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## EVALUATION OF THE EFFECT OF CHATURBHUJA RASA IN KAMPAVATA

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#### **ABSTRACT**

Kampavata is a slow progressive disorder of late adult life and is one of most prevalent neurological disorder. Parkinson's disease, known in Ayurveda as "Kampavata," is a neurological disorder affecting 1% of the population over age 65 and is the fourth most common neurological degenerative disorder found in the elderly. In Charaka Samhita vepathu has been described as one of the eighty types Vata nantmaja vyadhi and Kampa has been mentioned one among them. The present study objective is to evaluate the efficacy of Chaturbhuja Rasa in Kampavata. A simple random single group observational study is adopted here. Kampavata expresses the signs and symptoms as Karapadatale Kampa, Dehabhramana, Nidrabhanga and Matiksheena. In Rasendrasara sangraha, Chaturbhuja Rasa is directly indicated for Kampavata. Thus an effort is made to evaluate the efficacy of internal administration of Chaturbhuja Rasa in Kampavata. In the present study 20 patients were registered after fulfilling the criteria of diagnosis in a single group. All the patients were examined before and after the trail, according to the case sheet format. Data before the treatment and after the treatment recorded and at the end of study both were compared for assessment. Statistical analysis showed the treatment is more highly significant in the parameters, Kampa, Gatisanga, Stamba, Chestasanga, Tremors and Rigidity. In the parameters Stambha and Chestasanga there was no much difference in before and after treatment values statistically.

**Key words;** Kampavata, Parkinson's disease, Chaturbhuja Rasa

#### **INTRODUCTION:**

According to Ayurveda, Kampavata is a Vata Nanatmaja vikara. During the period of Charaka<sup>1</sup> and Sushruta clinical manifestations of kampavata like kampa, sthamba, chestasanag, vakvikriti etc was not explained as one disease instead explained under various contexts majority of the symptoms of kampavata were found in kaphavrita udana and kaphavrita vyana but no single avarana process completely covers the symptoms of kampavata. Actually many of the experts tried to provide a suitable Ayurvedic nomenclature for the Parkinson's disease e.g. - sakamp-paksaghata and vepathu etc.

Kampavata (Parkinson's disease) is slow progressive disorder of late adult life and is one of the most prevalent and common neurological disorder occurs with more or less equal frequency in all countries around the world. In present era there are many such neurological disorders which are rising in their incidence day to day, such neurological disorders can be considered under the concept of vatavyadhi.

Kampavata (Parkinson's disease) being one of them having the pathology of degeneration in a part of the brain. Nearly two centuries have elapsed since disease Parkinson's is known, better treatment are still being sought.

In Ayurveda, Snehana, Svedana, Niruha basti, Virechana, nasya, Anuvasana basti and Sirobasti been indicated in management of Kampavata. The management of Kampavata can be done by the oral administration of Chaturbhuja Rasa which is explained in Rasendra sara sangraha<sup>2</sup> as it contains Rasa sindhura, Swarna bhasma, Manashila, Haratala, Eranda, Kumari. The karma of Kumari and Eranda over nadivaha samsthan is balya and medhya indicated in conditions like mastishkya dourbalya, nadidourbalya and best in all vata vyadhis, Rasa sindhura and Swarna mitigates all types of roga and even tridoshas. The present study intended to focus on the disease evaluation i.e. kampavata and its management with Chaturbhuja rasa.

#### **OBJECTIVE:**

To evaluate the efficacy of Chaturbhuja Rasa in Kampavata.

| Lakshanas of Kampavata | Symptoms of Parkinson's disease |  |  |  |
|------------------------|---------------------------------|--|--|--|
|                        |                                 |  |  |  |
| Kampa                  | Tremor                          |  |  |  |
|                        |                                 |  |  |  |
| Matiksheena            | Dementia                        |  |  |  |
|                        |                                 |  |  |  |
| Vibandh                | Constipation                    |  |  |  |
|                        |                                 |  |  |  |
| Dehabhramana           | Postural changes                |  |  |  |
|                        |                                 |  |  |  |
| Nidrabhanga            | Insomnia                        |  |  |  |

Lakshanas of Kampavata<sup>3</sup>, explained in the classics such as kampa, dehabhramana, nidrabhanga and matiksheena are very vague and are also seen in many other neurological disorders other than Parkinson's disease. So it is very difficult to diagnose the Parkinson's disease very accurately only with these lakshanas.

#### MATERIALS AND METHODS

#### **Source of Data:**

- The patients of KAMPA VATA were selected randomly from O.P.D of SVP RAMC, BADAMI after fulfilling the inclusion and exclusion criteria irrespective of their sex, occupation and socioeconomic status.
- The size of sample was 20. It is a Simple random sampling technique clinical trial.

