**A NARRATIVE REVIEW OF HOMOEOPATHIC AND CONVENTIONAL THERAPIES IN OSTEOARTHRITIS**

RUNNING TITLE – TREATMENTS IN OSTEOARTHRITIS

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Abstract

Introduction - Knee osteoarthritis (OA) is the most common chronic rheumatic disease and it is a major contributor to pain and disability worldwide. It affects women more often than males and its frequency increases with age. This review seeks to summarize the effects of homoeopathy and alternative methods of treatment in the cases of osteoarthritis.

Materials and methods - A thorough search into literature in electronic databases was done, a reference list of pertinent publications, and contacts with specialists found relevant studies from 2000 to 2022. Clinical studies contrasting placebo or conventional therapy controls with homoeopathic and complementary strategies were selected. A consistent method of information extraction and quality assessment was used to gather data on patients, interventions and comparators, outcomes, research designs, and results. Trials with appropriate data were systematically compiled and summarized.

Results - A total twenty four clinical trials involving patients were included in the analysis. The studies used individualized homoeopathic medicines, physiotherapy, NSAIDs, analgesics, acupuncture. Methodological quality of the trials was variable.

Conclusion - Our review of overall findings demonstrate that homoeopathic complexes are clearly effective in the treatment of osteoarthritis. However, methodological errors and inadequate trial reporting make the data evidence insufficient to provide a firm conclusion. Additional replications are necessary as long as the trials are rigorous, systematic, and most importantly, individualized.

Keywords – Homoeopathy, Osteoarthritis, Degenerative Joint disease, Pain, Disability.

Introduction

Osteoarthritis (OA) is a heterogeneous group of degenerative joint diseases of multifactorial origin that are characterised by ligamentous laxity, weakening of the periarticular muscles, and in some cases, synovial inflammation and distension as well as defective integrity and progressive loss of articular cartilage. The two main areas of suffering that people with OA are most concerned about are pain and functional impairment. Individually, these two areas of suffering can be quite heavy, and when combined, they can significantly lower a person's quality of life. ⁽¹⁾ Pain is a common clinical symptom, especially after prolonged activity and weight bearing, whereas stiffness is felt after inactivity. The most common cause of primary osteoarthritis is ageing. It may manifest as localized, generalized, or erosive OA. ⁽²⁾ It is a joint's age-related dynamic response pattern to damage or trauma. Radiographic features commonly used to define OA include joint space narrowing, osteophytosis, subchondral sclerosis, cyst formation, and bone contour abnormalities. ⁽³⁾ Many researchers have shifted their focus to disease prevention and treatment in the early stages.

Physiotherapy, antidepressant therapy, patient education, and weight control are among the current therapeutic interventions used to manage OA. Non-opioid analgesics such as paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs), topical analgesics, opioid analgesics, and intra-articular steroid injections are also included in drug therapy. Such treatments may be ineffective in some patients, and NSAIDs can be toxic and have serious side effects. ⁽⁴⁾

In the treatment of OA patients, there appears to be a general need for medications with high efficacy and low toxicity. 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. ⁽⁴⁾

Search strategy

For relevant material, many electronic bibliographic databases were searched the databases Medline, Google Scholars, Science Direct, and Thieme-E-journal of Homeopathy were thoroughly searched. Osteoarthritis, Osteoarthrosis, Gonarthrosis, Homeopathy, Homoeopathy, Alternative medicine, and Complementary medicine were the search phrases utilised. To find any reviews that had been done in the pertinent field, we also did a thorough search of electronic databases. We manually examined important publications and trial registers as well as visually scanned reference lists from pertinent studies. ⁽¹⁾

Total 40 articles were searched through different database. Articles that were irrelevant or duplicated were removed. 24 Full length articles and 12 articles with additional information were included in this review. All the articles are related to Homoeopathy and alternative medicines, in which 17 articles were of homoeopathy, 12 were individualized and 3 articles include complex medications and other comparative studies articles. (Refer Table- 1)

