

QUALITY OF LIFE CHANGES IN KNEE OSTEOARTHRITIS (JANU SANDHIGATAVATA) WITH MATRA BASTI

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ABSTRACT

Quality of Life (QoL) is an important outcome of healthcare measures. It is an emerging domain of interest which measures the missing dimension of health especially in chronic disabling conditions like Osteoarthritis. This study focuses on the QoL issues among Osteoarthritis patients after administering the *Matra Basti*. QoL was assessed using Lysholm Knee Scoring Scale to understand the changes in Knee Osteoarthritis on domains of QoL. The present clinical trial was planned to study the effect of an Ayurvedic herbal formulation *Rasna Panchaka Kashaya* with and without *Prasarini Taila Matra Basti* in the management and QoL changes in Knee Osteoarthritis (*Janu Sandhigataavata*). After reaching to the diagnosis, patients were randomly distributed into two groups, viz. Group-1 received *Rasna Panchaka Kashaya*, and Group-2 received the same with *Prasarini Taila Matra Basti*. The subjective and objective parameters were measured before and after treatment in each group. The result of the *Rasna Panchaka Kashaya* along with *Matra Basti* is found to be highly significant in the study.

Keywords: QoL, *Janu Sandhigataavata*, *Matra Basti*, Lysholm Knee Scoring Scale

INTRODUCTION

Quality of life (QoL) is defined as individual's perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns¹. QoL refers to a subjective evaluation which is embedded in a cultural, social and environmental context. Ayurveda gives immense magnitude for the improvement and assessment of QoL as an outcome of treatment. Charaka², while describing the criteria of assessment of outcomes of therapy, has described four quartets (*Chatuhshreyah*) in which first is the effect of therapy on the disease but all other three i.e., *Agni* (Digestive power), *Dehabala* (Physical strength) and *Satwa-*

bala (Mental strength) are predominantly concerned with the QoL. It is emerging as a new domain of interest among the recent research especially in treatment of chronic disabling conditions such as Osteoarthritis.

Charaka clearly defines the motto of treatment being restoration of equilibrium of bodily elements and there by achieving perfect quality of life in terms of alleviation of pain, accession of voice and complexion, plumpness of the body, increase of strength, desire for food, relish while eating, timely and proper digestion of the food taken, approach of the sleep at proper time, not seeing frightful dreams (that forebode disease), happy awakening, the elimination of flatus, urine, faeces and semen, and freedom from impairment of

any kind of the mind, the intellect, and the sense organs. The fruit of action is the attainment of happiness² (*Sukhavapti*).

The quality of life (QoL) measurements are increasingly being used in assessing the treatment outcomes in these conditions³ as they measure the missing dimensions of healthcare. Osteoarthritis is the most common articular disorder begins asymptotically in the 2nd and 3rd decades and is extremely common by age 60. Almost all persons by age 40 have some pathologic change in weight bearing joint. Most of this disability burden is attributable to the involvement of the knees. It is a type illness which requires regular medications and ability on the part of patient to monitor and modify diets and lifestyle.

This study focuses on the QoL issues among Knee Osteoarthritis (*Janu Sandhigatavata*) with and without *Prasarini Taila Matra Basti* using a widely accepted Lysholm Knee Scoring scale⁴ which has been extensively researched, validated and being quite simple for administration. The outcomes of this study will be useful among the researchers and also the state health departments in designing or exploring future remedies and for prevention strategies along with construction of suitable rehabilitation measures.

AIMS AND OBJECTIVES

1. To evaluate the efficacy of *Rasna Panchaka kashaya*⁵ in *Janu Sandhigatavata*
2. To evaluate the effect of *Rasna panchaka kashaya* and *Prasarini Taila*⁶ *Matra Basti* in *Janu Sandhigatavata*
3. To assess the Quality of Life changes in *Janu Sandhigatavata* after the treatment in both the groups.

