Clinical Researches

Clinical study on *Sandhigata Vata* w.s.r. to Osteoarthritis and its management by *Panchatikta Ghrita Guggulu*

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**Abstract**

*Sandhigata Vata* is the commonest form of articular disorder. It is a type of *Vatavyadhi* which mainly occurs in *Vriddhavastha* due to *Dhatukshaya*, which limits everyday activities such as walking, dressing, bathing etc. thus making patient disabled / handicapped. It being a *Vatavyadhi*, located in *Marmasthisandhi* and its occurrence in old age makes it *Kashtasadhya*. *Vata Dosha* plays main role in the disease. *Shula Pradhana Vedana* is the cardinal feature of the disease associated with *Sandhishotha* with *Vata Purna Druti Sparsha*, lack of movements of the joints or painful movement of the joints. In this study total 49 patients having the complaints of *Osteoarthritis* were randomly divided into 2 groups. In Group A, patients were treated with *Panchatikta Ghrita Guggulu Vati* along with *Abhyanga* and *Nadi Swedana* and in group B patients were treated with only *Abhyanga* and *Nadi Swedana*. The data shows that *Panchatikta Ghrita Guggulu* along with local *Abhyanga* and *Nadi Swedana* i.e. group A has provided better relief in the disease *Sandhigata Vata*.

**Key words:** *Sanadhigata vata, Osteoarthritis, Panchtikta Ghrita Guggulu, Abhyanga, Nadi Sweda.*

**Introduction**

In *Vriddhavastha*, all *Dhatus* undergo *Kshaya*, thus leading to *Vataparakopa* and making individual prone to many diseases. Among them *Sandhigata Vata* stands top in the list. The incidence of osteoarthritis in India is as high as 12%. It is estimated that approximately four out of 100 people are affected by it. Osteoarthritis is the most common articular disorder begins asymptomatically in the 2nd & 3rd decades and is extremely common by age 70. Almost all persons by age 40 have some pathologic change in weight bearing joint1, 25% females & 16% males have symptomatic osteoarthritis.

Allopathic treatment has its own limitation in managing this disease. It can provide either conservative or surgical treatment and is highly symptomatic and with troublesome side effects. Whereas such type of conditions can be better treatable by the management and procedures mentioned in *Ayurvedic* classics.

Local *Abhyanga* and *Nadi Sweda* were selected for the present study as it has shown best for the *Vata Vyadhis*. Here local *Abhyanga* was given with *Bala Taila* because *Bala Taila* and *Nadi Sweda* are having *Vatashamaka* and *Rasayana* properties. In another group *Panchatikta Ghrita Guggulu*, local *Abhyanga* and *Nadi Sweda* were given to the patients. *Panchatikta Ghrita Guggulu* has got *Vatashamaka* properties.

**Aims & Objectives**

- To observe the effect of *Panchatikta Ghrita Guggulu* with *Abhyanga*, *Nadi Swedana* in *Sandhigata Vata*.
- To observe the effect of only *Abhyanga* and *Nadi Swedana* in *Sandhigata Vata*.
- To compare the difference of results in the above treatment groups.

**Material & Methods**

Patients, suffering from *Osteoarthritis*, were selected from O.P.D. and I.P.D. of I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar.

**Inclusion Criteria**

- Classical sign and symptoms of *Sandhigata vata* are *Shula, Shotha, Stambha, Sparsha-asahyata, Sphutana, Akunchana Prasarana Vedana* etc. at the joints1.
Patients between age group of 30 - 70 years.
Patients without any anatomical deformity were included.

Exclusion Criteria:
- Patients below 30 and above 70 years of age.
- Patients suffering from disease like D.M., Carcinoma, Psoriatic arthritis, Vata Rakta, Phiranga, S.L.E., Polymyalgia Rheumatica & Tuberculosis are excluded.

Grouping
Group A: Patients were treated by local Abhyanga with Bala Taila + Nadi Swedana with Dashamula Kwatha + Panchatikta Ghrita Guggulu
- 3-2 Vati twice a day were given to the patient for 30 days with lukewarm water.
Group B: Patients were treated by local Abhyanga with Bala Taila + Nadi Swedana with Dashamula Kwatha for 21 days.

Observations
Total 49 patients were registered (group A- 31 & group B-18), amongst them in group A, 26 patients had completed the treatment and 05 were drop out. However in group B, 14 patients had completed and 04 were drop out.

In this study, maximum 44.89% patients were found in 41 - 50 years of age group, 59.18% were female, 93.87% were Hindu, 93.87% were married, 37.73% were primary educated, 40.81% were housewives, 53.06% belonged to lower middle class, 81.63% were from urban area, 36.73% had Samashana type of habit, 85.71% had got gradual type of onset, 48.97% were found in chronic stage, 65.30% were in menopausal state of life.