Shekufe khayltas in his 4 weeks double blind, randomized study administered vitis vinifera D1 to 30 patients and using Mc Gill questionnaire concluded that vitis vinifera D1 can effectively reduces pain and stiffness in knee joint.⁽¹⁾ D. E. Hurwitz after 1 month of double blind study suggested that changes in loading parameters may differ depending on the type of analgesic agent used or even the nonsteroidal anti-inflammatory drug used, or that there may be a drug concentration threshold that allows for an analgesic effect without adversely affecting knee-joint loading.⁽²⁾ [R. A. van Haselen](#) pragmatic, randomized, double blind controlled trial of homoeopathic gel vs NSAIDS piroxicam gel on 184 patients found homoeopathic gel to be more effective and can be combined with analgesics if necessary.⁽³⁾ Heinz Birnesser trail study on 592 patients concluded that homoeopathic combination therapy presents a true alternative to allopathic medications.⁽⁴⁾ Mobasher stdying on 75 patients found both acupuncture and homoeopathy were effective in reducing pain but acupuncture was significantly more effective than homoeopathy.⁽⁵⁾ Koley in his study found no significant difference between homoeopathic medicines and placebo after giving individualized medicines.⁽⁶⁾ F. F. Motiwala has done observational study for 12 months on individualized homoeopathic prescription and concluded that homoeopathic medicines can improve the activity of daily living by reducing pain and stiffness in cases of osteoarthritis.⁽⁷⁾ Atul B. Rajgaurav has done RCT on 30 patients for 12 months and compared scores of WOMAC and Kellgren and Lawrence system of classification and found Rhus Tox effective in treatment of osteoarthritis.⁽⁸⁾ Pankaj Dave in his 6 months study on 100 patients prescribed Bryonia, Causticum, Calcarea Carb. Calcarea flour, Kali Carb, Rhus Tox and comprehend what pathophysiology occurs at the level of the knee joint along with their specific medicines.⁽⁹⁾ Dr. Amrutha Manoharan conducted study on 30 patient and given Bryonia, Rhus Tox, Pulsatilla, Arnica, Calcarea Carb as intervention and found that homoeopathic medicines are effective in reducing the pain in osteoarthritis cases.⁽¹⁰⁾ Dr. Rakendu after studying for 12 months on 60 patients find individualized homoeopathic medicines effective in improving the activity of daily living.⁽¹¹⁾ Bhaskar R. in his study found majority of people use allopathic medicine and analgesics. Few people favour homoeopathy. Rural residents need to be made aware of OA and its relationship to homoeopathy.⁽¹²⁾ Dr. Ancy Abraham conducted study on basis of Intensity of symptoms, change in KOOS Criteria and Changes in Serum Hyaluronic acid level on 44 patients and found Toxicodendron pubescens is useful in treating primary OA by lowering the level of serum hyaluronic acid.⁽¹³⁾ Dr. Diwanshi Gupta, Dr. E Siva Rami Reddy, Dr. Parveen Sharma, Dr. Charanjeet Singh and Dr. PK Chakraborty in their study found rare remedies such as Angustura Vera, Formica Rufa, Arbutus Andrachne, Osteo ArthriticNodosa, salicylic Acid, Sycotic Bacillus effective in treating the pain of knee joint.⁽¹⁴⁾ Hashemzadeh in randomized controlled trial for 6 weeks found Nanocurcumin significantly improves the symptoms of osteoarthritis patients compared to placebo group.⁽¹⁵⁾ N. Rajeev kumar studied on 60 samples for 18 months and found homoeopathic medicines selected on the basis of totality of symptoms were more effective than