MATERIAL AND METHODS

After confirming the diagnosis by taking the history in detail, clinical examinations and laboratory investigations, 47

patients were selected from the O.P.D and I.P.D of Dept. of Kaya Chikitsa, ALN Rao Memorial Ayurvedic College, Koppa, and were enrolled in the series. The patients were randomly distributed in the two groups, out of which 40 patients (20 in each group) completed the trial duration of one month and 7 patients left the treatment in between the study.

Quality of Life was assessed using the Lysholm Knee Scoring scale. Lysholm Knee Scoring scale is an international comparable quality of life assessment questionnaire. The data obtained was analyzed statistically using Sigmasat 3.5 Software. Students 't' test for independent samples was used to analyze the two groups of patients. Level of $p < 0.05$ was accepted as the level of Significance.

Group 1: *Rasna Panchaka Kashaya* 25ml twice daily before food with warm water for 30 days.

Group 2: The same *Rasna Panchaka Kashaya* with 50ml *Prasarini Taila Matra Basti* for 8 days was given.

Inclusion criteria

1. Patients with age group of 30-60 years, irrespective of sex, occupation and economical status.
2. Patients diagnosed on the basis of classical *lakshanas* of *Janu Sandhigatavata*.
3. Disease chronicity less than 1 year.

Exclusion criteria

1. Age below 30 and above 60 years.
2. Chronicity of disease more than 1 year.
3. Lactating and pregnant women.
4. Complications including contractures, nodules, septic arthritis etc.
5. Secondary malignant conditions and traumatic conditions.
6. Patients suffering from Cardio-pulmonary diseases, Hypertension, Bleeding disorders, Diabetes etc and other serious systemic and complicated diseases.

Assessment Criteria

Clinical Assessment

Patients were assessed on different parameters for obtaining the effect of the therapy. Some clinical signs and symptoms like *Sandhi shula*, *Sandhi shotha*, *Prasaranaakunjanayo vedana*, *Sandhi Atopa*⁷, Goniometric Assessment and Lysholm Knee Scoring Scale were assessed before and after the treatment.

Laboratory Assessment: Blood- Hb, TLC, DLC, ESR

Trial Drug Review

Both *Rasna Panchaka Kashaya* and *Prasarini Taila* have been described in *Sahasra Yoga*. The contents of the *Kashaya* are *Rasna* (*Alpinia galanga*), *Amrutha* (*Tinospora cordifolia*), *Eranda* (*Ricinus communis*), *Devdaru* (*Cedrus deodara*) and *Shunthi* (*Zingiber officinale*).

The contents of the *Prasarini Taila* are *Prasarini* (*Paederia foetida*), *Meda* (*Polygonatum cirrhifolium*), *Mahameda*

(*Polygonatum verticillatum*), *Shatapushpa* (*Anethum sowa*), *Manjishta* (*Rubia cardi-
folia*), *Kushta* (*Saussurea lappa*), *Rasna* (*Alpinia galanga*), *Jeevaka* (*Malaxis acu-
minata*), *Rushabhaka* (*Malaxis muscifera*), *Kakoli* (*Fritillaria roylei*), *Ksheera Kakoli* (*Lilium polyphyllum*), *Devdaru* (*Cedrus deodara*), *Tila taila* (*Sesamum Indicum*) and *Ksheera* (Cow's milk).

Source of Drug

Both the formulations were prepared according to classical methods of *Kashaya Kalpana* and *Taila Kalpana* mentioned in *Sahasra Yoga* in the pharmaceutical division of ALN Rao Memorial Ayurvedic Medical College, Koppa.

RESULTS

To observe the effect of the therapy, classical signs and symptoms were considered and the changes were assessed and calculated on 40 patients who completed the study period. The results obtained are shown in Table 1 and 2.

