

IMPORTANCE OF CAUSATION IN TRAUMATIC OSTEOARTHRITIS OF KNEE: AN EVIDENCE BASED CASE REPORT

Prasad Sunil¹ & Patel Jignesh H²

¹Ph.D Scholar, Department Of Homoeopathy, Parul University Vadodara Gujarat and Officer In-charge Clinical Research Unit For Homoeopathy ,Ranchi: ²Professor/Guide Jawahar Lal Nehru Homoeopathic Medical College And Hospital, Parul University ,Vadodara Gujarat

Correspondence: Prasad Sunil, E-mail: sunil.prasad12@yahoo.com

ABSTRACT

Osteoarthritis (OA) is a prevalent musculoskeletal disorder with significant impact on patient well-being and healthcare systems. This case study presents two patients in India with OA resulting from traumatic injuries, comparing two reportorial methods in homeopathic remedy selection. The first case (Male, 56) used the elimination method, emphasizing past injury, leading to the selection of *Sulphuricum Acidum*, a constitutional remedy. In contrast, the second case (Male, 58) applied the totality method, which focused on the complete symptom picture, resulting in the prescription of *Bryonia*. Both methods proved effective, demonstrating the importance of tailored approaches in homeopathic practice. Treatment combined non-pharmacological strategies such as exercise, weight management, and assistive devices, with pharmacological options like acetaminophen and topical NSAIDs for pain relief. Despite initial improvements, corticosteroid injections and physical therapy were required for ongoing symptoms. This case highlights the complexity of OA management in India, emphasizing early detection, diverse treatment approaches, and long-term patient care.

Keywords: Osteoarthritis, Homoeopathy, Knee Pain.

INTRODUCTION

Osteoarthritis (OA) is a prevalent degenerative joint disorder characterized by cartilage degradation, subchondral bone remodeling, and synovial inflammation. It primarily affects weight-bearing joints, causing pain, stiffness, joint effusion, and functional impairment. Aging, genetic predisposition, biomechanical stress, metabolic dysregulation, and inflammatory mediators contribute to OA development (Felson & Zhang, 1998; Felson et al., 2008). The pathogenesis of OA involves abnormal chondrocyte metabolism,

imbalanced extracellular matrix turnover, oxidative stress, and inflammation, with cytokines such as IL-1 α and TNF- α playing key roles (Felson et al., 2000; Abramson & Attur, 2009). Recent research highlights the influence of epigenetics, mitochondrial dysfunction, and dysregulated autophagy in OA progression (Bijlsma et al., 2011).

Management options are mainly palliative, including lifestyle modifications, physical therapy, analgesics, NSAIDs, corticosteroid injections, and viscosupplementation (Hochberg et al., 2012). However, challenges

persist due to delayed diagnosis, limited treatment efficacy, and the lack of disease-modifying therapies. There is a pressing need for innovative strategies to enhance OA diagnosis and treatment (Hunter et al., 2014). In India, factors like manual labor, squatting, poor ergonomics, and rising obesity rates exacerbate OA (Brown et al., 2006). Genetic predispositions and pro-inflammatory dietary patterns further contribute to its pathogenesis (Gelber et al., 2008). Previous joint injuries, malalignment, and metabolic syndrome also increase OA risk (Brown et al., 2006). Tailoring management to these factors is essential for improving clinical outcomes and reducing the burden of OA (Felson et al., 2000; Hunter et al., 2014).

EFFECT OF TRAUMATIC INJURY IN DEVELOPMENT OF OSTEOARTHRITIS

Case 1: case following reportorial approach of elimination method.

Patient's Information: A 56-year-old male (XYZ) presented on September 8, 2023, with a three-year history of limb weakness, tremors, and bilateral knee and hip discomfort following a fall. Symptoms include exertion intolerance, knee instability, and pain exacerbated by exertion, stair climbing, and cold weather, with relief through dry conditions and manual interventions. His medical history is unremarkable; family history includes stroke (grandfather), Type 2 Diabetes (father), and rheumatoid arthritis (mother).

a) PHYSICAL GENERALS: The participant reports tearing muscle pain exacerbated by cold weather, exertion, and moisture, with relief in dry climates and by lying on the painful side. They experience bilateral knee pain consistent with osteoarthritis, worsened by movement, activity, and cold weather, with morning stiffness and occasional swelling.

