

THE EFFECT OF NIRGUNDYADI YOGA ON JAANU SANDHIGATAVATA WITH SPECIAL REFERENCE TO KNEE JOINT OSTEOARTHRITIS

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ABSTRACT

Jaanusandhigatavata (Knee joint O.A.) is described under *Vatavyadhi*, In *vridhavastha* (old age), all *dhatu*s undergoes *kshaya* (degeneration) thus leading to *vataprakopa* and making individual prone to many diseases. It can be correlated with Degenerative Joint disease or Knee joint O.A. which in turn cripples the patient to the maximum extends and reduces the total working capacity of the person. *NirgundyadiYoga* is devoid of side effects even in long term use as well as can prescribe in variable doses as described in *Ayurveda samhitas*. *Nirgundyadi yoga* has very good property of *vatashaman* (decreases *vata*) and slows down the degeneration when given orally in *kashaya* (decoction) form. Considering that there will be improvement in results with each follow up after treatment, there may be chances to have partially reappearance of the symptoms when drug intervention will stop. *Nirgundyadi yoga* may show significant change in the subjective and objective parameters. This proposed operative Hypothesis for the present study is derived on the basis of: 1. The description in the classical Ayurvedic and Modern texts. 2. The clinical experiences of doctors in contemporary medicine and as well as in classics. 3. The survey of the literature regarding contemporary research on *Jaanusandhigatavata* (Knee joint O.A.). This Hypothesis was subjected to testing by using Open trial clinical study, Phase – II.

Keywords: *Jaanusandhigatavata*, Osteoarthritis, *Nirgundyadiyoga*, Knee joint.

INTRODUCTION

^{1*} Ayurveda highlighted degenerative diseases under the concepts like “*Dhatu*sai hilyam |” and “*Dhatu*kshayam”. *SandhigataVata* is one of such disease, which needs a specific target of therapeutic intervention to check or slow down the process of “*Dhatu*kshaya” and to

pacify *Vata*. *Sandhigatavata* may be correlated with degenerative joint disease or Osteoarthritis, which in turn cripples the patient to the maximum, extends and reduces the total working capacity of the person. The incidence of Osteoarthritis is seen more in women and

elderly patients after the middle age. ^{2*}According to World Health Organization (W.H.O.) Osteoarthritis is the second commonest Musculo-skeletal problem in the world population (30%) after back pain (50%). The reported prevalence of Osteoarthritis from a study in rural India is 5.78%. The major risk factors associated with the knee joint Osteoarthritis seen in a population study were above 40 Yrs. of age, female sex, obesity, occupational knee bending, physical labour etc. Osteoarthritis is the most common articular disorder begins asymptotically in the 2nd and 3rd decades and is extremely common by age 70. Almost all persons by Age 40 have some pathologic change in weight bearing joint. 25% females and 16% Males have symptomatic OA.

In Allopathic science, mainly analgesics, anti-inflammatory drugs or surgery are the options for the treatment of Osteoarthritis. These don't give satisfactory relief and also causes great adverse effect. Researchers are looking for drugs that would prevent, slow down or reverse joint damage. Agents which slowdown or halt disease progression are critically needed. ^{3*}For the search of prevent and cure of the disease *Jaanusandhigatavata*, many Researches has been carried out by using other than *Nirgundyadi Yoga* Medicine. But a very rare Researches are happened on *Nirgundi*, *Eranda*, *Koranta*, *Bala* and *Vishwa*. Medicines, Randomly selected Medicines and the present study is a humble effort in search of how much percent Medicines are effective is there in taken *dravyas*.

AIM & OBJECTIVES OF THE STUDY

To study *JaanusandhigatavataVyadhi* and *Nirgundyadi Yoga*.

To assess the efficacy of *Nirgundyadi Yoga* in *JaanuSandhigataVata*

MATERIALS

A) PATIENTS - 100

B) DRUG – *Nirgundyadi Yoga*

C) INSTRUMENTS –

1. Measuring tape,
2. X- Ray,
3. Goniometer

STUDY DESIGN AND SAMPLING METHOD

A total of 100 *Jaanusandhigatavata* patients were selected incidentally and simple random sampling method, allocated to one group according to inclusive and exclusive criterias. Special Case Performa was designed and parameters were assessed. Consent was taken towards the willingness in the participation of the study.

