

## AYURVEDIC TREATMENT APPROACH FOR THE MANAGEMENT OF SHOULDER OSTEOARTHRITIS – A CASE STUDY

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### ARTICLE INFO

Received 15<sup>th</sup> July, 2020  
Received in revised form 7<sup>th</sup>  
August, 2020  
Accepted 13<sup>th</sup> September, 2020  
Published online 28<sup>th</sup> October, 2020

### Key words:

Osteoarthritis, Sandhigata Vata, Nasya  
Karma, Mahamasha Taila,  
Trayodashang Guggulu.

### ABSTRACT

**Background:** Shoulder Osteoarthritis is one of the type of arthritis primarily affecting the elderly as a degenerative and neurological condition with symptoms being pain and disability. As per Ayurveda perspective, it is considered as Sandhigata vata of the shoulder joint. Modern approach comes with wide range of modalities such as analgesics, muscle relaxants, steroids, physiotherapies, and even operative procedures but none of them gives satisfactory and permanent results to relieve.

**Materials And Methods:** Sandhigata vata of shoulder joint being a vatavyadhi that too occurring Urdhwajatrugata (supra clavicular) region creates a necessity for the modality that can nourish and replenish the vitiated vata and able to improve range of motion with analgesic effect at the desired site, Nasya (Nasal Medication) Karma with a Balya (strengthening) oil wins all the desired conditions hence chosen for the present case. Keeping this in main frame, present case was treated with two sessions of 7 days of *Nasya Karma* with 7 days of rest period in between along with *Trayodashang Guggulu* as a palliative drug continued for 21 days. Regular assessments were done with last follow up being on 28<sup>th</sup> day. RESULTS: Significant relief was observed and recorded with SPADI (shoulder pain and disability index) score improvement from 71.54% to 26.15%, with improved quality of life.

**Conclusion:** Mahamasha Taila Nasya Karma with Trayodashang Guggulu canan effective treatment approach for shoulder Osteoarthritis.

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### INTRODUCTION

Osteoarthritis is the most common form of arthritis and a leading cause of disability, largely affecting the elderly population worldwide.. It's a major epidemic in metropolitan cities like Delhi, Mumbai, and Bangalore<sup>1</sup>. A joint is made with a minimum two number of bones, regular wear and tear plus the increasing age making the main pathology behind it, leading to wearing down of the protective tissue (cartilage, that cushions the bones) on the outer surface of the bone making it difficult to perform the function of mobility of the joint and thus there is loss of friction between the adjoining bones. This condition usually is not limiting but worsens over time. The most commonly affected joints lists hands, knees, hips and spine. Symptoms being pain, tenderness (discomfort when pressing on the area with your fingers), stiffness and inflammation over the affected joint.

Sandhigata vata carries similar complains as that of Osteoarthritis. *Sandhigata Vata* vis-à-vis Osteoarthritis belongs to the category of vata vyadhi and is a *Yapya Vyadhi*

(unable to be cured but symptomatic relief can be provided to improve quality of life). The severe consequences caused by *Sandhigata Vata* can be understood by the fact that *Acharya Sushruta* included *Vatavyadhi* amongst the *Astamahagada*<sup>ii</sup> (8 major diseases). *Shula* (pain), *Atopa* (abnormal sounds due to damage of joints or crepitus), *Vata purna driti sparsha* – (liquid filled inflated rubber bag like feel of touch), *Shotha* (Swelling), *Prasarana Akunchanayoho pravritti savedana* (painful range of motion); are the signs and symptoms of sandhigata vata; for which all the *Vata Prakopaka Nidana* (*Vata Dosha* aggravating factors) are responsible to create the pathology.