Vata-Kapha predominance was found in 55.10% of patients, 81.63% patients had got Madhyama Sara. Madhyama Samhanana was found 83.67% of patients and in Pramanata Pariksha Sthulya was found in maximum number of patients i.e. 51.02% and Madhyama Pramana was found in 32.65% of patients, 65.30% were in Madhyama Satmya & Avara Vyayama Shakti was found in 53.06% patients.

Knee is one of the big weight bearing joints and thus 93.88% was found in involvement of knee joint.

Apart from this Vata Vriddhi and Vata Prakopa were found in 100% patients & Kaphakshaya was found in 18.36% patients. Asthi - Majjavaha Srotodushti was found in all the patients. Other important Srotas were involved in the pathogenesis of the disease are Mamsavaha (71.42%), Artavavaha (57.14%), Medovaha (28.48%), Raktavaha (18.36%) and Purishavaha (26.33%).

Results

Table 2: Chief complaints wise distribution of 49 patients of Sandhigata Vata

| Chief Complaints                           | Number of patients | Total | %   |
|--------------------------------------------|--------------------|-------|-----|
| Sandhishula                                | 31                 | 18    | 49  100|
| Sandhisotha                                | 19                 | 10    | 29  59.18|
| Akunchana Prasarana Vedana                 | 23                 | 13    | 36  73.46|
| Prasaran Vedana                            |                    |       |     |
| Hanti Sandhigata                           | 04                 | 04    | 08  16.32|
| Sandhi Sphutana                            | 22                 | 11    | 33  67.34|
| Sparshasahyata                             | 17                 | 07    | 24  48.97|
| Vata Purnadruni                            | 03                 | 00    | 03  06.12|

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In case of walking time in group A, percentage of improvement was 11.15%, while in group B percentage of improvement was found 5.34%, which is insignificant at the level of p>0.05. In case of climbing time in group A, percentage of relief was 11.88%. While in group B, percentage of improvement was 9.09%. This result shows statistically significant at the level of p<0.01.

In group A, in left knee joint flexion percentage of relief was 36.31%, while in right knee joint flexion it was 47.42%. In hip joint flexion (left), percentage of relief was found 38.51% and in hip joint flexion (right), percentage of relief was found 36.82%, which is statistically highly significant. In group B, in left knee joint flexion, the percentage of relief was found 27.05% & right knee joint flexion, improvement was found 20.15%. While in hip joint flexion (left), percentage of relief was found 18.85% & hip joint flexion (right), percentage of relief was found 14.58% (Table 3-4).

The above mentioned data shows that Panchatikta Ghrita Guggulu along with local Abhyanga and Nadi Swedana i.e. group A has provided better relief in the disease Sandhigata Vata (Osteoarthritis) in the present study (Table 5).

**Discussion**

In this study 44.89% patients were found in 41 - 50 years of age group. Sandhigata Vata starts at the age of 40 which is declining stage of Madhya Vaya. According to sex 59.18% were female patients, which indicates that Sandhigata Vata is more common in female and here the lack of female hormone (oestrogen) in the pre-menopausal period also plays an important role. Modern text also reflect the same type of prevalence, Osteoarthritis or Degenerative Joint Disease (DJD) may first appear without symptoms between 20 and 30 years of age. The symptoms, such as pain and inflammation, appear in middle age. Till the age of 55 it occurs equally in both sexes; after 55 the incidence is higher in women.

Among the female patients 40.81% were in menopausal state of life. Due to Dhatukshaya (Rasa Dhatu) aggravation of Vayu occurs that causes the Sandhigata Vata. In the menopausal condition the deficiency of female hormone leads to different bone and joints problem. While 87.75% patients did not have regular exercise in their routine life. Lack of practice or exercise gradually leads to the weight gain which ultimately leads to Sandhigata Vata. In Prakrutiwise distribution shows that Vata-Kapha predominance was found in 55.10% of patients, due to Vayu of patients and also intake of the Vata Vardhaka Nidana.

Among the different Nidana of the disease Divaswapa...
was found in 65.30%. Day time sleeping increases Kapha and Meda which leads to weight gain and Agnivaishamya which is a common risk factor for Sandhigata Vata. Among the other causative factors Ati Raksha Ahara (51.02%), Ati Sheeta Ahara (40.81%), Ati Vyayama (38.77%), Ati Alpa Ahara (32.65%) also were found. These Nidana played an important role in aggravation of Vayu and thus causes Sandhigata Vata.

In case of chronicity, 48.97% patients were found in chronic stage & 85.71% were having gradual type of onset. This data also supported by literary data. While 85.71% were suffering from Osteoarthritis in cold season and in this season Vata usually aggravates and causes the disease. Maximum number of patients i.e. 95.88% had involvement of knee joint. Knee is one of the big weight bearing joints and thus mostly affected by Osteoarthritis. Involvement of other joint i.e. hip, ankle, shoulder were found 30.61%, 6.12% and 8.16% respectively.

