

## Knee Osteoarthritis Management through Ayurveda: A Case Report

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### Abstract

Knee osteoarthritis is the most frequent type of arthritis and is a main reason of disability. Its occurrence in India is 22% to 39%. In Contemporary medicine, OA is usually treated with Acetaminophen, aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) as pain relief medicines. Extreme exploit of NSAIDs can escort to gastric complications. Total knee Arthroplasty (TKA) is extensively employed in the management for end-stage osteoarthritis but Pneumonia is one of the most frequent complications after knee Arthroplasty. It is the main reason of readmission and death subsequent to surgery. In *Ayurveda*, Osteoarthritis can be linked with *sandhigata vata* because of its similarity in clinical features. This is a case of knee Osteoarthritis who was suggested Arthroplasty. She was effectively treated with internal medication & some external therapy. Osteoarthritis is usually managed by *Ayurveda* practitioners but from this case study, it can be concluded that severe osteoarthritis may be managed by *Ayurvedic* intercession.

**Keywords:** OA, *Sandhigata Vata*, Internal medication, External therapy, *Ayurvedic* Intercession.

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### INTRODUCTION

Knee osteoarthritis (OA) is the most frequent kind of arthritis and is a main reason of disability which abridged the quality of life [1]. The occurrence of it is 22%-39% in India [2]. More than 50% of the inhabitants approximately the world (>65 years) show X-ray evidence of OA in one of the joints, consequently demonstrating the high frequency of this disease. However OA is uniformly present in men and women, it appear to be more frequent among younger men (<45 years) and in the elder women (>45 years) [3].

According to Piramal Healthcare Limited in a countrywide campaign against chronic diseases, India is estimated to be the chronic disease capital with 60 million citizens of arthritis by 2025. Presently in OA affected persons, 80% are having several movement limitation and 20% are incapable to execute main activities of everyday livelihood [4].

In Contemporary medicine, OA is usually treated by Acetaminophen, aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) as a pain reliever. Extreme employ of NSAIDs can escort to gastric complications similar to ulcers and augmented threat for hospitalization [5]. In a few patients, upper

gastrointestinal (GI) side effects are so severe that they need discontinuing the medicine.

The major cure of knee OA is fractional or entire knee replacement. Total knee Arthroplasty (TKA) is extensively employed in the Management of last-stage osteoarthritis (OA). This surgical process allows for the enhancement in patient's clinical symptoms and excellence of life, but complications associated to TKA symbolize a main dilemma for orthopedists. Pneumonia is one of the most frequent complications subsequent to total knee Arthroplasty [6]. It is the main reason of readmission and death after surgery Furthermore., Atelectasis and Pleural effusion are also common following total joint Arthroplasty, which can unfavorably influence the outcomes of patients [7].

The clinical features of *Sandhigatavata* is described in different *Ayurvedic* classics which is characterized by *shoola* (joint pain), *shotha* (swelling), *Prasaarana-Aakunchanayo Pravruttscha Vedana* (painful joint movement) resembles with Osteoarthritis [8,9].

Acharya Bhavamishra in *Bhavaprakasha nighantu* described management similar to *Snehana*

(oleation), *Swedan* (sudation), *Upanaha* (poultice) and *Lepa* (topical application) for *Sandhigata Vata* [10]. Several Drugs are also depicted in *Ayurvedic* texts which are being prescribed regularly from numerous years.

Following case of Knee osteoarthritis was effectively managed by using above said treatment principles.

### Case Report

A 57 year old female patient came in OPD of Panchakarma, M.S.M Institute of *Ayurveda* with the complaints of severe pain and swelling over left Knee joint & intricacy in walking since 2 months. She was taken Allopathic treatment, but did not obtain relief and

suggested knee replacement. She was not willing for surgery so she chosen Alternative treatment option. Patient was clinically examined & some procedures are advised.

On clinical assessment, we got following findings. Pallor 2+, Pulse-76/min, Blood pressure-140/80 mm of Hg, massive swelling of left knee joint, Tenderness 2+and restricted movements.

In deliberation by the findings of clinical inspection & investigations (specified in Observation & Result), following treatment was prearranged. Since she was suffering from Hypertension, Amlodipin 5mg was sustained.

**Table-1: Treatment plan**

Sr. No	Treatment	Dose	Duration
1.	<i>Punarnavadi guggulu</i>	500 mg twice a day after meals	30 days
2.	<i>Dashamula qwath</i>	50 ml twice a day	30 days
3/	<i>Upnaha sweda</i>		15 days
4.	Janu Basti with <i>Dashamula taila</i>		15 days
After completion of one month of above treatment , following medicines were advised for next two months			
7.	Tablet. <i>Asthiposhaka</i>	2 tablet twice a day	For 02 months
8.	<i>Punarnava mandoor</i>	500mg twice a day	For 02 months