The participant craves acidic foods and avoids rich or fatty foods, which cause digestive discomfort. They exhibit a dry, yellowish-coated tongue, persistent thirst for cold water, and a sour taste, with occasional water brash. Stools are large and hard, with rectal discomfort. Profuse perspiration with a sour odor occurs, particularly around the neck. Sleep is disturbed by frequent awakenings and distressing dreams.

b) MENTAL GENERALS: The participant exhibits pervasive anxiety, particularly regarding health, with a tendency to overanalyze and a fear of failure and rejection. They are timid, overwhelmed by responsibilities, and crave stability, avoiding change and disruption. Emotionally volatile, they display irritability and fluctuating moods while remaining reserved in social settings. Physically, they suffer from tearing muscle pain, aggravated by cold and damp conditions, and bilateral knee pain indicative of osteoarthritis, with stiffness and occasional swelling. They crave acidic foods and avoid fatty ones, which cause digestive discomfort. The tongue is dry with a yellowish coating, and they experience persistent thirst and a sour taste. Stools are large and hard, causing rectal discomfort. Profuse perspiration with a sour odor occurs, especially around the neck, and sleep is disturbed by unsettling dreams.

Provisional diagnosis: Inflammatory joint disorders

Laboratory investigations: X-ray of b/l knee joints

Final diagnosis: Osteoarthritis of knee joint

Miasmatic diagnosis: syco-psoric

◆ **TOTALITY OF SYMPTOMS:-**

◆ **Anxiety:** Predominantly health-related; overanalyzes minor details.

- ◆ **Timidity:** Fear of failure, illness, and new experiences; avoids change, distressed by disruptions.
- ◆ **Overwhelmed:** Struggles with decision-making; craves stability, unsettled by routine deviations.
- ◆ **Sensitivity to Criticism:** Internalizes feedback, leading to inadequacy and fear of rejection.
- ◆ **Emotional Volatility:** Irritability, fluctuating moods; reserved, preferring solitude or small gatherings.
- ◆ **Muscle Pain:** Exacerbated by cold; relief from dry climates and lying on the painful side.
- ◆ **Knee Pain:** Osteoarthritis; aching, stiffness, swelling; worsens with movement, cold, and damp. Improved with rest and warmth.
- ◆ **Appetite:** Craves acidic foods, avoids fatty ones (causing digestive discomfort).
- ◆ **Tongue/Thirst:** Dry tongue with yellowish coating; persistent thirst for cold water.
- ◆ **Digestive Symptoms:** Sour taste, occasional water brash; hard stools, rectal discomfort.
- ◆ **Perspiration:** Profuse, sour odor, particularly around the neck.
- ◆ **Sleep:** Frequently disturbed with unsettling dreams.

RUBRICS EXTRACTED FOR REPERTORISATION BY ELIMINATION PROCESS

1. [Kent] [Generalities]INJURIES (INCLUDING BLOWS, FALLS AND BRUISES)
2. [Kent] [Generalities]INJURIES (INCLUDING BLOWS, FALLS AND BRUISES): Extravasations, with
3. [Kent] [Mind] IRRITABILITY (SEE ANGER)
4. [Kent] [Stomach] DESIRES:Brandy
5. [Kent] [Stomach] AVERSION:Coffee
6. [Kent] [Abdomen] WEAKNESS, SENSE OF Stool After

7. [Kent] [Stool] SOFT

Therapeutic Intervention: The repertorization was conducted using Zomeo Ultimate software, applying the elimination reportorial method following 'Kent repertory' in consultation with materia medica^{24,25}, which determined 'SULPHURICUM ACIDUM' as the well-indicated remedy.