individualized medicines.⁽¹⁶⁾ Dr. Yogeshwari Gupta in her study concluded that homoeopathic medicines are capable of reducing pain and symptoms of osteoarthritis and also improves the quality of life of patients.⁽¹⁷⁾ Dr. Meenakshi Shriwas on studying 30 patients of osteoarthritis concludes that a homoeopathic medicine efficiently treats osteoarthritis without producing any side effects afterwards.⁽¹⁸⁾ Reteka Sexena, Tarkeshwar Jain after studying 50 patients concluded that in the treatment of knee OA, osteoarthritic nosode combined with physiotherapy is much more effective than placebo combined with physiotherapy.⁽¹⁹⁾ Dr. S. Yoga used Modified Naranjo Criteria for assessing the course of disease and predicting the prognosis of disease, and finding the efficacy of homoeopathic drugs in treatment.⁽²⁰⁾ Syed Farhan Abbas Naqvi cross sectional study on 600 patients for 1 year found there is no statistically significant difference between complaints and complications in the allopathic medical system, but both complaints and complications are statistically significant in the homoeopathic medical system and the herbal medical system.⁽²¹⁾ G Peat in his narrative review Knee osteoarthritis severe enough to necessitate joint replacement accounts for a small proportion of all knee pain and disability suffered by the elderly. To have an impact on community levels of pain and disability, primary care healthcare must focus on this larger group.⁽²²⁾ Ram kumar presented a case report prescribing Rhus tox as intervention for 4 months and the result was homoeopathic medicine improved health and pain tolerance thereby reducing risk of deformity and also raised the quality of life.⁽²³⁾ Dr. Tanya Rai conducted study on 60 patients and found individualized medicines were more effective than prescribing calcare flour.⁽²⁴⁾ (Refer Table – 2)

Result

A total twenty four clinical trials involving patients were included in the analysis. The studies used individualized homoeopathic medicines, physiotherapy, NSAIDS, analgesics, acupuncture. Methodological quality of the trials was variable.

Discussion

This narrative study was done to access the effectiveness of homoeopathic treatment in cases of osteoarthritis. All the studies were of high methodological quality. And the assessment was done on scoring and questionairing which have evidence to show valid results. This systematic review was carried out to establish the fact that homeopathic medicines are safe and effective without any long term side effects. Overall, patients were more satisfied with homoeopathic care than with conventional care.⁽²⁹⁾ Homeopathic medications in high dilutions prescribed by trained professionals are most likely safe and unlikely to cause serious side effects.⁽³⁰⁾ Homeopathy, as we all know, was invented by German physician Samuel Hahnemann. He was the one who established the fundamental principles of homoeopathy.⁽³¹⁾ Homeopathy is a 'therapeutic system' that employs doses of substances known as homoeopathic medicines that are prescribed based on two principles: similitude ("like cures like") and potentisation.⁽³²⁾ The most important goal of homoeopathic therapy is to stimulate the organism to react against the imbalance that is affecting it, using homoeopathic medicine to indicate the correct way this vital reaction towards the cure should occur, avoiding the organism's automatic responses, which can be harmful to the system if not controlled rationally.⁽³³⁾ There is some RCT evidence overall that individualised homeopathic medicines are modestly, but detectably, more effective

than placebos. ⁽³⁴⁾⁽³⁵⁾ Pre-clinical research backs up the idea that highly potentized medications can have measurable effects in living systems. ⁽³⁶⁾

Conclusion - Our review of overall findings demonstrate that homoeopathic medicines are clearly superior in the treatment of osteoarthritis. However, methodological errors and inadequate trial reporting make the data evidence insufficient to provide a firm conclusion. Additional replications are necessary as long as the trials are rigorous, systematic, and most importantly, individualized.