Usually, symptomatic relief is the key line adopted to treat Osteoarthritis; for which there are multiple approaches like lifestyle changes, over-the-counter (OTC) medication, Physiotherapy, Accupuncture and home remedies (e.g. hot and cold compress, massage therapy), but there are various system of medicines that can perform way better than just being on symptomatic terms. Ayurveda has its unique approach for this. Present work is a case of Osteoarthritis of shoulder joints of an

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elderly patient, hence an *Urdhvajatrugata Vikara*, for which *Nasya Karma* (administration of drugs by the route of nasal cavity) is the choice of treatment<sup>iii</sup> with appropriate drug along with *Trayodashang Guggulu*<sup>iv</sup>. As per fundamental treatments described in Ayurvedic treatises and based on personal clinical experience, *Nasya Karma* with *Mahamasha oil* along with *Trayodashang Guggulu* was chosen to treat the present case.

**Case Summary**

A 50 year old male patient, visited in OPD of Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, New Delhi, with the following complaints- pain and restriction of movement of right Shoulder joint since six months, in February 2020. According to the patient he was apparently well six months ago. He first noticed mild restriction at right shoulder while lifting heavy objects, as the time passes, it further aggravated associated with pain also, even with mild movement and during daily household routine chores, for which he visited a nearby clinic and get some topical application with palliative medicaments which gave him some temporary relief for few days but it again started and the condition become worsened. Personal history revealed that patient had a desk job with long screen hours including irregular food habits, irregular timings of food and milk with unwholesome combinations for almost all the days adding to which sleep pattern was also disturbed which usually resulted in a sleep deprived state. To have a deeper knowledge clinical examination was done as follows.

**Rogi preeksha (examination of the patient)**

**Ashtavidha pariksha (eight fold examination method)**

- Pulse (*Nadi*) -78/min
- Stool (*Mala*)- Normal
- Urine (*Mutra*) -Normal
- Tongue (*Jihva*)- Mild Coated (*Ishat Saam*)
- Speech (*Shabda*)- Normal speech
- Skin (*Sparsha*) -Rough (*Khara*)
- Eyes (*Druka*)- Normal
- Built (*Akruti*) -Medium (*Madhyama*)

**Dashvidh priksa (tenfold examination method)**

1. *Prakriti: Vata Kaphaja*
2. *Vikriti: prakrati sam samveta*
3. *Sara: Madhyam*
4. *Samhanana: Madhyam*
5. *Pramana: Madhyam*
6. *Satmaya: Madhyam*
7. *Satwa: Madhyam*
8. *Ahara Shakti: Madhyam*
9. *Vyaamshakti: Madhyam*
10. *Vaya: proda*

**Samprapti ghatak**

*Dosha: Vata KaphaDushya: Asthi, Majja*  
*Srotas: Asthivaha and MajjavahaSrotodushti: Sanga*  
*Roga Marg: MadhyamVyaadh Swabhava: Yapya*

**General examination**

Built: normal Cyanosis: absent  
 Nutrition: adequate  
 Lymphadenopathy: absent  
 Pallor: absent Clubbing: absent  
 Icterus: absent Oedema: absent

**Investigations**

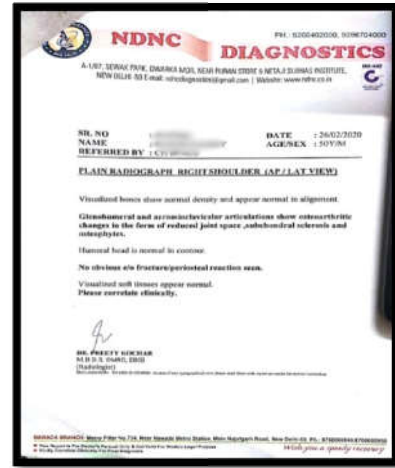


Figure 1 X-RAY –Right Shoulder joint (AP/Lateral view)

**Local Examination: Shoulder Joint (Right)**

Inspection: Rubor: present/absent  
 Swelling: present (mild)  
 Dislocation: none (confirmed by x-ray)  
 Palpation: swelling: present (mild)  
 Tenderness: mild  
 Range of motion: restricted and painful

**Assessment of the Patient**

**Spadi Score Scale:** The Shoulder Pain and Disability Index (SPADI)<sup>v</sup> is a self-administered questionnaire that consists of two dimensions, one for pain and the other for functional activities. The pain dimension consists of five questions regarding the severity of an individual's pain. Functional activities are assessed with eight questions designed to measure the degree of difficulty an individual has with various activities of daily living that require upper-extremity use. The SPADI is the only reliable and valid region-specific measure for the shoulder.