REPERTORIZATION CHART:

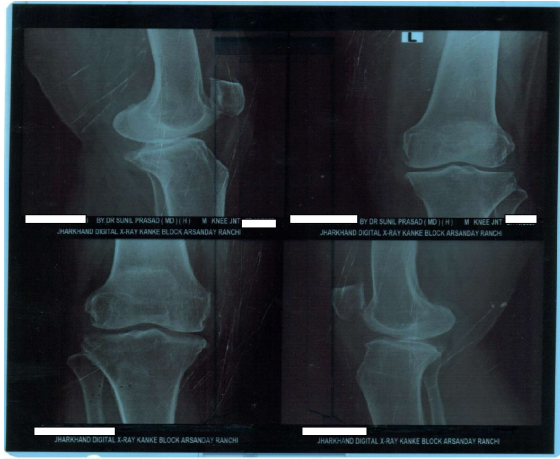
REPERTORIAL CHART NO.-1

Consultations and follow-ups:

Date Of Follow-up	Symptoms	Prescription	Justification of prescription	KOODS	EQ-SDL
12.07.23	Presenting complaints	SULPHURICUM ACIDUM200/4 DOSES	TOTLITY OF SYMPTOMS ACCOMPANIED WITH REPERTORISATION	S-18 ST-7 P-30 FDL-57 FSRA-16 QOL-13	24
18/08/23	ALL GENERALITIES IMPROVED.PAIN SUBSIDED 50 PERCENT PT. WAS ASKED TO REPORT AFTER ONE MONTH.	RUBRUM MET 200/30 DOSES	PT. WAS FEELING BETTER BY 8% RELIEF IN SYMPTOMS.	S-18 ST-7 P-29 FDL-49 FSRA-14 QOL-12	40
26/09/23	ALL GENERALITIES BETTER THAN BEFORE. PAIN SUBSIDED more than 50 PERCENT AFTER TAKING MEDICINE. TWISTED ANKLE 2 DAYS AGO (PAIN PERSISTANT SINCE 2 DAYS PT. WAS ASKED TO REPORT AFTER ONE MONTH.	SULPHURICUM ACIDUM 200/2 DOSES	PATIENT WAS FEELING BETTER AND ALL GENERALITIES WERE IMPROVED DUE TO TWISTING OF KNEE 2 DAYS PRIOR.	S-13 ST-5 P-21 FDL-43 FSRA-12 QOL-10	50
27/10/23	ALL GENERALITIES BETTER THAN BEFORE PAIN SUBSIDES BY 80 PERCENT WITH NO RELAPSE OR RECURRENCE. PATIENT WAS advised to continue the last medicine for 3 more months	RUBRUM MET 200/30 DOSES	ALL GENERALITIES BETTER THAN BEFORE PAIN SUBSIDES BY 35-42 PERCENT WITH NO RELAPSE OR RECURRENCE. PATIENT WAS advised to continue the last medicine for 3 more months	S-7 ST-3 P-14 FDL-24 FSRA-7 QOL-5	75

On observing for 3 more months it was found that:

- 1) ALL GENERALITIES BETTER
- 2) PAIN SUBSIDES BY 75 PERCENT WITH NO RELAPSE OR RECURRENCE

LAB INVESTIGATIONS: FIG: BEFORE TREATMENT (PARTICIPANT 1)

NAME	G.S.	AGE/SEX	56 YRS /M
REF BY.	DR SUNIL PRASAD, MD(H)	DATE	8- 09- 2023

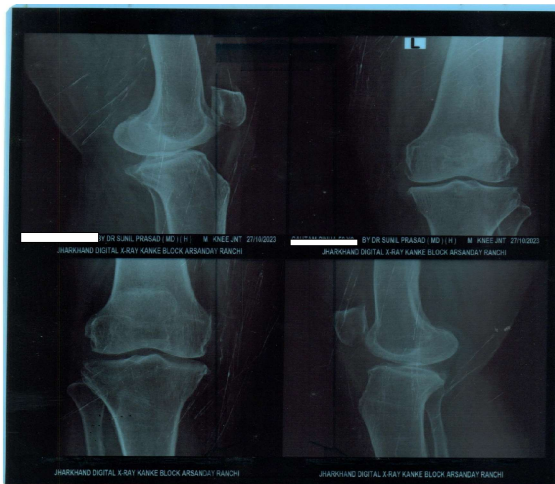
FINDINGS:

Degenerative changes noted in the form of marginal osteophytes and medial tibiofemoral joint space reductions are noted with medial tibial condyle showing subchondral sclerosis.

