EFFECT OF BRIHANMASHADI TAIL MATRA BASTI AND KAPIKACCHU BEEJA CHURNA IN KAMPAVATA (PARKINSON'S DISEASE)

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ABSTRACT

Background: Kampavata which is one of the vataj nanatmaj vyadhi, resembles Parkinson’s disease is a type of movement disorder. It happens when nerve cell in the brain don’t produce enough of a brain chemical called dopamine. Parkinson’s disease is second most common neurodegenerative disease. It is estimated that approximately 1 million persons in United States & 5 million persons in the world suffer from his disease. Usually affects after the age of 50 years. Aim: To evaluate the effect of Kapikacchu beeja churna and Brihanmashadi Tail matra basti in Kampavata(Parkinson’s diseases) basti. Material & Method: 17 patients of Kampavata (Parkinson’s disease) were followed selected and administered sarvanga snehan, Sarvang swedan followed by Brihanmashadi matra basti with orally Kapikkachhua beej churna every day for 14 days. Result: Completion of treatment 8(47 %) patients got marked relief, 6(35%) patients got moderate relief and 3(17.6%) patients got mild effect. From the present study can be concluded that Kampavata can be managed with above treatment. Key Words- Brihanmashadi matra, Kampavata, Kapikacchu churna, Parkinson’s Disease basti

INTRODUCTION

Kampavata is slowly progressive disease of adult life and is one of the most prevalent neurological disorder. In Charak Samhita Vepathu has been described as one of the eighty type of nanatmaja vyadhi of vata. Direct reference to the Parkinson’s disease in Ayurvedic symptoms of Kampavata such as karapadtal kampa (tremors in hands & legs), Dehabhraman (postural instability), Matiksheen (Dementia) and Nidrabhagna (Insomnia) simulate to Parkinsons disease.

There are many vatavyadhis commonly seen but Kampavata is one of the rare mentioned under vatavyadhis because of its crippling nature and non availability of curative treatment. This disease has remained a great problem in aging society which usually affects after the age of 50 years. The disease is increasing in its frequency with world population showing an incidence of 1-2 per 1000 population and has equal sex distribution.

In Parkinson’s disease the basic pathologic changes is degeneration of a group of nerve cells deep within the centre of brain in an area called substantia nigra. This cells use Dopamine as their neurotransmitter to signal other nerve cells. As these cells degenerate & stop functioning, Dopamine fails to reach the areas of brain that affect motor functions.
No satisfactory treatment is seen in contemporary system of medicine for Parkinson’s disease. In this therapy *kapikachhu beej* contains Levodopa which is indicated in Parkinson’s disease and *Basti chikitsa* is useful in all *Vatavyadhis*.

**MATERIALS AND METHODS:**

**Source of Data:**
17 patients diagnosed as *Kampavata* (Parkinson’s disease) were selected from outpatient department; in patient department at Y.M.T.Ayurvedic Medical College, Kharghar, Navi Mumbai.

**Inclusion Criteria:**
1. Patients with clinical signs and symptoms of *Kampavata* (Parkinson’s disease)
2. Patients with either sex
3. Patients above 40 yrs of age

**Exclusion Criteria:**
Patients with other systemic disorder which interfere with treatment will be excluded such as
1. Diffuse Lewybody disease
2. Jacob’s disease
3. Striatonigral degeneration
4. Wilson’s disease
5. Huntington’s disease (Chorea)
6. Alzheimer’s disease
7. Drug induced
t8. Trauma
9. Cardio embolic stroke.

**Diagnostic Criteria:**
Diagnosis was made based on clinical symptoms of *Kampavata* (Parkinson’s disease) i.e. *Tremor* - *Kampa*

- **Rigidity** - *Stamba*
- **Bradykinesia** - *Chestsanga*
- **Gait abnormalities** - *Gatisanga*
- **Postural abnormalities** - *Avaman*

**Selection of drug-Brihanmashadi tail matra**

(Ref- *Vangasena Vatavyadhi adhikar*)

**Contents** -
1. Mash Kwath
2. Bala Kwath
3. Dashmula Kwath
4. Yava
5. Kulatha
6. Chaga mamsa rasa
7. Tila Tail-1 prastha
8. Dugdha- 4 prastha
9. *Kalka Dravya – Atmagupta* (Kraunch), Saindhav, Shatavha, Erand, Musta, Jeевaniya aushadi, Bala, Triku. -1 tola

Drug authentication has been done from *Dravyguna* department and preparation of drug from *Rasashastra-Bhaishajya kalpana* department from Y.M.T.Ayurvedic college, Kharghar.

