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Effect of Sesame Seeds (*Krishna Tila*) In the Management of Menopausal Arthritis - Case Report

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ABSTRACT

Introduction: Menopausal arthritis is osteoarthritis (OA) that causes joint pain and inflammation early in menopause. Within five years of natural menopause or a hysterectomy, 64% of females with knee osteoarthritis experienced symptoms. Nonsteroidal anti-inflammatory drugs (NSAIDs), Corticosteroids and Hormone Replacement Therapy (HRT) have higher risk of serious side effects and health risks. So non-pharmacological management and dietary supplements gaining interest among patients with Arthritis. Sesamin, a sesame lignan found in sesame seeds was recently reported to be converted by intestinal microflora to enterolactone, a compound with estrogenic activity.

Aim & Objectives: This study aimed to study the efficacy of Sesame Seed powder with local treatment in the management of Menopausal Arthritis. **Methodology:** A female patient of 53year old was came to OPD with complaining of pain, stiffness and swelling in right knee joint, difficulty while walking since 5-6 month. There was a significant joint space reduction in X-ray of right knee joint. She was advised *Krishna Tila* (Sesame Seed) powder internally and locally *Snehan* (with *Tila Taila*), *Swedan* and *Agnikarma* settings was done. **Results and Discussion:** After 1month, significant reduction was observed in all sign and symptoms of the patient. Also Reduction was seen in VAS score and Increase in Range of motion of Rt. Knee joint was seen. *Krishna Tila* is an excellent source of calcium, magnesium, iron, manganese. It also contains sesamin and sesamol. **Conclusion:** Patient got satisfactory relief in clinical features after 1 month. Sesame seed (*Krishna Tila*) along with *Snehan-Swedan* and *Agnikarma* can give worthy relief in Menopausal Arthritis.

Key words: *Krishna Tila*, *Sesame indicum*, *Menopausal Arthritis*.

INTRODUCTION

Menopause is a permanent cessation of menstruation. The median age of menopause is 51.^[1] After menopause the ovaries cease to produce significant amount of oestrogen hormone therefore the symptoms and diseases associated with oestrogen deficiency are of increasing importance to women's health.^[2] When oestrogen levels drop during menopause,

symptoms such as hot flashes, night sweats, mood swings, fatigue, weight gain, and dryness in the vagina, joint pain, swelling, and stiffness would occur.^[3] Menopausal arthritis is osteoarthritis (OA) that causes joint pain and inflammation early in menopause and may persist even after other menopausal symptoms have gone away.^[4] According to the Women's Health Initiative, 44% of the participating postmenopausal women reported having osteoarthritis.^[5] Oestrogen plays an important role in maintaining the homeostasis of articular tissue, therefore, oestrogen protects against joint degeneration.

Sesame seeds are high in protein, vitamin B1, dietary fibre as well as excellent source of calcium, magnesium, iron, manganese, copper, zinc. It also contains sesamin and sesamol.^[6] Sesamin, a sesame lignan was recently reported to be converted by intestinal microflora to enterolactone, a compound with estrogenic activity.^[7] *Shushruta* had explained *Tila* as *Balavardhakh*, *Snigdha*, *Keshya*, *Dantya*,

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VataNashak along with other properties.^[8] Osteoarthritis can be correlated with *Sandhigatavata* in *Ayurveda*. Various treatment options (Hormone Replacement Therapy, NSAIDS) in Menopausal OA are present but they cause multiple side effects such as Strokes, Heart Attack, Breast Cancer.^[9] So, there is a great need to find effective *Ayurvedic* management for Menopausal Arthritis. Through this paper, a novel effort was undertaken to enlighten over the great efficacy *Krishna Tila* on Menopausal Arthritis.

History of Present Illness

A 53-year-old female patient was symptomless before 5-6 month but gradually she had symptoms such as pain in right knee joint and difficulty while walking, stiffness in both knee joints since 2-3 month, and swelling in right knee joint since 15 days. She had history of taking analgesic. But she got relief till only, she took the medicine. So she approached *Swasthritta* OPD, Government Ayurved Hospital, Nagpur, Maharashtra, India, for Ayurvedic treatment. Examination of the patient including Vitals Examination, *Ashtvidh Parikshan* (Table 1), and Specific Locomotor System examination was done. And after obtaining written informed consent, the treatment was started on.

Past History

H/O HTN since 5 years, Tab. Amlodipine 5mg/OD

Tab. Zerodol SP whenever necessary.

Personal History

Name: XYZ

Age/Sex: 53 years/F

OPD: 33951

Occupation: House Wife

Marital status: Married

Food habits: Mixed diet, excessive intake of spicy food.