Table 1: Effect of the Therapy in Group 1 and Group 2

| Variable | Group | Mean | | % Relief | SD± | SE± | P | S |
|---|-------|-------|-------|----------|------|-------|--------|----|
| | | BT | AT | | | | | |
| <i>Sandhishula</i> | Gr.1 | 1.75 | 0.80 | 54.3% | 0.69 | 0.15 | <0.001 | HS |
| | Gr.2 | 1.90 | 0.65 | 65.8% | 0.72 | 0.160 | <0.001 | HS |
| <i>Sandhishotha</i> | Gr.1 | 1.40 | 0.70 | 50% | 0.73 | 0.16 | <0.02 | S |
| | Gr.2 | 1.50 | 0.55 | 63.3% | 0.76 | 0.17 | <0.001 | HS |
| <i>Prasaranaakun- janayo vedana</i> | Gr.1 | 1.35 | 0.60 | 55.5% | 0.64 | 0.14 | <0.001 | HS |
| | Gr.2 | 1.45 | 0.50 | 65.5% | 0.76 | 0.17 | <0.001 | HS |
| <i>Atopa</i> | Gr.1 | 1.25 | 0.60 | 52% | 0.74 | 0.17 | <0.04 | S |
| | Gr.2 | 1.75 | 0.65 | 62.9% | 0.64 | 0.14 | <0.001 | HS |
| Goniometer | Gr.1 | 1.45 | 0.75 | 48.3% | 0.47 | 0.10 | <0.05 | S |
| | Gr.2 | 1.60 | 0.60 | 62.5% | 0.56 | 0.12 | <0.001 | HS |
| Lysholm Knee Score | Gr.1 | 64.35 | 79.85 | 24.18% | 4.43 | 0.99 | <0.001 | HS |
| | Gr.2 | 63.15 | 85.60 | 35.55% | 6.48 | 1.45 | <0.001 | HS |

Note: S= Significant, HS= highly significant

Table 2: Comparative Effect of the therapy in both Groups

| Variable | Group-1 | | | Group-2 | | | P | S |
|---|---------|------|------|---------|------|------|-------|----|
| | Mean | SD | SE | Mean | SD | SE | | |
| <i>Sandhishula</i> | 0.95 | 0.68 | 0.15 | 1.25 | 0.71 | 0.16 | 0.18 | IS |
| <i>Sandhishotha</i> | 0.70 | 0.73 | 0.16 | 0.90 | 0.71 | 0.16 | 0.38 | IS |
| <i>Prasaranaakun- janayo vedana</i> | 0.75 | 0.63 | 0.14 | 1.05 | 0.82 | 0.18 | 0.20 | IS |
| <i>Atopa</i> | 0.65 | 0.74 | 0.61 | 1.10 | 0.64 | 0.14 | 0.04 | S |
| Goniometer | 0.70 | 0.47 | 0.11 | 1.00 | 0.56 | 0.12 | 0.07 | IS |
| Lysholm Knee Score | 15.40 | 4.38 | 0.98 | 22.45 | 6.48 | 1.45 | 0.001 | HS |

Note: S= Significant IS=Insignificant HS= highly significant

DISCUSSION AND CONCLUSION

From the onset of *Dosha-Dushya Dusti*, till the evolution of the *Vyadhi* various stages can be seen. As no special *Samprapti* has been explained for *Sandhigata Vata* the *Samanya Samprapti* of *Vatavyadhi* can be considered as the *Samprapti* of *Sandhigata Vata*. According to *Acharya Charaka* and *Vagbahta dhatu kshaya* is the main cause for *Vata prakopa*. This *balavan (prakupita) Vata* circulates through the empty channels in the body (*rikta srotas*), fills them and produces *sarvanga* and *ekanga rogas* (systemic and localized diseases). *Chakrapani* commenting on the word *riktani* states that *riktani* means *tuchyani (snehadi guna shunyani)* i.e. channels or *srotasas* devoid of nutrients. *Avarana* of this *prakupita Vata* by other *doshas* is the other reason for the *Vata prakopa* in the absence of *dhatu kshaya* resulting in disease.