Among the risk factors patients of female sex 57.14%, obesity 55.10%, psychological stress 28.57% was found prevalent. These are also supported by the literary data. Osteoarthritis mainly occurs on the weight bearing joints. Data shows 11 pound weight reduction, reduce 50% risk of cervical spondylosis. It was found elevated both before and after treatment in female patients of pre-menopausal or menopausal period. That may be due to the Osteoporotic changes of bones, due to lack of oestrogen hormone.

Probable Mode of Action
Sandhigata Vata is Madhyama Roga Margagata Vatika disorders in which vitiated Vata gets lodged in Sandhi. Hence to treat Sandhigata Vata drugs acting on both Vata and Asthi should be selected. According to Charaka, in Asthi Dhatu Dushhti the treatment should be given Tikta Dravya Ghrita and Kshira. In Panchatiktaka Ghrita Guggulu predominance of Tikta Rasa is there. Tikta Rasa has Vayu and Akasha Mahabhuta in dominance. Hence it has got affinity towards the body elements like Asthi having Vayu and Akasha Mahabhuta in dominance. Though, Tikta Rasa aggravates Vayu which may enhance the pathogenic process of Sandhigata Vata but, the main principle of Ayurvedic treatment is “Sthanam Jayate Purvam”. The main site of Sandhigata Vata is Sandhi which is the site of Shleshaka Kapha. So, by decreasing the Kapha Dosha Tikta Rasa fulfils the principle.

Most of ingredients of Panchatiktaka Ghrita Guggulu have Tikta Rasa, Ushna Virya and Madhura and Katu Vipaka. The Tikta Rasa increase the Dhatvagni (metabolic stage). As Dhatvagni increase, nutrition of all the Dhatus will be increased. As a result Asthi Dhatu, Majja Dhatu may get stable and Asthi Dhatu and Majja Dhatu Kshaya will be decreased. So degeneration in the Asthi Dhatu may not occur rapidly. It can be said, it slows down the degeneration processes.

Tikta Rasa has got Deepana, Pachana and Rochana properties. So it helps in the improvement of the general condition of health and thus strengthen the whole body as well as joints. On other hand Tikta Rasa possess Lekhana property, so it helps in the weight reduction of the patients and helps in the management of Osteoarthritis. Tikta Rasa is also has got Jwarraghna and Daha Prashamana properties that it may act as anti-inflammatory agent and can reduce the pain and swelling of the joints.

Ghrita is Vata-pittashamaka, Balya, Agniardhaka, Madhura, Saumya, Sheeta Virya, Shula, IwarrAhara, Vrishya and Vayasthapaka also. Thus, it pacifies Vata, improve the general condition of the body and acts as a rejuvenator of the body. Thus, helps in the Samprapti Vighatana of the Sandhigata Vata. Ghrita is having property like Yogavahi which is helpful in increasing bio-availability of other drugs without loosing its own property. Ghrita also contains vitamin D which plays an important role to utilize calcium and phosphorous in blood and bone building.

Due to the Ushna property of Guggulu, it is one of the major Vatashamaka Dravya. Due to its Raksha and Vishadha Guna it acts as a Medohara. According to Sushruta, Guggulu has got Lekhana property which helps in reducing body weight. Due to its Katu Rasa it acts as a Deepana. Thus help in the improvement of general condition of the patient. Purana Guggulu also acts as a Rasayunu which
may help to prevent the any degenerative change in the body. Pharmacologically Guggulu has got the properties of anti-inflammatory, immunomodulatory and anti-lipidaemic action.

On the overall effect of the Panchatikta Ghrita Guggulu, it has been found that drug is predominant in Ushna Virya which helps in pacification of aggravated Vata and subside the pain.

Snehana pacifies the Vata, softens the body and eliminates the accumulated Malas. Swedana relieves the stiffness, heaviness and coldness of the body and produce sweating. By the process of Snehana and Swedana the blood vessels of skin become dilated and local circulation of blood will be increased. The medicine applied locally is also absorbed by the skin and exerts its effects locally.

Conclusion

Sandhigata Vata is one of the Vata Vikara & it is Yapya Vyadhi. South Asian countries like Bangladesh, India, Nepal, Sri Lanka are having higher incidence. Sandhigata Vata vis-à-vis Osteoarthritis is multi-factorial, non-inflammatory degenerative joint disorders.

The data shows that Panchatikta Ghrita along with local Abhyanga and Nadi Swedana i.e. group A has provided better relief in the disease Sandhigata Vata (Osteoarthritis) in the present study. In group A, 15.38% patients achieved complete remission, while 61.54% patients found in maximum improvement and 23.07% were having moderately improved. No patients found unchanged and mild improved. In group B, 07.14% patients obtained complete remission, while 64.28% patients were having moderate improvement, whereas 14.28% patients each were having maximum improvement and mild improvement. No patient found unchanged. There was no apparent change was observed in x-ray before and after treatment. Present study reveals that the selected management have potential effect on Sandhigatavata with the added advantage of being free from side effects.

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