Efficacy of Dashamula Taila and Shulahara Taila in Management of Sandhi-Vata

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Abstract

This study was conducted to evaluate the efficacy Dashamoola taila and Shulahara taila in the management of Sandhigata vata (osteoarthritis) which mainly occurs in middle to elder age persons and is one of the leading causes of joint pain and disability worldwide. For this purpose 60 patients of osteoarthritis were treated in two groups, each comprises of 30 patients. The patients of Group A were given Abhyanga with Dashamoola taila and Svedana on affected joint twice daily for 1 month. The group B patients were treated by Abhyanga with Shulahara taila and Svedana on affected joint twice daily for 1 month. Therapies of both the groups provided significant relief in signs and symptoms such as Sandhishula (joint pain), Sandhi-Stambha (joint stiffness), Sandhishotha (joint edema), Sprarashāhavatva (tenderness) and Sandhishpaṭa (crepitus) as well as improved the range of movements of the affected joint. The comparison showed that Shulahara taila group provided better relief in comparison to Dashamoola taila group in all variables.

Key words: Sandhigata vata, Sandhi-vata, Dashamoola taila, Shulahara taila, Osteoarthritis

Introducion

Sandhigata-vata (osteoarthritis) is a Vatavyadya having higher incidence affecting loco motor system and make the patient unable to do daily routine activity. Pain (Shula) is the cardinal feature of the disease associated with Sandhishotha (joint inflammation), Vata purṇa-drati-sparsha (edema palpable as air filled sac), Prasārattraudakuncana savedana (painful movement of the joints), and in the later stage Ḥantī sandhi (restricted joint movements).

Osteoarthritis refers to a clinical syndrome of joint pain accompanied by varying degrees of functional limitation and reduced quality of life. It is the most common form of arthritis, and one of the leading causes of pain and disability worldwide. Joint pain presents not only with crippling and incapacitating effect but also with emotional, economic and social problems.

Charaka gives common principles of treatment of Vata Vyadhi which comprises repeatedly use of Snehana, Svedana, Basti and Mridu Virechana. Sushruta advises Snehana, Upanaha, Agni karma, Bandhana and Mardana for the treatment of Sandh-vata. Abhyanga is an important type of external Snehana. Thus, taking these principles into consideration Abhyanga and Svedana therapy were selected for the present study.

Materials & Methods

62 patients fulfilling the diagnostic criteria of Sandhigata vata were selected from O.P.D. & I.P.D. of Roga evam Vikriti Vigyan department of NIA hospital Jaipur.

Selection of Drug:

Dashamoola Taila: Dashamoola Taila described by Bhāshajayāra-tatavālī and commonly used for Sandhigata vata was selected as control drug.

Shulahara Taila: A medicated oil named as Shulahara taila was formulated. The drugs selected for this preparation were such which have action to relieve its symptoms as well as have properties to break the pathogenesis of Sandhi-vata from Ayurveda point of view. This taila comprised of drugs having Shulahara, Shothahara, Balya, Rasayana etc actions which may provide maximum relief in all symptoms of this disease. Following drugs along with their proportions were used to prepare this oil: 1. Ashwagandha-3 Part (Root), 2. Akarakara-2 Part (Root), 3. Guggula-1 Part (Gum resin), 4. Rasaṇa-1 Part (Leaf), 5. Nirgundi-1 Part (Leaf), 6. Eranda-1 Part (Root), 7. Yavani-1 Part (Seed), 8. Shallaki-1 Part (Gum resin), 9. Shigru-1 Part (Seed), 10. Haridra-1/2 Part (Rhizome), 11. Pana-1/2 Part (Patra svarasa), 12. Eranda Taila-seed’s oil four times to Kalka.

Method of Preparation of Shulahara Taila: Both the formulations viz., Dashamoola Taila and Shulahara Taila were prepared as per the classical and standard method for Sneha-Paka. Kalka, Sneha and Kvatha were taken in proportion of 1:4:16. The oils were prepared under the supervision of the subject experts in the Pharmacy of NIA, Jaipur.

Criteria for Diagnosis:

Patients having signs and symptoms of Sandhigata vata, as described in Ayurvedic texts, as well as of osteoarthritis of modern medicine were primarily registered. But final diagnosis was based on radiological evidence of OA such as osteophytes, marginal lipping, narrowing of joint space or sclerosis.

