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 Sandhigatavata). 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 Sandhigatavata, 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 concerns. 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. Charaka, 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 Satwabala (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 happiness\(^2\) (*Sukhavapti*).

The quality of life (QoL) measurements are increasingly being used in assessing the treatment outcomes in these conditions\(^3\) 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 *Prasarnini Taila Matra Basti* using a widely accepted Lysholm Knee Scoring scale\(^4\) 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 *Prasarnini Taila 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 Sigmastat 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 *Prasarnini 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, Prasaranakaunkjanayo vedana, Sandhi Atopa, Goniometeric 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 officinalis).

The contents of the Prasarini Taila are Prasarini (Paederia foetida), Meda (Polygonatum cirrhifolium), Mahameda (Polygonatum verticillatum), Shatapushpa (Anethum sowa), Manishta (Rubia cardi folia), Kushta (Saussurea lappa), Rasna (Alpinia galanga), Jeevaka (Malaxis acuminata), Rushabhaka (Malaxis muscifera), Kakoli (Fritillaria roylei), Ksheera Kakoli (Lilium polyphylum), 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     | Group Mean % Relief SD± SE± |
| Sandhishula    | 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 0.16 <0.001 HS |
| Sandhishotha   | 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 |
| Prasaranakaun-  | Gr.1 1.35     | 0.60 55.5% 0.64 0.14 <0.001 HS |
| jananayo vedana | Gr.2 1.45     | 0.50 65.5% 0.76 0.17 <0.001 HS |
| Atopa          | 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 |
| Sandhishula    | Mean SD SE     | Mean SD SE     |
|                | 0.95 0.68 0.15 | 1.25 0.71 0.16 |
| Sandhishotha   | 0.70 0.73 0.16 | 0.90 0.71 0.16 |
| Prasaranakaun-  | 0.75 0.63 0.14 | 1.05 0.82 0.18 |
| jananayo vedana | 0.65 0.74 0.61 | 1.10 0.64 0.14 |
| Atopa          | 0.70 0.47 0.11 | 1.00 0.56 0.12 |
| Goniometer     | 15.40 4.38 0.98 | 22.45 6.48 1.45 |
| Lysholm Knee Score | 0.01 IS | 4.00 IS |

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 Vagbhahta dhatu kshaya is the main cause for Vata prakopa. This balavan (prakupita) Vata circulates through the empty channels in the body (rika 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 Dhatushaya. 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.
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