#### **Inclusion criteria**

- 1. Patients with clinical signs & symptoms of Kampavata vis-à-vis Parkinsonism disease were selected.
- 2. Patients of either sex are selected.
- 3. Patients above 40 years of age.

#### **Exclusion criteria**

- 1. Diffuse Lewy body disease
- 2. Jacobs disease
- 3. Striatonigral degeneration
- 4. Wilson's disease
- 5. Huntington's disease (chorea)
- 6. Alzheimer's disease

#### **Posology:**

1 ratti (125mg) of Chaturbhuja Rasa for 30 days

#### Anupana:

Triphala Kwatha followed by Rice with milk

#### **Study duration**

Internal Administration of Chaturbhuja rasa -30 days

#### **Assessment of results:**

The subjective and objective parameters of base line data to pre and post medication were compared for assessment of the results. All the results were analyzed statically for value using pared't' test.

#### **Subjective parameter**

- 1. Chesta sanga: slowness and poverty of movements.
- 2. Kampa (Resting tremor): at least in one limb.
- 3. Sthamba (Rigidity): In any group of muscles in extremities.
- 4. Avanamana (Postural changes): Which includes signs like Rombergism.
- 5. Vak vikruti: Ekshruti (monotony) and Kala (low) speech.
- 6. Gatisanga: Slow stepped & short stepped gait with proplusion & retropulsions.

#### **Objective parameters:**

- 1. Tremors
- 2. Rigidity
- 3. Bradykinesia
- 4. Gait
- 5. Dressing
- 6. Postural stability

#### **GRADING FOR VARIABLES**

#### Kampa (Tremor) Score

Bilateral violent tremor along with tremor in tongue and / or in eyelids lips and not suppressed or diminished by willed movement.

Grade -3-

Bilateral tremor Grade -2-

Unilateral slight tremor present at rest decreased by action, increases by emotion and stress

Grade -1-

No tremor Grade -0-

| Gatisanga: |
|------------|
|------------|

Unable to raise from bed and walk without assistance Grade -3-

Can walk slowly but need substantially help, shuffling with retropulsion/ propulsion lack of associated

Grade -2movement

Can walk without assistance slowly but with shuffling gait Grade -1-

Can walk brisk without aid Grade -0-

#### Vakvikriti:-

Incomprehensive words, monotonous voice, echoing, speaks only on insistence of examiner

Grade -3-

Monotonous voice, spilt consonance but understandable speaks feels with examiner

Grade -2-

Variable tone of voice. Grade -1-

Grade -0-Normal speech

#### Stambha (rigidity)

Marked rigidity in major joints of limbs, patients maintain abnormal sitting postures, stared eyes

Grade -3-

Rigidity demonstrable on one of major joints Grade -2-

Cog-wheel rigidity feebly present and on continuous examination vanishes Grade -1-1JCR

No rigidity Grade -0-

#### Avanamna

Complete bend down of body Grade 3 Head bent forward with legs bent at knees Grade 2 Grade 1 Only arm bent at elbows No bending or flexion Grade 0

#### Chestasanga

Unable to carry routine activities of daily life Grade 3 Able to perform daily activities with moderate difficulties Grade 2 Able to perform daily activities with less difficulties Grade 1 No difficulties in carrying out activities Grade 0

#### **Tremors**

- Gr 0 Absent
- **Gr 1 -** Slight and infrequent
- Gr 2 moderate
- Gr 3 Marked
- Gr 4 Marked with all activities

#### **Rigidity**

- Gr 0 Absent
- Gr 1 Slight and infrequent
- **Gr 2** moderate
- **Gr 3 -** Severe, interferes with many activities
- Gr 4 Marked with all activities

#### Bradykinesia

- Gr 0 None
- **Gr 1 Minimal slowness**
- Gr 2 Mild slowness and poverty of movement
- Gr3 Moderate slowness poverty or small amplitude
- Gr 4 Marked slowness ,poverty, or amplitude

#### Gait

- Gr 0 Normal
- Gr 1 Walks slowly, may shuffle with worst steps no propulsion
- **Gr 2** Walks with difficulty or little assistance or no assistance
- **Gr 3 -** Severe disturbance no assistance
- Gr 4 Cannot walk

#### **Dressing**

- Gr 0 Normal
- **Gr 1 -** Slow no help needed
- **Gr 2** Occasional help with buttons
- **Gr 3 -** Considerable help required
- **Gr 4** helpless