Table 1 Pain Scale

Pain scale	Score
At its worst?	1 2 3 4 5 6 7 8 9 10
When lying on the involved side?	1 2 3 4 5 6 7 8 9 10
Reaching for something on a high shelf?	1 2 3 4 5 6 7 8 9 10
Touching the back of your neck?	1 2 3 4 5 6 7 8 9 10
Pushing with the involved arm?	1 2 3 4 5 6 7 8 9 10

Table 2 - Disability Scale

Disability scale	Score
Washing your hair?	1 2 3 4 5 6 7 8 9 10
Washing your back?	1 2 3 4 5 6 7 8 9 10
Putting on an undershirt or jumper?	1 2 3 4 5 6 7 8 9 10
Putting on a shirt that buttons down the front?	1 2 3 4 5 6 7 8 9 10
Putting on your pants?	1 2 3 4 5 6 7 8 9 10
Placing an object on a high shelf?	1 2 3 4 5 6 7 8 9 10
Carrying a heavy object of 10 pounds (4.5 kilograms)	1 2 3 4 5 6 7 8 9 10
Removing something from your back pocket?	1 2 3 4 5 6 7 8 9 10

**Plan of Treatment**

*Panchakarma Procedure - Mahamasha Taila Nasya Karma*  
 Palliative treatment –*Trayodashang Guggulu*

**Table 3** Details of preparatory procedures for *Nasya Karma*

Procedures	Ingredients	Dose	Duration
1. local <i>Snehana</i>	<i>Mahamasha Taila</i>	Quantity sufficient	Every day before <i>Nasya</i>
2. local <i>Swedana</i>	<i>Dashmoola Kwath</i>	Quantity sufficient	Every day before <i>Nasya</i>
3. <i>Nasya</i>	<i>Mahamasha Taila</i>	8 Bindu (4ml), each nostril	7 days
4. <i>Kaval</i>	<i>Ushnodaka</i>	Quantity sufficient	Every day after <i>Nasya</i>
5. <i>Dhoompana</i>	<i>Dhoomavarti</i>	3 times, 3 Gusps each nostril	Every day after <i>Nasya</i>
6. local <i>Swedana</i>	<i>Dashmoola Kwath</i>	Quantity sufficient	Every day after <i>Nasya</i>

***Nasya Karma with Mahamasha Taila***

Duration of administration of *Nasya*: 2 sessions of 7 days of *Nasya Karma* with 7 days of rest period in between.

Time of administration of *Nasya* -Before meal

Frequency of administration of *Nasya* - once a day

Dosage for *Nasya*—8 Bindu (4ml approximately) each nostril

***Oral Administration of Trayodashang Guggulu***

Duration of administration: 21 days

Time of administration- *Adhobhakta* (after meal)

Frequency of administration- twice a day

Dose: 3 tablets

*Anupana*- warm *Dashmoola Kwath*

Follow up on 28<sup>th</sup> day, after three weeks of treatment.

**RESULT****Table 4** Pain Scale Score

Pain scale	Score Day 0	Score Day 7	Score Day 21	Score Day 28
At its worst?	8/10	6/10	2/10	1/10
When lying on the involved side?	8/10	7/10	3/10	1/10
Reaching for something on a high shelf?	9/10	7/10	5/10	3/10
Touching the back of your neck?	9/10	7/10	6/10	4/10
Pushing with the involved arm?	7/10	5/10	3/10	2/10
TOTAL	41/50	32/50	19/50	11/50

**Table 5** Disability Scale

Disability Scale	Score Day 0	Score Day 7	Score Day 21	Score Day 28
Washing your hair?	7/10	6/10	4/10	2/10
Washing your back?	8/10	7/10	6/10	4/10
Putting on an undershirt or jumper?	5/10	4/10	4/10	3/10
Putting on a shirt that buttons down the front?	5/10	4/10	3/10	3/10
Putting on your pants?	5/10	3/10	2/10	2/10
Placing an object on a high shelf?	9/10	7/10	5/10	3/10
Carrying a heavy object of 10 pounds (4.5 kilograms)	8/10	7/10	5/10	4/10
Removing something from your back pocket?	5/10	4/10	2/10	2/10
TOTAL	52/80	42/80	31/80	23/80

