



# Indian Journal of Agriculture and Allied Sciences

A Refereed Research Journal

ISSN 2395-1109

Volume: 1, No.: 3, Year: 2015

Received: 14.09.2015, Accepted: 26.09.2015

## EFFECT OF COMPOUND DRUG (OIL FORM) ON OSTEOARTHRITIS

Surendra Nath<sup>1</sup>, Poonam Sharma<sup>2</sup> and K.N. Dwivedi<sup>3</sup>

<sup>1</sup>Medical Officer, Mirzapur Varanasi, <sup>2</sup>Research Scholar and <sup>3</sup>Professor, Department of Dravyaguna, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Corresponding Author: Surendra Nath

**Abstract:** The disease osteoarthritis is also called disability of movement. Many lines of treatment are advocated by different systems of medicine but no one is found to be satisfactory. Its treatment in Ayurveda has been mentioned on rational basis. There are plants originated drugs which have properties and auctioned desirable to produce relief in pain, swelling and useful in repair. Among such drugs we selected following drugs Sesamum oil, Onion bulb, Ajowan seeds and Cinnamon leaves as they are easily available and economic. Diagnosed patients of Osteoarthritis were selected from OPD of Govt. Primary Health Centre, Magaraha, District Mirzapur. A total of 50 patients of either group were selected on random basis and divided in groups A and B. Patients of group A received local application of test drug and of group B were advised only useful exercises advised by physiotherapist. Patients of group A showed encouraging and significant improvement in morning stiffness and joint pain as compared to group B. This shows better efficacy of test drug.

**Keywords:** Osteoarthritis, Morning stiffness, Vedanasthapan, Sothahara.

**Introduction:** In last 3 decades few of very fast growing diseases are diabetes, hypothyroidism, hypertension and age related osteoarthritis. Among these osteoarthritis is very troublesome and common among aged persons. The main cardinal features are morning stiffness and pain in weight bearing joints. This is the most disabling condition characterized by the progressive erosion of articular cartilage. Osteoarthritis is considered to be an intrinsic disease of articular cartilage in which biochemical and metabolic alteration results in its break down. Perhaps the most important influences are aging and mechanical effects. Genetic factors also appear to play a role especially in the cases involving the hands and hips. Although linkage to chromosomes 2 and 11 has been suggested in some cases. Patients with primary disease are usually asymptomatic until they are in their fifties deep achy pain, morning stiffness, crepitus and limitation of range of movement are the main features occurring initially. In ayurvedic text <sup>[1]</sup>, its description is very close to the modern views. Its features have been described as “Sankochah parvadaho stambho bheda sthghnam parvadamapi” <sup>[2]</sup>, i.e. constriction of muscles of entire body, joint

stiffness, aching pain in joints and bones (these are symptoms of deranged vayu).

**Materials & Methods:** For preparation of test formulation, the crude drugs are collected from Ayurvedic Garden & spices market Goladeena nath, Varanasi except Onion bulb which was purchased fresh and green from vegetable market of Varanasi. The crude drugs were fresh, dry and not more than six months old from maturity. The drugs procured were-1. Sesamum oil, 2. Onion bulb, 3. Ajowan seeds, 4. Cinnamon tamala leaves.

The all above drugs were taken in ratio of 8:4:2:1 by weight i.e. Sesamum oil 8 parts, Onion bulb 4 parts, Ajowan seeds 2 parts, and Cinnamon leaves 1 part. The medicated oil was prepared by Ayurvedic Taila paka vidhi described in Bhaisajya Ratnavali.

**Selection of Drugs for Osteoarthritis:** According to Ayurvedic literature, above four drugs possess the different actions as below.

- 1. Sesamum Oil:** Snehan (lubricating), Vedanasthapan (analgesic) and Sandhaniya (healing promotor) <sup>[3]</sup>.
- 2. Onion Bulb:** Vedanasthapan (analgesic) and Shothahara (anti inflammatory) <sup>[4]</sup>.
- 3. Ajowan Seeds:** Vedanasthapan (analgesic) and Shothahara (anti inflammatory) <sup>[5]</sup>.

4. **Cinnamon Leaves:** Vedanasthapana (analgesic) and lekha (weight reducing)<sup>[6]</sup>.

The all four drugs carry the Vedanasthapana (analgesic) guna which is main symptom. Secondly the Shothahara (anti inflammatory) guna is possessed by these drugs which are desirable in condition of Osteoarthritis because friction of cartilages give the inflammation of capsule by all except Sesamum oil.