Inclusion Criteria:

The patients suffering from moderate to severe joint pain in joint like knee, hip etc.

Patients of age group 40-75 year

Patients belong to either gender, irrespective of religion, sex, socio-economic status, occupation

Exclusion Criteria:

Patients with any anatomical deformity were excluded.

Patients with established hypertension, renal, hepatic or cardiac failure and long term steroid treatment were excluded.
Biochemical and clinical evidence of rheumatoid arthritis, gouty arthritis, ankylosing spondylitis, were excluded. Severely debilitated patients i.e. bone T.B, malignancy were excluded.

**Investigations:** Routine haematological investigations were carried out before and after treatment to assess the present condition of the patients. R.A. factor and S. Uric acid were estimated in the patients where it was required for differential diagnosis. X-ray examination (both antero-posterior & lateral view) of the involved joints

**Grouping Pattern:** 62 patients of Sandhigata vata (OA) were registered for this study out of which 1 patient in Group A and 1 from Group B was dropout. The remaining 60 patients were randomly divided into two groups each comprising of 30 patients. All the patients were advised to withdraw use of NSAIDs before starting the trial.

**Group A:** The patients of this group were treated with Abhyanga with Dashmoola taila and Svedana on affected joint twice daily.

**Group B:** In this group, patients were treated by Abhyanga with Shulahara taila and Svedana on affected Joint twice daily.

**Abhyanga (Oil Massage):** Gently massage was done on affected joints by moving the palm in a circular direction continue for 5 minutes.

**Svedana (Sudation):** Hot fomentation was given with hot bottles, hot pad and warm clothes externally on the affected joints after oil massage for 10 minutes.

**Duration of the Trial:** Total duration of Treatment was 1 month with the regular follow up in an interval of 10 days for observing any side effect of drugs and symptomatic evaluation.

**Criteria of Assessment:** The effects of the therapy on the patients were assessed on the following parameters:

**Subjective improvement:** The improvement was assessed before and after treatment with regard to the clinical features, on the basis of the scoring system (depending upon their severity).

**Joint Pain grading** (Visual analogue scale): Improvement in Joint Pain grading was assessed before and after treatment with the help of Universal pain assessment tool.

**Sandhigraha (Restricted Joint Movement):**

Improvement in range of movement was assessed before and after treatment by using universal goniometer.

**Overall Assessment of the Effects:**

**Complete Remission:** 100% relief in signs and symptom

Remission: More than 75% relief in signs and symptom

**Marked Improvement:** 51 to 75% relief in signs and symptom

**Moderate Improvement:** 26 to 50% relief in signs and symptoms.

**Mild Improvement:** ≤ 25% relief in signs and symptom

**Unchanged:** No relief

**Results & Discussion**

Maximum number of patients i.e. 33.3% belonged to age group of 40-50 years, followed by 31.7% to age group of 51-60 years and 30% to the age group of 61-70 years. Females were 56.7% while males were 43.3%. Among the female patients 70.6% were in menopausal state, which supports estrogen deficiency as a risk of osteoarthritis. Maximum i.e. 58.3% patients had Vata-Kaphaja, 5% had Vata-Pitta and 16.7% patients had Pitta-Kaphaja Prakriti. Predominance of Vata-Kaphaja suggests the susceptibility of these patients to Sandhigata vata where Vata and Kapha vitiation play a vital role in initiation and manifestation of this disease.

Majority of patients i.e. 53.3% were having Body mass index above normal (23≤) out of which 31.7% were obese, 11.7% were overweight and rest10% were morbidly obese. The data reflects association between obesity and osteoarthritis.

All the patients were having Sandhishula followed by Sandhisphutana (93.33%), Sandhigraha (85%), Sandhishotha (66.66%) and Sparasabhyata (58.33%). Radiological investigation showed decrease joint space in 53.33% patients followed by subcondral bony sclerosis in 28.33%, osteophytes in 23.33%, altered shape of bone ending in 10% and synovial effusion in 8.33% patients. There is often a poor link between changes visible on X-ray and symptoms of osteoarthritis: minimal changes can be associated with a lot of pain, or modest structural changes to joints can occur with minimal accompanying symptoms. Hence it proves the dissimilarity between the clinical and radiological findings.