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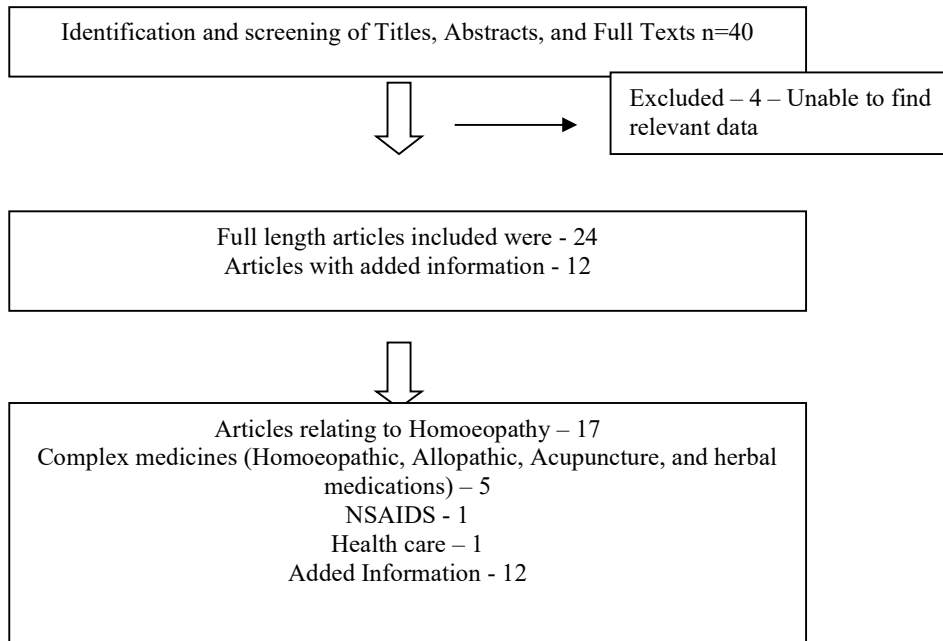


Table- 1 Flowchart of the study

S.NO	REFEREN CE	SAM PLE SIZE	INTERVE NTION	RESEARC H METHODO LOGY	ASSESS MENT	OUTCO ME
1	Shekufe khayltas, 2000 ⁽⁵⁾	30	Vitis vinifera D1	Double blind, randomised	Mc Gill questionai re	The treatment of pain and stiffness related to osteoarthri tis of the knee joint is significant ly improved by vitis vinifera D1. It is a low-cost treatment with no side effects that gently drains built-up

						toxins from the affected area, in this case the knee joint.
2	D. E. Hurwitz et al 2000 ⁽⁶⁾	53	NSAIDS	double-blind study	Kellgren and Lawrence grade	suggested that changes in loading parameters may differ depending on the type of analgesic agent used or even the nonsteroidal anti-inflammatory drug used, or that there may be a drug concentration threshold that allows for an analgesic effect without adversely affecting knee-joint loading
3	R. A. van Haselen et al, 2000(7)	184	homeopathic gel vs an NSAID (piroxicam) gel	pragmatic, randomized, doubleblind controlled trial	VAS	The NSAID gel was not as well tolerated or as effective as the homoeopathic gel. It is

						impossible to rule out the existence of a clinically significant difference between treatment groups. Patients with osteoarthritis may find the homoeopathic gel to be a helpful therapeutic option when combined, if necessary, with straightforward analgesics.
4	Heinz Birnesser et al, 2003 ⁽⁸⁾	592	Zeel® comp. N (tablets) COX 2 inhibitors Celebrex® (active ingredient celecoxib, 100 or 200 mg hard capsules) and Vioxx® (active ingredient rofecoxib, 12.5 or 25 mg tablets)	open, prospective, multicenter, reference-controlled cohort study	WOMAC	This trial demonstrates that Zeel® comp. N is much more well tolerated while being just as effective as the COX 2 inhibitors celecoxib and rofecoxib. As a result, for the

						<p>treatment of mild to moderate osteoarthritis of the knee, this homoeopathic combination therapy presents a true alternative to allopathic medications. Zeel® comp. N should also cut the cost of long-term arthritis therapy due to its cheaper cost and the fact that it essentially removes the need for supplementary medicine to control side effects.</p>	
	5	Mobasher et al, 2014 ⁽⁹⁾	75	Acupuncture, Homoeopathy and Pre Study medications		VAS, WOMAC	<p>Acupuncture and homoeopathy both reduced pain and improved knee function, but acupuncture</p>

						re was significantly more effective than homoeopathy. Furthermore, acupuncture significantly reduced knee circumference while homoeopathy had no effect.
6	Koley et al, 2015 ⁽¹⁰⁾	60	Individualised	Double blind Randomised Placebo controlled trial	VAS	There were no significant difference between homoeopathic medicines and Placebo
7	F. F. Motiwala et al 2016 ⁽¹¹⁾	131	Individualised Homoeopathic Prescription	Prospective Observational Study	ADL, WOMAC Score	Homoeopathic medicines have the potential to improve the ADL of OA patients by reducing pain and stiffness and slowing disease progression without any adverse systemic effects,