There is no evidence of fracture or loose bodies. No abnormal soft tissue calcification seen.

Bones show normal architecture.

IMPRESSION: Grade III osteoarthritic changes.

**FIG: AFTER TREATMENT (PARTICIPANT 1)**

NAME	G.S.	AGE/SEX	56 YRS /M
REF BY.	DR SUNIL PRASAD, MD(H)	DATE	12-12- 2023

FINDINGS:

Alignment of knee joint is normal. Negative for fracture.

Negative for dislocation.

No evidence of sclerotic lesion is seen. No evidence of lytic lesion is seen.

Articular margins and joint space is normal. No obvious bony injury.

Bone density is normal.

IMPRESSION: No significant abnormality detected.

ADVICE: Clinical correlation and follow up.

CASE 2: case following repertorial approach of totality method.

Patient's Information: Mr. ABC, a 57-year-old male, visited CRU(Ranhchi) OPD on 26/08/23 presented with a primary complaint of bilateral hip joint pain, characterized by a cracking and stitching sensation extending to the knees. He also reports significant weariness and gait instability, particularly exacerbated during ascent of stairs. Additionally, the patient experiences swelling in the knees and feet, accompanied by a sensation of heaviness in the lower extremities. These symptoms have been persistent for eight years, with exacerbation noted during motion and in the morning, while relief is achieved through rest and lying on the affected side. A notable history includes a traumatic injury to the lower extremities sustained from a fall on a first-floor staircase two years prior. The patient's past medical

history is non-contributory. Family history is significant for hypertension and Type 2 Diabetes Mellitus in the father and mother. Mr. ABC is employed as a postman, maintains cordial familial relationships, and has been married with one son aged 37 years. His lifestyle is devoid of significant addictions or sexual health concerns. His residence is a well-ventilated, well-constructed house with a nearby pond. Vaccinations have been administered without adverse effects, and developmental milestones were achieved appropriately.

Clinical Findings: During the physical examination of Mr. ABC, a 57-year-old male, notable swelling and mild erythema were observed around both knee joints, with increased girth and palpable warmth. The lower extremities exhibited edema in the feet and lower legs, without significant skin changes. Palpation revealed tenderness, particularly around the medial and lateral joint lines of the knees, with mild discomfort in the hip region. Range of motion testing showed restricted knee flexion to approximately 90 degrees and limited extension, with pain at the extremes of movement. Hip joint movement was relatively preserved but caused mild discomfort. Muscle strength in the quadriceps and hamstrings was diminished (4/5 bilaterally), and the patient demonstrated an antalgic gait with instability when ascending stairs. Special tests indicated possible meniscal involvement and anterior knee instability, with a positive McMurray's and Lachman's test, and discomfort and crepitus noted during the Patellar Grind Test.

Generalities:

a) Physical generals: Participant reports vertigo upon standing and displays general lameness and irritability. He is sensitive to warmth, with symptoms worsening with

motion, morning, hot weather, exertion, and touch, finding relief by lying on the painful side. His appetite is erratic, marked by a strong craving for sweets and bitter flavors, a preference for cold drinks, and aversion to milk. His tongue is clean and slender, with a pronounced thirst for large quantities of water. He experiences a bitter taste, dribbling saliva during sleep, and stool that is hard, constipated, and has an acrid odor. Urine is dark and offensive upon standing. He prefers sleeping on his back with 8-9 hours of sound sleep, but struggles with sleeplessness before midnight. Dreams involve being occupied with daily tasks. This profile reflects a range of sensory and gastrointestinal symptoms, emphasizing temperature sensitivity and specific dietary preferences.

b) Mental generals: The participant exhibits significant irritability when faced with confrontation or disruption, indicating a high sensitivity to contradiction. They demonstrate restlessness, anxiety and impatience, preferring solitude over social interactions, which reflects their coping mechanisms and intolerance for opposition. There is a marked rigidity in adherence to personal beliefs and opinions, suggesting a strong need for cognitive consistency. The participant shows hypochondriacal tendencies, with excessive concern about health, either their own or that of others, reflecting a preoccupation with perceived threats. Additionally, they experience episodic depression, often linked to physical ailments, with sudden and unexpected changes in mood or behavior.