**Table 1:**

| Table-1 Effects of the Dashmula Taila (Group A) Therapy on Chief Complaints |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Complaint       | No. of patients | Mean Score BT  | % of Change    | SD (±)           | SE (±)           | W               | P               |
| Sandhishotha    | 20              | 1.95            | 1.40            | 28.20            | 0.51            | 0.11            | <0.0010         |
| Sandhigraha     | 25              | 2.16            | 1.52            | 29.63            | 0.49            | 0.10            | <0.0001         |
| Sprarshasahatva | 16              | 1.19            | 0.69            | 42.11            | 0.52            | 0.13            | <0.0078         |
| Sandhisphutana  | 29              | 1.48            | 1.17            | 20.93            | 0.47            | 0.09            | <0.0059         |
| Joint Pain      | 30              | 3.57            | 2.40            | 32.71            | 0.87            | 0.16            | <0.0001         |
| Knee joint range| 29              | 115.72          | 119.31          | 3.10             | 2.9             | 0.54            | <0.0001         |

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Effect of Therapies on Clinical Variables

Relief of 28.20% was seen in Sandhishotha (swelling in joints) in group A and 30.76% in group B. The relief in both the groups was statistically extremely significant (Table-1 and 2). Hence, Group B therapy provided slightly better relief in Sandhishotha than Group-A therapy.

29.63% relief in Sandhigraha (stiffness in joints) was observed in Group-A, while in group-B it was 35.26%. The relief in both the groups was statistically extremely significant (Table-1 and 2). Thus, Group-B therapy provided better relief in Sandhigraha than Group-A.

42.11% relief in the symptom of Sprarshasahatva (tenderness) was reported in Group-A while group-B therapy provided 47.72% relief in it. Statistically this relief in both the groups was very significant (Table-1 and 2). Thus the better relief in tenderness was seen in patients of Group-B than Group-A.

In Sandhishulatana (crepitus) 20.93% relief was seen in group-A and 26.83% in group-B. Statistically this relief in both the groups was very significant (Table-1 and 2). Hence, Group-B therapy provided better relief in Sandhishulatana than Group-A therapy.

In the present study extremely significant (P<0.0001) relief in the symptoms of joint pain grading (by universal pain assessment tool) was found in both the groups. Percentage-wise consideration showed that more relief was found in group-B i.e. 39.32% than in group-A i.e. 32.71% (Table-1 and 2).

When the relief provided in groups A & B was compared, it was seen that there was no significant difference between the two groups suggesting an almost equal efficacy of both the groups in all clinical variables.

Effect of Therapy on Knee Movement Range:

Concentration of the range of movements it was found that there was 3.10% improvement in the knee joint flexion in Group A, whereas, 3.70% improvement in knee joint flexion in group B. The improvement provided by the therapies of both the groups was found to be statistically very significant (Table 1 and 2). Hence percentage-wise improvement in group B was higher than group A.

Comparison showed that there was no significant difference in range of knee movement between the two groups suggesting an almost equal efficacy of both the groups on range of movement (knee Joint flexion).

Effect of Therapy on Hematological and radiological Parameter: Both the drugs caused no significant change in laboratory parameters and also no apparent changes were observed in x-ray before and after the treatment.

Overall Effect of Therapy: In group-A 16.7% reported marked improvement, 40% moderate improvement and 43.3% mild improvement but remaining 10% patients remained unchanged.

In group-B 16.7% patients showed marked improvement, 40% moderate improvement and 36.7% showed mild improvement and 8.3% remained unchanged (Table-3). Thus overall improvement provided by group-B therapy was also slightly better in comparison to group-A therapy. None of the patients of both the groups reported any adverse effect; hence drugs are safe to use externally.

Conclusions

Observing the demographic profile, it can be concluded that Sandhigata vata mostly occurs in middle to elder age persons commonly in menopausal females. Overweight/obese persons are more prone to osteoarthritis.

Statistically significant relief was found in all the symptoms of both the groups. On the basis of percentage relief in signs and symptoms and overall relief provided by the therapies it can be concluded that the effects of Group-B (Shulahara taila) were better in comparison to Group-A (Dashmula taila).

It may also be concluded that the local Abhyanga (Oleation therapy) and Svedana (hot fomentation) are safe and effective for the osteoarthritis but gives relief in symptoms for a limited period thus requires repetitive use.

The results would have been better if the therapy had continued for a longer duration.

### Table 2

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<th>Complaint</th>
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<th>Mean AT</th>
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### Table 3

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<th>Group-B</th>
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<td>%</td>
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<td>Complete remission</td>
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