100 patients were treated with *Nirgundyadi yoga* for 30 Days, 20. ml., Twice a day, before meals, 200ml of *dugdhaaspathya* and did 60 Days follow up. Total 90 days period. Parameters assessment days - 1st0th day, 2nd30th, 3rd 60th day & 4th 90th day.

^{4*}**DIAGNOSTIC CRITERIA**

Subjective Criteria

1. Pain, 2. Swelling, 3. Crepitus.

Objective Criteria

1. Circumference of joint,
2. X-Ray Finding,
3. Range of Movement

INCLUSION CRITERIA

1. Patients willing to participate in the study.
2. Patients are irrespective of sex, religion, Socio-economical status, marital status were selected.
3. Patients were selected in between 35 to 70 years age group
4. *Jaanu SandhigataVata* diagnosed according to classical and modern signs and symptoms and patient examinations.

EXCLUSION CRITERIA

1. Age below 35 years and above 70 years.
2. Obese persons (B.M.I.- above 30)
3. Debilitating disorders as Tuberculosis, Rheumatoid arthritis etc.
4. Any systemic disorders as Anaemia Malignancy etc.
5. Secondary Osteoarthritis.

ASSESSMENT OF VARIABLES

Clinical assessment was made for the severity of the disease and for the clinical improve-

ment. Grading for the severity of individual subjective and objective parameters, assessment and as well as for overall assessment was framed as four-point scale (1-4). The grading of 6 variables is given along with clinical proforma especially designed for the study on *Jaanu sandhigataVata*.

Individual Assessment Of Severity - The severity of each variable ranging from Normal – 1, Mild – 2, Moderate – 3, Severe – 4.

Overall Assessment of Severity - Based on the scoring of variables, overall severity was graded as *Prakrita*: 0 to 6, *Mrudu*: 7 to 12, *Madyama*: 13 to 18 and *Teevra*: 19 to 24.

Assessment of clinical improvement

Clinical improvement of the disease was based on improvement in the clinical findings and reduction in the severity of the symptoms and overall severity of the disease. Grading for the clinical improvement individual symptoms and over all severity is as enumerated below.

Grading for the Clinical Improvement for Individual Variable

- | | |
|-----------------------------------|--|
| 1) C.D.- Clinically deteriorated, | i.e. increase in severity score against the Initial score |
| 2) C.S. - Clinically stable, | i.e. severity score remains as against the Initial score. |
| 3) C.I. - 1 – Encouraging, | i.e. 1 degree reduction in the severity score, against the initial score
i.e. reduction from mild – normal, moderate – mild, severe – moderate. |
| 4) C.I. – 2 – Good | i.e. 2-degree reduction in the severity score, against the initial score i.e. reduction from moderate – normal, severe mild. |
| 5) C.I. – 3 – Excellent | i.e. 3-degree reduction in the severity score, against the initial score i.e. sever – normal. |

GRADING FOR THE CLINICAL IMPROVEMENT ON OVER ALL SEVERITY

- 1) C.D: Deteriorate (increase in the severity score)
- 2) C.S: Stabilized (no change in the severity score)
- 3) C.I- 1: Encouraging (0-6 reduction in the severity score)
- 4) C.I- 2: Good (7-12 reduction in the severity score)
- 5) C.I- 3: Excellent (13-18 reduction in the severity score)

DATA COLLECTION

Assessment for individual signs and symptoms and overall clinical improvement was done. The data was collected at the end of follow-up and scoring was done based on the data was collected, and analyzed, tabulated as convenient.

STATISTICAL ANALYSIS

^{5*}The data collected were statistically analyzed with the help and under the guidance of statistician. The analysis has been done as Fredmen's test (Based on Chi-Square) for k related samples. This test is non-parametric equalant to repeated measures Annova and analysis has been done as per the Mean Ranks of Before Treatment, After Treatment, First Follow-up and Second Follow-up and also shown the percentage of efficacy in the different variables. This test has been done because of Ranked type data.