Provisional Diagnosis: osteoarthritis/ inflammatory joint disorders.

Laboratory Investigations: X-RAY of B/L knee **Final Diagnosis:** osteoarthritis of b/l knee joint **Miasmatic Diagnosis:** syco-psoric

TOTALITY:

1. Exhibits restlessness, anxiety and impatience, seeking solace in solitude rather than social engagement, indicative of their preferred coping mechanism and intolerance to contra- indication.
2. Undergoes episodic periods of depression, often coinciding with physical ailments changing mood or behaviour suddenly and unexpectedly.
3. Desires: sweet⁺⁺, bitter⁺⁺⁺, cold drink
4. Stool: burnt, hard and constipated stool with acid and pungent smell
5. Urine: dark coloured/offensive as (on standing)
6. Sleep: prefers to sleep lying on back, sound sleep (8-9 hrs)/sleeplessness before midnight
7. a) Cracking and stitching hip joint pain extending to knees, b) Weariness and unstable gait and going upstairs., c) Swelling of knee and foot/ heavy limbs, lower extremities
8. Location: b/l lower extremity / hip joint (H/O traumatic injury in lower extremities due to first floor staircase)
9. Duration: 2 years ago

Sensation: Stiffening sensations.

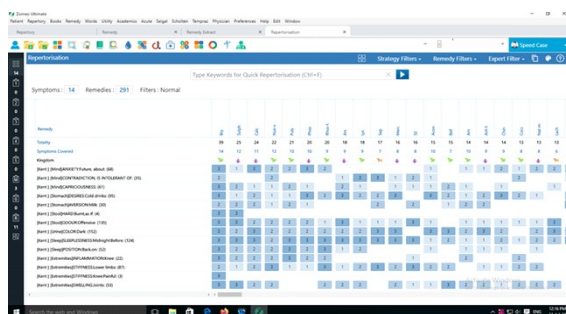


Fig-2: REPERTORISATION CHART

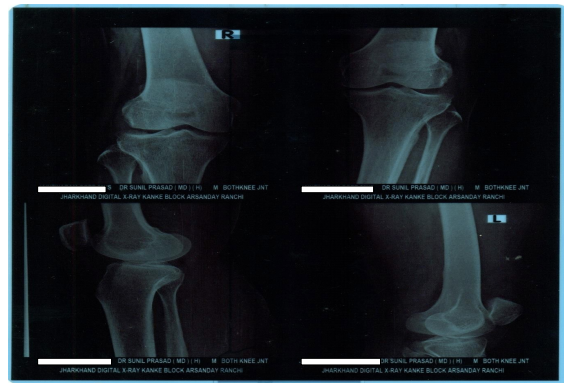
Therapeutic Intervention:

The repertorization was conducted using Zomeo Ultimate software, applying the elimination reportorial method following 'Kent repertory' in consultation with materia medica^{24, 25}, which determined 'BRYONIA' as the well-indicated remedy.

Follow-up and outcomes: KOOS: TABLE B/ EQ-5DL- TABLE-C

Date Of Follow-up	Symptoms	Prescription	Justification of prescription	KOOS	EQ-5DL
26.08.23	Presenting complaints	BRYONIA 200/4DOSES	TOTALITY OF SYMPTOMS ACCOMPANIED WITH REPERTORISATION	S-15ST-7P-31 FDL-52 FSRA-16 QOL-13	20
27/9/23	ALL GENERALITIES IMPROVED. PAIN SUBSIDED 5 PERCENT PT. WAS ASKED TO REPORT AFTER ONE MONTH.	RUBRUM MET 200/30 DOSES	PT. WAS FEELING BETTER BY 8% RELIEF SYMPTOMS.	S-18ST-6P-26 FDL-50 FSRA-14 QOL-11	28
26/10/23	ALL GENERALITIES BETTER THAN BEFORE. PAIN SUBSIDED 25 PERCENT AFTER TAKING MEDICINE, TWISTED ANKLE 2 DAYS AGO (PAIN PERSISTANT SINCE 2 DAYS PT. WAS ASKED TO REPORT AFTER ONE MONTH.	BRYONIA 200/2DOSES	PATIENT WAS FEELING BETTER AND ALL GENERALITIES WERE IMPROVED PAIN WORSENO DUE TO TWISTING OF KNEE 2 DAYS PRIOR.	S-15ST-6P-29 FDL-50 FSRA-14 QOL-13	32
20/11/23	ALL GENERALITIES BETTER THAN BEFORE PAIN SUBSIDES BY 35-42 PERCENT WITH NO RELAPSE OR RECURRENCE. PATIENT WAS advised to continue the last medicine for 3 more months	RUBRUM MET 200/30 DOSES	ALL GENERALITIES BETTER THAN BEFORE PAIN SUBSIDES BY 35-42 PERCENT WITH NO RELAPSE OR RECURRENCE. PATIENT WAS advised to continue the last medicine for 3 more months	S-10ST-6P-26 FDL-47 FSRA-14 QOL-10	45