The above said *Ahara Vihara* induces reduction of *Snehabhava* and simultaneously produces *Vatakopa* due to the *Dhatu Kshaya*. Reduction of *Shleshaka Kapha* occurs and this allows the settling of vitiated *Vata (vyana vata)* in the joints thereby gradually resulting in the manifestation of *Sandhigatavata*. In *Ayurvedic* texts various methods and formulations have been described in the management of *Sandhigatavata*. Two types of *Chikitsa* i.e. *Shodhana* and *Shamana* have been dealt in detail with description. The *Ayurvedic* literatures give *Basti* the utmost importance to incorporate the *Vata* disorders.

So, the present clinical trial was planned to study the effect and changes in Quality of Life (QoL) by an indigenous compound, *Rasna Panchaka Kashaya* with and without *Prasarini Taila Matra Basti* in the management of Knee Osteoarthritis (*Janu Sandhigatavata*). The duration of

trial was one month and the patients were examined after a gap of 15 days and follow up period was of 1 month. On the basis of comparison of before and after trial in both groups following points have emerged: 7 (35%) patients in Group-1, 11 (55%) patients in Group-2 were cured and 3 (15%) and 4 (20%) patients in Group-1 and 2 respectively showed marked improvement. No toxicity or untoward side effects has been noted during the trial study. On the basis of Statistical test, it can be concluded that *Prasarini Taila Matra Basti* has shown excellent improvement in Quality of Life (QoL) of the patients of Group-2 with maximum number of patients achieving a normal total score value assessed by Lysholm Knee Scoring Scale. Statistically the result of *Rasna Panchaka Kashaya* with *Prasarini Taila Matra Basti* (Group-2) was highly significant as compare to *Rasna Panchaka Kashaya* without *Prasarini Taila Matra Basti* (Group-1).

This study supports the opinion that the administration of *Prasarini Taila Matra Basti* increases the quality of life in patients of Osteoarthritis. The subjective assessment of QoL becomes important especially in developing nations like India, deciding the physician visits and adherence to strict dietary, exercise and drug regimen. Osteoarthritis being a chronic illness, the understanding of one's illness demonstrates better coping to the disease and better outcome in terms of treatment, as the final motto of treatment is to provide a better QoL (*Sukhavapti*).

To conclude, Patients in Group-2 express overall higher levels of Quality of Life as measured with the Lysholm Knee Scoring Scale compared with that of Group-1.

REFERENCES

1. Anonymous. WHO QoL BREF, Field Trial version. Geneva: World Health Organization, Geneva. 1996.
2. Charaka Samhita, Vimana Sthana, *Rogabhishagjiteeya Vimana Adhyaya*, 8/89-90, Vol. 2, First edition. Jamnagar; Shree Gulabkunverba Ayurvedic Society. 1949 : pp. 916–7
3. W. Jack Rejeski, Knee Osteoarthritis and Health Related Quality of Life. 1994 15: 205–18. Available from: <http://www.acsm.org/access-public-information/position-stands>.
4. Tegner Y, Lysholm J, Rating Systems in the evaluation of knee ligament injuries. 1985 Sep;(198):43-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/4028566>
5. Sahasra Yoga, Hindi commentary by Dr. DV Panditrao, Kashaya prakaran, Pg no.-90. Kendriye ayurveda and siddha anusandan parishad, New Delhi, 10th Edition, 1990
6. Sahasra Yoga, Hindi commentary by Dr. DV Panditrao, Taila prakaran, Pg no.-268, Kendriye ayurveda and siddha anusandan parishad, New Delhi, 10th Edition, 1990
7. Charaka Samhita, Chikitsa Sthana, *Vatavyadhi Adhyaya*, 28/37, Vol. 2, First edition. Jamnagar; Shree Gulabkunverba Ayurvedic Society. 1949

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Source of support: Nil

Conflict of interest: None Declared