Finally the Sesamum oil works as Sandhaniya because mild to moderate small cartilaginous parts generates pain when movement of joints done and the most important guna snehan which is more essential for the maintenance of synovial fluid.

#### Criteria for Patient Selection having Osteoarthritis

1. Patients having no history of diabetes or renal failure.
2. Patients having no any infective osteoarthritis.
3. Patients having the age not lower than forty years.
4. Patients having no history of traumatic injury of joint.
5. Patients having no history of any type of narcotic or alcohol ingestion.

The patients were selected from Govt. Primary Health Centre–Magaraha, District Mirzapur. 60 patients were registered for clinical evaluation. Patients were randomly divided in 3 groups having equal number of patients in both groups. Ten patients could not attend regular follow up hence they were excluded from this study. Thus total number of patients in study were 40. The dose was 5 ml daily for gentle massage 3 times daily locally for 45 days.

#### Observation

#### Criteria for Pain and Stiffness Assessment via Grading

Table-1: Pain Criteria

S.N	Grade	Score	Signs/Symptoms
1	0	0	No pain
2	+	1	Mild(pain precipitate during hard work)
3	++	2	Moderate (continuous pain during movement)
4	+++	3	Severe(unable to do any routine urge(work))

Table-2: Stiffness Criteria (in hours)

S.N	Grade	Score	Signs/Symptoms
1	0	0	No stiffness
2	+	1	Less than one hour
3	++	2	1-2 hours
4	+++	3	Stiffness lasting more than 2 hours

**Study Design:** We took 3 groups

#### 1. Group-A (Only 20pts on Physical Exercise):

Only on physical exercise (both male and female)

#### 2. Group-B (Only 20 pts on Trial Drug):

Second male osteoarthritis patients

#### 3. Group-C (Only 20 pts on Trial Drug):

Last third one female osteoarthritis patients.

Table-3: For Pain

Group	BT	AT	AT-BT
A	2	3	3-2=1
B	3	1	3-1=2
C	3	1	3-1=2

The above table shows difference of score points. The group 'A' has very mild significant effects of physical exercise on osteoarthritis patients. The group 'B' and 'C' shows the differences more comparison between 'BT' and 'AT' indicates highly significant effect of drugs on osteoarthritis patients.

Table-4: For Stiffness

Group	BT	AT	AT-BT
A	2	3	3-2=1
B	3	1	3-1=2
C	3	1	3-1=2

The above group 'A' shows non-significant effects of physical exercise. The above group 'B' and 'C' shows highly significant effects of drugs on osteoarthritis patients.

#### Results

After the 45 days of treatment, 17 patients of group A showed very good improvement in terms of morning stiffness and joint pain and also the quality of life. In group B of 20 only 7 patients were improved in terms of morning stiffness and joint pain.

#### Discussion

The patients of Osteoarthritis have main trouble of morning stiffness and joint pain. The selected drugs possess analgesic and anti inflammatory action, in addition Sesamum oil has lubricating action also. These three properties/ actions are essentially needed while treating Osteoarthritis. Drugs used in this preparation have these three actions/ properties that's why patients of group A got significant relief.

**Conclusion:** Over all effect of the drug was very effective and 85% patients of group A attained active life. The drugs are very effective, easily available and cost effective.

#### References

1. Pandey Kashinath, Chaturvedi Gorakhanath. (2011). *Hindi Commentary on Charaka Samhita of Agnivesa*, Part 2, Chikitsa Sthana 28/25, pp. 781, Chaukhambha Bharati Academy.
2. Pandey Kashinath, Chaturvedi Gorakhanath. (2011). *Hindi Commentary on Charaka Samhita of Agnivesa*, Part 2, Chikitsa Sthana 28/20, pp..

- 780, Chaukhambha Bharati Academy.
3. Sharma, P. V. (2011). *Dravyaguna Vigyana*, Part 2, p. no. 120, Chaukhambha Bharati Academy.
  4. Sharma, P. V. (2011). *Dravyaguna Vigyana*, Part 2, pp. 69, Chaukhambha Bharati Academy.
  5. Sharma, P. V. (2011). *Dravyaguna Vigyana*, Part 2, p. no.494, Chaukhambha Bharati Academy.
  6. Sharma P. V. (2011). *Dravyaguna Vigyana*, Part 2, pp. 250, Chaukhambha Bharati Academy.