FIG: BEFORE TREATMENT (PARTICIPANT 2)



IMPRESSIONS: Grade III osteoarthritic changes, Mild Degenerative changes noted in the form of marginal osteophytes and medial tibiofemoral joint space reductions are noted with medial tibial condyle showing subchondral sclerosis.

PARTICIPANT 2 (AFTER TREATMENT)

FINDINGS:

Mild Degenerative changes noted in the form of marginal osteophytes and medial tibiofemoral joint space reductions are noted with medial tibial condyle showing subchondral sclerosis.

There is no evidence of fracture or loose bodies . No abnormal soft tissue calcification seen. Bones show normal architecture.

IMPRESSION: Grade I Right knee osteoarthritic changes.

TABLE-1A

1. History of medication	Oral or tropical analgesics or NSAID therapy for painful episodes of osteoarthritis, provided the medications are stopped completely at least 2 weeks prior study entry .
2.Consent	Participant agreeing to provide written consent (blinding was not followed.)
3.Pathological evidence	Participant with pathological evidencing of severe degeneration of knee joint and marked joint narrowing varus , or valgus deformity (>12 degrees), and requiring surgery
4.ambulancy	Non ambulant
5.injections / surgical intervention	Intra – articular injections , replacement surgery of knee
6.mental retardation/ stability	Diagnosed cases of mental instability or psychiatric illness
7.Gestational period	Pregnancy or lactation
8. Addiction / any other homeopathic medication.	Substance abuse and dependence and history of taking any other homeopathic treatment for chronic illness since past 6 months.

TABLE-B

KOOS ABB.	EXPANDS	NONE	MILD	MODERATE	SEVERE	EXTREME
S	SWELLING	0	1	2	3	4
ST	STIFFNESS	0	1	2	3	4
P	PAIN	0	1	2	3	4
FDL	FUNCTION,DAILY LIVING	0	1	2	3	4
FSRA	FUNCTIONAL SPORTS RECREATIONAL ACTIVITIES	0	1	2	3	4
QOL	QUALITY OF LIFE	0	1	2	3	4

DISCUSSION: Osteoarthritis (OA) is a degenerative joint disorder, often following trauma, such as knee injury from a road traffic accident. Conventional treatments provide symptom relief but may have adverse effects, particularly in older patients with comorbidities. Homeopathy offers a holistic approach, addressing both symptoms and constitutional factors. A 58-year-old male with post-traumatic OA was treated with Calcarea Carbonica 200C over 4 months, showing

significant improvement in pain, stiffness, and mobility. Complementary lifestyle modifications were also recommended. Homeopathy presents a safe, effective alternative for OA management, especially in older adults with comorbidities.

CONCLUSION: This study evaluates two homeopathic approaches for osteoarthritis management: Kent’s repertory utilizing the elimination method and the totality approach. Kent’s method, which prioritizes symptom exclusion to identify the most appropriate remedy, demonstrated superior improvements in joint symptoms and overall health, including energy, sleep, and functional capacity. In contrast, the totality approach, while effective in symptom management, did not yield comparable systemic benefits. These findings suggest that Kent’s elimination strategy offers a more precise and efficacious treatment for osteoarthritis, warranting further investigation to refine and validate clinical protocols.

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