Sleep: disturbed sleep due to pain

Addiction: No Addiction

Weight: 65kg

Height: 5'4"

Vitals Examination

Blood pressure: 140/80mm Hg

Pulse: 68/min

Respiratory rate: 18/min

Table 1: Ashtvidh Parikshan

Nadi	Vat-Pittaj
Mala (Bowel)	Samyak (Normal)
Mutra (Urine)	Samyak (Normal)
Jivha (Tongue)	Saam (coated)
Shabd (Speech)	Spasht (Clear)
Sparsh (Skin)	Samshitoshn (Warm)
Druk (Eyes)	Prakrut (Normal)
Aakruti (Built)	Sthool (Heavy)

Table 2: Chief Complaints

SN	Chief complaints	Grade	Duration
1.	Pain in right knee joint	3+	5-6 months
2.	Difficulty and pain while walking	2+	5-6 months
3.	Stiffness in both knee joints	2+	2-3 months
4.	Mild swelling over right knee joint	2+	15 days

Examination for locomotor system

Inspections

- Difficulty and pain in both knee joints while walking for distance and sitting for long duration
- Swelling over right knee joint
- Knee flexion deformity on right knee
- Reflexes are intact
- No varicosities are seen
- Tenderness present over medial side of right knee joint

- Crepitus present in both knee joints
- Affected flexion and extension of right knee joint
Range of movement (ROM)

Right knee - Flexion 80°, Extension 0°

Left knee -Flexion 125°, Extension 0°

Investigations

X-ray right knee Anteroposterior and lateral view had showed space reduction in knee joint, osteoporotic changes was seen.

Sr. Calcium - 7.12mg/dl

Diagnosis: Menopausal Arthritis

Table 3: Treatment

SN	Treatment Given	Dose	Duration
1.	<i>Krishna Tila</i>	17gm/BD	30 Days
2.	<i>Snehan</i> (Oleation) with <i>Tila Taila</i>	As required for local Application	30 Days
3.	<i>Agnikarma</i> at Rt. Knee Joint	-	3 Settings (on alternate day)

OBSERVATIONS AND RESULTS

After completion of therapy, the patient got significant relief in pain while walking, stiffness, and swelling of knee joint.

Table 4: Assessment on the basis of subjective and objective criteria

Type of assessment		Before treatment	After treatment
A) Subjective Parameters			
1.	Pain in right knee joint (VAS score)	3+	0
2.	Difficulty and pain while walking	2+	1
3.	Stiffness in both knee joints	3+	0
4.	Mild swelling over right knee joint	2+	0

5.	Crepitus present in both knee joint	3+	1
B) Objective Parameters			
1.	Range of movement: (Right leg)	80	120
2.	Serum Calcium	7.12	8.15

DISCUSSION

By taking into consideration all factors, involved in the pathogenesis of this patient, treatment principles for Menopausal Arthritis was applied here. After the treatment of 1 month, the patient got significant relief clinically, and a significant improvement was observed in Sr. Calcium level and ROM of Rt Knee joint. Treatment protocol mainly comprised of *Krishna Tila* which is one of the common diet ingredients in Indian family. *Krishna Tila* seeds are rich in Calcium, Magnesium and also contain sesamin and sesamol. Sesamin, a sesame lignan was recently reported to be converted by intestinal microflora to enterolactone, a compound with estrogenic activity. Sesame seeds increases High density lipoprotein (HDL), Sex Hormones (Oestrogen), Calcium and Calcitonin. Oestrogen fulfils a relevant role in maintaining articular tissue of joint and play protective role in development of OA. As *Krishna Tila* possess oestrogen it play vital role in Menopausal Arthritis. *Krishna Tila* Seeds are *Balavardhakh*, *Snigdha*, *Keshya*, *Dantya*, *Vata Nashak* in nature. It pacifies *Vatadosha*. *Snehan* (oleation) causes reduction in pain, improvement in muscle strength, and improvement in joint flexibility and provides symptomatic relief in osteoarthritis and the range of motion increased The combined effect of overall therapy helped to decrease swelling, stiffness, and pain by breaking the pathogenesis of disease; hence, an optimum positive result was obtained.

CONCLUSION

The results revealed that Menopausal Arthritis can be managed effectively with collaborative approach of *Krishna Tila* consumption internally and local *Snehan* with *Tila Taila*. As present study is a single case report

hence result obtained in this study are needed to be accessed by conducting similar work on larger sample size. In other words validation of present findings is expected to create specific guideline for management of Menopausal Arthritis.

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