						and they can be used safely as a comprehensive health care therapeutics.
8	Atul B. Rajgurav, Parth Aphale 2016 ⁽¹²⁾	30	Rhus Tox	RCT	WOMAC and Kellgren and Lawrence system of classification	The scores before and after the treatment showed a significant change, it was discovered. Conclusions: Rhus tox was found to be useful in treating knee osteoarthritis cases.
9	Pankaj Dave, Mehul Trivedi, Girish Patel, PranavSha 2018 ⁽¹³⁾	100	Bryonia Causticum Calc carb Calc flour, Kali carb Rhus tox	randomised, controlled, Prospective, open intervention trial	KOOS	It becomes quite clear to learn that Rhus tox. was predominantly where popliteal muscle tendon was destroyed, followed by OA alterations, if we can take the idea of individualization to its most fundament

						al level and comprehend what pathophysiology occurs at the level of the knee joint. Whether there is micro trauma or overuse injury to an osseous portion, ligament, or menisci, bryonia is beneficial in treating a number of symptoms. Causticum works well when popliteal and patellar tendons have been damaged along with a progressive decrease of quadriceps muscular strength. Where osteophytes are present, recurring synovitis results,
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						and calcium carbide demonstrated effectiveness. Calcium carbide also had osteoporosis.
0.	1 Dr. Amrutha Manoharan, 2019 ⁽¹⁴⁾	30	Bryonia Rhus tox Pulsatilla Arnica Calcarea Carb	Randomized Control Trial	Symptomatic	It was discovered that homoeopathic medicines used in centesimal potency were effective in the treatment of knee osteoarthritis. This study demonstrates that centesimal potency is effective in reducing pain in patients with knee osteoarthritis.
1.	1 Dr. RAKENDU 2019 -15	30	individualised	Convenient Sampling technique	ADL scales	The ADL scores, which are used to gauge the efficacy of treatment, reveal a significant

						improvement following treatment. According to the statistical analysis of the aforementioned findings, homoeopathic medications are beneficial in the treatment of knee osteoarthritis and also increase the patients' ability to carry out their everyday activities.
2.	1 Bhaskar R. More, Santosh Kumar A. Gite, Mahesh Kumar A. Gite, Kailassing G. Pardeshi, Varsha B. More, Kalyani S. Jadhav. 2019 ⁽¹⁶⁾	100	lifestyle and dietary modifications in their daily routine	Randomized, Cross-sectional study	Assessment criteria Pain, stiffness, swelling, restricted movements, painful movement	Those who are younger in age are also affected by OA for a variety of causes. In rural areas, farmers and housewives are more susceptible to OA. The majority of people use

					s, deformatie s, knee x-ray	allopathic medicine and analgesics. Few people favour homoeopathy. Rural residents need to be made aware of OA and its relationship to homoeopathy.
3.	1	Dr. Ancy Abraham, Dr. ESJ Prabhu Kiran and Dr. Mini Illath Veetil 2020 ⁽¹⁷⁾	44	Rhus Tox 200	Intensity of symptoms, change in KOOS Criteria and Changes in Serum Hyaluronic acid level	By lowering the level of serum hyaluronic acid, Toxicodendron pubescens (Rhus Tox) is useful in treating primary osteoarthritis. Its effects lead to alterations in the composition of hyaluronic acid that are comparable to those seen in primary osteoarthritis.

