Osteoarthritis of the Knee, according to improvement in patients. Patients with mild improvement had 7.20±1.78 (Mean ± SD) of NRS before treatment reduced to 4.00±0.00after treatment of Osteoarthritis of the Knee. Patients with moderate improvement had 7.00±1.52 (Mean ± SD) of NRS before treatment reduced to 1.61±0.65after treatment of Osteoarthritis of the Knee. Patients with marked improvement had 6.17±1.74 (Mean ± SD) of NRS before treatment reduced to 0.08 ±0.28after treatment of Osteoarthritis of the Knee.

Discussion

Osteoarthritis is the most prevalent degenerative joint disease that most of the people suffer from. The public health issue of osteoarthritis is well-established at this point. It is common, especially in the elderly, and the condition harms physical function. There have been improvements in the clinical, radiological, and other investigative methods used to define the illness and measure its component aspects. It is a degenerative condition with frequently troubling symptoms that is difficult to permanently cure. In this regard, homoeopathy has some potential in treating this condition to limit the most distressing symptoms, stiffness, and immobility, and to prevent additional injury to knee joints.

The primary goal of this study was to determine whether homoeopathic remedies have any impact on the management of individuals suffering from pain in Osteoarthritis of knee. A total of 37 cases were registered. 30 patients in all finished the trial, 7 cases were dropped out of the study. The age group of above 40 years, of both the sexes was included in this study which was observed for the period of 3-6 months each. Homoeopathic medicines were prescribed on the basis of totality of symptoms presented by the patient.

Most of the patients affected with Osteoarthritis of knee were above the age group of 45 years. The most common gender found to affect was female with the percentage of 76.67%. It was analyzed that most of the patients were housewives.

In this study, the most common homoeopathic medicine prescribed was Bryonia (33.33%), followed by Rhus Tox, Ruta G (16.67%), Ledum pal, Sulphur, Calcarea Carb, Apis and Causticum.

Assessment was done using the Numerical Rating Pain Scale before and after the treatment. The patients' outcomes were favourable. Due to the small sample size, students paired 't' test was used to do statistical analysis of the cases. There was a significant reduction seen after the treatment given to the patients. 12 cases (40%) showed marked improvement, 13 cases (43.33%) showed moderate improvement and 5 cases (16.67%) showed mild improvement. No negative impacts were noticed during the study.

Conclusion

From the above data presented, it can be established that homoeopathic medicines are effective in the management of pain in the cases of osteoarthritis of knee joint. Homoeopathic medicines can reduce the intensity, reoccurrence of the pain in cases of osteoarthritis of knee. The findings demonstrated that in cases of OA of the knee, medicines based on acute totality can relieve pain, reduces symptoms while also improving overall health.

However, due to the small sample size and short study duration, additional research will need to be conducted in the future, taking into account larger sample sizes and longer study durations.

Summary

The purpose of this clinical trial was to assess the effectiveness of homoeopathic medicines in management of pain the cases of primary (idiopathic) osteoarthritis of knee above the age group of 40 years. Thirty cases have been selected for the study based on the inclusion and exclusion criteria. The patients were routinely monitored, and a conclusion was drawn at the end of the study. It was a single-blind, non-randomized clinical trial done at Bharati Vidyapeeth Homoeopathic Hospital. Patients were informed and given their consent before being enrolled. In the respective general OPD and peripheral OPD of Bharati Vidyapeeth Homoeopathic Foundation Hospital, Pune, all 30 cases and their five follow-ups were completed. Based on the totality of symptoms, homoeopathic medicines were prescribed. Changes in the severity, frequency, and absence of symptoms were closely noted. Improvement was noted using the assessment criteria and analyzed using students paired't' test. The study showed that Homoeopathic medicines are effective in management of cases of primary (idiopathic) osteoarthritis of knee of knee above the age group of 40 years.

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Statement Of Conflict Of Interest

Author's declare there is no conflict of interest.

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