#### Postural stability

**Gr 0 -** – Normal

Gr 1 - Recovers unaided

Gr 2 Would fall if not caught

**Gr 3 -** Falls spontaneously

Gr 4 - Unable to stand

#### **RESULTS:**

| PARAMETER          | MEAN |      | MEAN  | Paired t test |        |         | Improve % |
|--------------------|------|------|-------|---------------|--------|---------|-----------|
|                    |      |      | BT-AT | T             | P      | Remarks |           |
|                    |      | T    |       | value         | value  |         |           |
| Kampa              | BT   | 1.15 | 0.85  | 6.47          | < 0.01 | HS      | 73.9      |
|                    | AT   | 0.3  |       |               |        |         |           |
| Gati sanga         | BT   | 1.1  | 0.65  | 5.9           | < 0.01 | HS      | 59.09     |
|                    | AT   | 0.45 |       |               |        |         |           |
| Vak vikruti        | BT   | 1.45 | 0.45  | 3.94          | < 0.01 | HS      | 31.03     |
|                    | AT   | 1    |       |               |        |         |           |
| Stambha            | BT   | 1.3  | 0.9   | 9             | < 0.01 | HS      | 69.23     |
|                    | AT   | 0.4  |       |               |        |         |           |
| Avanamana          | BT   | 0.45 | 0.05  | 1             | >0.05  | NS      | 11.11     |
|                    | AT   | 0.4  |       |               |        |         |           |
| Chesta sanga       | BT   | 1.5  | 0.80  | 5.14          | < 0.01 | HS      | 53.33     |
|                    | AT   | 0.7  |       |               |        |         |           |
| Tremors            | BT   | 2.5  | 1.70  | 9.48          | < 0.01 | HS      | 68        |
|                    | AT   | 0.8  |       |               |        | /_^     |           |
| Rigidity           | BT   | 1.7  | 1.20  | 6.43          | < 0.01 | HS      | 70.58     |
|                    | AT   | 0.5  |       |               | /41    |         |           |
| Bradykinesia       | BT   | 1.75 | 1     | 4.15          | < 0.01 | HS      | 57.14     |
|                    | AT   | 0.75 |       |               | 10     |         |           |
| Gait               | BT   | 1.2  | 0.5   | 3.68          | < 0.01 | HS      | 41.66     |
|                    | AT   | 0.7  |       |               |        |         |           |
| Dressing           | BT   | 1.3  | 0.65  | 4.95          | < 0.01 | HS      | 50        |
|                    | AT   | 0.65 |       |               |        |         |           |
| Postural stability | BT   | 0.65 | 0.15  | 1.83          | >0.05  | NS      | 23.07     |
|                    | AT   | 0.5  |       |               |        |         |           |
|                    |      |      | 50.67 |               |        |         |           |

Based on the analysis the conclusion can be drawn as, the treatment is more highly significant in the parameters, *Kampa*, *Gatisanga*, *Stamba*, Chestasanga, *Tremors and Rigidity*. In the parameters *Stamba* and *Chestasanga* have same effects with positive correlation between before and after treatment. In the parameters *Gait*, *Vakvikruti* and *Bradykinesia* treatment has less significant. In the parameters *Avanamana* and *Postural stability* treatment not significant even they positive correlation before and after treatment. This may be because of the involvement of whole vertebral column which cannot be corrected with medical management.

#### **DISCUSSION:**

According to Ayurveda, Kampavata is a Vata Nanatmaja vikara. During the period of Charaka and Sushruta clinical manifestations of kampavata like kampa, stambha, chestasanag, vakvikriti etc was not explained as one disease instead explained under various contexts majority of the symptoms of kampavata were found in kaphavrita udana and kaphavrita vyana but no single avarana process completely cover the symptoms of kampavata.

It is therefore suggested that in view of classical reference, a complete clinical entity having symptoms, signs etc. the term Kampvata the most appropriate term, for the first time explained by Basavarajiyam with clinical features similar to that of Parkinson's disease.

**Probable mode of action**: Chaturbhuja Rasa is having the ingredients like Suvarna Bhasma, Rasasindhura which by virtue of their Rasayana effect help in the mitigation of symptoms of Kampavata. Eranda is best Vata kapha hara and also it acts as nerve tonic because of its Veerya.

The disease Kampavata is a Swabhavaja Vyadhi associated with old age which is a Vata predominant period, which makes the disease Yapya (incurable). However, it was the success of the therapy that improvement was noticed in almost all the patients and none was deteriorated. Parkinson's disease is a chronic, progressive, incurable type of Vata disorder. Chaturbhujs rasa being Rasayana acts superior treatment for Vata disorder.

#### **CONCLUSION:**

- The treatment is more highly significant in the parameters, Kampa, Gatisanga, Stamba, Chestasanga Tremors and Rigidity.
- Compared to other symptoms, moderate improvement was observed in Gait, Vakvikruti and Bradykinesia.
- The therapy had no effect on the Avanamana and Postural stability. But in large sample size its efficacy on this parameter can be established.
- Overall 50.67% mean improvement was observed on all the parameters.

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