4.	1	Dr. Diwanshi Gupta, Dr. E Siva Rami Reddy, Dr. Parveen Sharma, Dr. Charanjeet Singh and Dr. PK Chakraborty 2020 ⁽¹⁸⁾	60	Rare medicines Angustura Vera, Formica Rufa, Arbutus Andrachne, Osteo Arthritic No dosa, salicylic Acid, Sycotic Bacillus	A pre- post Study	WOMAC	Medicines that are hard to come by Angustura Vera, Formica Rufa, Arbutus Andrachne, Osteo Arthritic No dosa, Salicylic Acid, and Sycotic Bacillus have been found to be effective in the treatment of knee joint pain in patients aged 45 to 65.
5.	1	Hashemzadeh et al, 2020 ⁽¹⁹⁾	71	Nanocurcumin and Placebo	Randomised Controlled Trial	WOMAC	Patients with osteoarthritis benefit greatly from nanocurcumin.
6.	1	N. Rajeev Kumar et al, 2021 ⁽²⁰⁾	60	Individualised Homoeopathic Prescription	Observational Study	RAPID 3	Homoeopathic Medicines based on totality of symptoms is found to be more effective as compared to individualised

						homoeopathic medicines
7.	1 Yogeshwari Gupta et al, 2021 ⁽²¹⁾					homoeopathic medicines are capable of reducing pain and symptoms of osteoarthritis and also improves the quality of life of patients
8.	1 Dr. Meenakshi Shriwas, 2021 ⁽²²⁾	30	Acute and constitutional homoeopathic medicine	Observational study	Wong-Baker Pain Rating Scale	Homoeopathic treatments improved overall health and pain tolerance, which decreased the risk of deformity and raised quality of life. Accordingly, our study concludes that homoeopathic medicines can be utilised to treat osteoarthritis efficiently with the assistance

						of individualization treat the patient according to its symptomatology & our dynamic medicine have not produced any form of side effects
9.	1 Reteka Sexena, Tarkeshwar Jain 2021 (23)	50	<i>Osteoarthritic nosode</i> and physiotherapy and placebo	single blind randomised controlled trial study	Knee Outcome Survey-Activity of Daily Living Scale (KOS-ADLS) questionnaire	In the treatment of knee OA, osteoarthritic nosode combined with physiotherapy is much more effective than placebo combined with physiotherapy
10.	2 Dr. S.YOGA Sankar, Suman.A.S 2021(24)	60	individualized		Modified Naranjo Criteria	Despite being seen as both art and science, the homoeopathic tradition of medicine finds it difficult to qualify as a scientific

						<p>approach. The theories of vital energy, medication dynamization, and homoeopathic modus operandi have not yet been scientifically proven. In order to demonstrate homoeopathy's efficacy and objectivity in comparison to other systems of medicine already in use, contemporary research focuses on evidence-based investigations. The latter is increasing importance in studies based on prognostic and diagnostic characteristics to find elements</p>
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						that might prevent death. By using homoeopathic symptoms as a predictive indicator, homoeopathic drugs can be evaluated for their efficacy in specific cases.
1.	2	Syed Farhan Abbas Naqvi et al, 2021 ⁽²⁵⁾	600		cross sectional study	According to the study, there is no statistically significant difference between complaints and complications in the allopathic medical system, but both complaints and complications are statistically significant in the homoeopathic medical system and the herbal

						medical system.
2.	2	G Peat et al 2021 ⁽²⁶⁾			Narrative review	Knee osteoarthritis severe enough to necessitate joint replacement accounts for a small proportion of all knee pain and disability suffered by the elderly. To have an impact on community levels of pain and disability, primary care healthcare must focus on this larger group.
3.	2	Ram Kumar, 2022 ⁽²⁷⁾	1	Rhus tox	Case study	Homoeopathic treatments improved overall health and pain tolerance, which decreased the risk of deformity and raised

						<p>quality of life. Accordingly, our study concludes that homoeopathic medicines can be utilised to treat osteoarthritis efficiently with the assistance of individualization treat the patient according to its symptomatology & our dynamic medicine have not produced any form of side effects</p>
4.	2 Dr. Tanya Rai, 2022 ⁽²⁸⁾	60	Individualised Homoeopathic medicine	open-label, randomised, pragmatic clinical trial	WOMAC and Numerical Rating Scale	Individualized homoeopathy treatment and Calcarea Fluor are both successful in lowering pain and improving functional outcomes

						in osteoarthritis patients. However, individualized homoeopathic treatment administered to each patient's needs was more effective than Calcarea Fluor.
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Table – 2 Overview of studies related to Osteoarthritis