**Table-2: Ingredients of compound Asthiposhaka**

Tablet. <i>Asthiposhaka</i>	Ingredients	Dose
	<i>Kukkutandatvak Bhasma</i>	-100 mg
	<i>Asthisrunkhala ( Cissus quadrangularis )</i>	-100mg
	<i>Arjuna (Terminalia arjuna)</i>	50 mg
	<i>Amalaki (Emilca officinalis)</i>	-50mg
	<i>Aswagandha (Withania somnifera)</i>	-50 mg
	<i>Guduchi (Tinospora cordifolia)</i>	-50 mg
	<i>Guggulu( Commiphora mukul)</i>	-50 mg
	<i>Bala (Tinosphora cardifolia)</i>	-50 mg
	<i>Babbula qwath(Acacia arabica )</i>	

### OBSERVATION & RESULT

**Table-3: Evaluation on Day 1, 15 & 30**

Sr. No	Assessment parameters	Day 1	Day 15	Day 30	
1	Hemoglobin percentage	9.5 gm %	9.7 gm %	10 gm %	
2	Measurement swelling of left knee joint	Middle margin	37cm	36 cm	35 cm
		Upper margin	38 cm	37 cm	35.8 cm
3	Walking distance	100 meter with support of stick (Painful)	200 meter without support (Mild pain)	500 meter without support (No pain)	



**Fig-1: X-ray left knee joint**

Still patient is coming for follow up. She has no pain or swelling on left knee and can walk the distance around 1 Km, with no pain. There are also considerable changes in the X-Ray of left knee (Fig-1).

## DISCUSSION

The treatment prearranged in this patient was in accordance with following properties of drug.

**Punarnavadi Guggulu** – It was used for local swelling & pain. *Punarnava* is the major ingredient of *punarnavadi Guggulu*. It is identified as '*Shreshtha Shothaghna*' (anti-inflammatory). In one study of *Boerhaavia Diffusa*, it was established to be Anti-inflammatory and diuretic [11].

**Guduchi**– It is one of the ingredients of *Punarnavadi Guggulu* & *Asthiposhaka*. In *Ayurvedic* texts; it is described as *Rasayan* (Rejuvenator). It is established to stimulate escalation of osteoblasts, increases the demarcation of cells into osteoblastic ancestry and increases the mineralization of bone too [12].

**Devadaru** - It is integrated in *punarnavadi guggulu* as it has *Shothahara* (anti-inflammatory) & *Vedana sthapana* (pain relivers) properties. It is distinctively indicated in *jeerna Sandhivata* & *Amavata*. The volatile oil extorted by steam decontamination of the timber of Devadaru was established to possess Anti-inflammatory & Analgesic action in opposition to Acetic Acid induced writhing and hot plate reaction in rats [13].

**Haritaki**– It is acknowledged as *Mrudu Virechaka* (mild laxative) as well as *Srotoshodhaka*. In this case; there was massive swelling due to accretion of synovial fluid. *Haritaki* may be useful to assuage swelling by its *Srotoshodhana* property. It is also established to exist an Anti- Oxidant [14].

**Gomutra** - current study have confirmed that Cow urine can be a prospective resource of natural Antioxidant that might have higher significance as supportive therapy in preventing or slowing Oxidative stress associated degenerative diseases [15].

**Guggulu** – It is the ingredient of *Punarnavadi Guggulu* & *Asthiposhaka*. In *Ayurveda*, it is depicted as *Vedanasthapana*, *Shothahara* & *Rasayana*.

It contains two extremely effectual compounds, Guggulesterone and Myrrhanol A. In Arthritis there are elevated levels of certain inflammatory protein. Guggulesterone neutralize this

protein and reduces echelon of inflammation. Myrrhanol A alleviates pain by blocking pro-inflammatory COX enzymes. Several studies showed Anti inflammatory & Anti Arthritic action of Guggulu [16].

**Dashamoola Qwath** was prearranged as a *Vatashamaka* drug. Its several ingredients contain evaluated in experimental models of inflammation and pain and have revealed to possess Anti-inflammatory and Analgesic activities [17].

**Upnaha Sweda** was advised since it reduces *Stambha* (stiffness), *Gaurava* (heaviness) and *Shoola* (pain) [18].

**JanuBasti** by *Dashamula taila* was done to assuage *Vata* & may be useful to prevent further degeneration [19].

Patient was on Tablet *Asthiposhaka* and *Punarnava Mandoor* intended for subsequently two months. *Asthiposhaka* contains *Kukkutandatvak Bhasma*, *Asthishrunkhala* and *Arjuna* are osteoprotective.

**Amalaki**, **Aswagandha**, **Guduchi** and **Bala** are *Rasayana* to stop further degeneration of bones *Punarnava Mandoor* was prescribed to treat the Anemia.

## CONCLUSION

Osteoarthritis treatment is a normal practice of *Ayurvedic practitioners*, but for end stage OA, we usually doubtful to control. From this case study, it can be concluded that severe Osteoarthritis might be effectively treated by *Ayurvedic* intercession this study will be useful for further combined research with Contemporary medicine in the cases of end stage Osteoarthritis.

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