**Table 6** Interpretation of scores

DAYS	Total SPADI score
Day 0	71.54%
Day 7	56.92%
Day 21	38.46%
Day 28	26.15%

After 21 days of treatment, follow up was taken on 28<sup>th</sup> day, in-between assessments were also performed, initially the SPADI score was 71.54% which gradually regresses to 26.15%, thus proves a significant improvement.

**DISCUSSION**

Easing the last phase of life of the elderly people and to improve their quality of life, *Ayurvedic* approach to *Sandhigata Vata* is to retard the degeneration process and strengthening the *Dhatu*s and pacifying the *Vata Dosha*, which has special importance for the management of any degenerative phenomenon. As *Sandhigata Vata* is one of the *Urdhwajatrugata Vikara* and specially *Dhatukshaya Janya Vataroga*, *Nasya karma* with *Balya* (strengthening) oil along with *Trayodashang Guggulu* was chosen, to have a safer and economical medicament.

***Probable Mode of Action of Nasya Karma with Mahamasha Taila***<sup>vi</sup>

*Nasya Karma* is the therapeutic procedure in which medication is administered with intranasal approach. It is specially prescribed for the diseases of *Urdhwajatrugata* (supra clavicular) *Vikara*. Further pattern of induced activity depends on the chemical and physical properties of the stimulant medication, for which lipid based *Balya* medication was searched and found to be *Mahamasha Taila*, which mainly contains *Masha* (black urad pulse), very commonly famous for its properties like *Brumhana gunatmaka*, *nervine tonic*, *immunomodulator*, *aphrodisiac* and *anti-inflammatory*. The other main contents being *Dashmoola*, *chaga mamsa*, *Atmagupta* (*Mucuna Pruriens*) and *Jeevaniya* drugs (healthy life promoting drugs) and others making it *Madhura vipaki*, *Snigdha*, *Ushnaviryatmak* and *Vatahara* in nature hence effective in treating conditions like *sandhigata vata*.

***Probable mode of action of Trayodashang Guggulu***<sup>vii</sup>

*Trayodashang Guggulu* is an *Ayurvedic* compound formulation and as the name suggests contains 13 drugs, is specially prescribed for gaining the strength to nerves, bones, joints, muscles and ligaments of the limbs. Main content being *Guggulu* comprises properties of choice like *Deepana*, *Rasayana* (helps to prevent degenerative changes and promotes regeneration of the bodily tissues), *anti-inflammatory*, *immunomodulatory* and *analgesic*; all of which making it to be the desired drug for the present case. The contents of *Trayodashang Guggulu* were mainly *Guru*, *Snigdha gunatmak*, *Madhur rasa*, *Madhur vipaki* and *Ushna viryatmak* in properties, which corrects symptoms present in the case here. Thus the contents of *Trayodashang Guggulu* directly took part in the *Samprapti vighatan* by their individual properties of each and every drug and as a whole medicine<sup>viii</sup>.

**CONCLUSION**

The data shows that *Nasya Karma* with *Mahamasha Taila* along with *Trayodashang Guggulu* provided significant relief in *Sandhigata Vata* (*Osteoarthritis*) in the present study. In spite of being a single case study, we got promising results both parametrically and clinically, still there is a great need for another project including large number of sample size for the betterment of human lives. We hope that this small contribution will be a stepping stone to perform further research work.

**Financial support and sponsorship-** Nil.

**Conflicts of interest**–None declared

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### How to cite this article:

Tinkle Rani, Vishal Aggarwal and Arun Gupta (2020) ' Ayurvedic Treatment Approach for the Management of Shoulder Osteoarthritis – A Case Study ', *International Journal of Current Medical and Pharmaceutical Research*, 06(10), pp 5335-5338.

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