RESULTS AND DISSCUSSION ON SUBJECTIVE CRITERIAS VEDANA

As pain is purely a subjective feeling, it's very difficult to quantify pain, hence womac index pain chart were used for the assessment of results. It was observed that the mean score which was 3.98 before treatment reduced to 2.64 at the end of treatment, i.e. 33.66%. 1.57at end of first fallow up i.e. 60.55%. Again, it decreases to 1.80 at the end of fallow up i.e. 54.77%. The results show highly significant. After treatment it shows good results, again in first fallow up it shows better results, at the end of fallow up again results show decline lesser than first fallow up. It is may be due to actions of drugs are up to two months.

SANDHI SOTHA

It was observed that the mean score which was 3.76 before treatment reduced to 2.49 at the end of treatment, i.e. 33.77%. 1.91 at end of first fallow up i.e. 49.20%. Again it increases to 1.84 at the end of fallow up. i.e. 51.06 %. The results show highly significant. After treatment, after first fallow up and after end of fallow up it shows good results respectively. It is may be due to actions of drugs are up to three months and to be in increasing order.

ATOPA

It was observed that the mean score which was 4.00 before treatment reduced to 2.54 at the end of treatment, i.e. 36.5 %. 1.68 at end of first fallow up i.e. 58.00 %. again it decreases to 1.79 at the end of fallow up. i.e. 55.25 %. The results show highly significant. After treatment it shows good results, again in first fallow up it shows better results, at the end of fallow up again results shows decline lesser

than first fallow up. It is may be due to actions of drugs are up to two months.

ON OBJECTIVE CRITERIAS

CIRCUMFERENCE OF KNEE JOINT

It was observed that the mean score which was 3.58 before treatment reduced to 2.55 at the end of treatment, i.e. 28.77%. 1.95 at end of first fallow up i.e. 45.53%. again it increases to 1.92 at the end of fallow up. i.e. 46.36%. The results show highly significant. After treatment, after first fallow up and after end of fallow up it shows good results respectively. It is may be due to actions of drugs are up to three months and to be in increasing order.

X – RAY

It was observed that the mean score which was 2.5 before treatment, It remain as it is i.e. 2.5 at the end of treatment, at end of first fallow up, and at the end of fallow up. There will not be any change in percentage because what is the severity present in before treatment same severity present in after treatment, in first fallow up and in end of the fallow up. The results show there is no difference at all. So chi-square test was not properly defined. *Jaanu-sandhigatavata* it is a *parihariniviyadhi* (Su-shruta) i.e. degenerative disease, where taken *dravyasa* will not repair the *asthidhatu*, there will not be changes seen in anatomical changes occurs in cartilages or bones.

GONIOMETER

It was observed that the mean score which was 3.96 before treatment, reduced to 2.61 at the end of treatment, i.e. 34.09%. 1.7 at end of first fallow up i.e. 57.07 %. again it decreases to 1.72 at the end of fallow up. i.e. 56.56%. The results show highly significant. After

treatment it shows good results, again in first fallow up it shows better results, at the end of fallow up again results shows decline lesser than first fallow up. It is may be due to actions of drugs are up to two months.

Showing results in percentage and Statistical analysis in overall after treatment, after first fallow up and after end of fallow up.

As showing results in overall after treatment and after fallow up is very difficult to quantify on the basis taken assessment criterias.

It was observed that the mean score which was 4.00 before treatment reduced to 2.86 at the end of treatment, i.e. 28.50% .1.51at end of first fallow up i.e. 62.25%.again it decreases to 1.64 at the end of fallow up. i.e. 59.00%. The results show highly significant. After treatment it shows good results, again in first fallow up it shows better results, at the end of fallow up again results shows decline lesser than first fallow up. It is may be due to actions of drugs are upto two months.

CONCLUSION

In this Clinical research study symptomatic relief is their during treatment period and after treatment up to the first fallow up, and again little aggravates symptoms during second fallow up. Minimum contraindications and nil complications make it acceptable choice of treatment in *Jaanusandhigatavata*.

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