**Method of Therapy**
1. Kapikachhu beej churna 6 gm twice daily with lukewarm water for 14 days
2. Sarvanga snehan.
4. Brihan masha tail matra basti for 14 days

Previous any medicines for Parkinson’s disease has been discontinued 1 week before treatment.

**Study Duration** - 14 days

**Follow up** – After 7 days

**Assessment Criteria:**
To assess the efficacy of treatment, the symptoms of *Kampavata* (Parkinson’s Disease) such as tremor, bradykinesia, rigidity etc were noted carefully before the commencement of treatment (1st day), during (7th day) and after treatment (14th day).

United Parkinson’s Disease rating scale was applied to measure the degree of improvement.

**Tremor**

- **T0** - Absent
- **T1** - Slight and infrequent, not bothersome to patient
- **T2** - Moderate, bothersome to patient
- **T3** - Severe, interferes with many activities
- **T4** - Marked, interferes with all activities.

**Rigidity**

- **R0** - Absent
- **R1** - Slight or only with activation
- **R2** - Mild / Moderate
R3- Marked, full range of motion
R4- Severe.

**Bradykinesia**
B0 – None
B1 – Minimal slowness, could be normal ,deliberate
B2 – Mild slowness ,poverty of movement
B3 - Moderate slowness, poverty or small amplitude
B4 – Marked slowness ,poverty or amplitude.

**Gait**
G0 – Normal
G1- Walks slowly may shuffle short steps no festination or propulsion
G2 – Walks with difficulty little or no assistance
G3 – Severe disturbance ,frequent assistance
G4 – Cannot walk.

**Posture**
P0 – Normal erect

**Observation & Result:**
It was observed that out of 17 patients 13 patients (76 %) were male &4 patients (34%) were female. The maximum number of patients 12(75 %)were in age group of 51 to 60 years & 5 (25 %) patients were in age group of 41- 50 years. Majority of patient about 10(58%) belongs to >6 months chronicity & 7 patients(42%) belongs to 3- 6 months chronicity.

<p>| Table 1: Observation on results of Tremor(kampa),Rigidity(stambha),Bradykinesia (chest asanga),Gait(Gatisanga),Posture(Avmanan). |</p>
<table>
<thead>
<tr>
<th>Tremor</th>
<th>T0</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Treatment</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>6</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>During Treatment</td>
<td>-</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>After Treatment</td>
<td>-</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Rigidity
R0 R1 R2 R3 R4 Total
Before Treatment 2 7 5 3 - 17
During Treatment 9 5 2 1 - 17
After treatment 12 3 2 - - 17

Bradykinesia
B0 B1 B2 B3 B4 Total
Before Treatment - 2 10 3 2 17
During Treatment - 6 6 3 2 17
After Treatment 10 3 2 - - 17

Gait
G0 G1 G2 G3 G4 Total
Before Treatment - 9 6 2 - 17
During Treatment - 10 6 1 - 17

'p' value 0.01

'p' value <0.03

'p' value <0.05

'p' value <0.050
Results were interpreted after statistical analyzing the grading the symptoms mentioned in assessment criteria before, during & after the treatment in all 17 cases. Tremor (Kampa) - Kampa was the main presenting symptom in all patients. The treatment shows more highly significant before & after treatment with 'p' value < 0.001.

Rigidity (Stambhah) – Rigidity i.e. cog wheel rigidity was found in 15 patients. After treatment of snehan, swedan, basti & Shamanoushadhi 12 patients got complete relief with 'p' value < 0.030. Bradykynesia (Chestsanga) – Bradykynesia was observed in all 17 patients but only 2 patients got complete relief from bradykynesia. The net relief in parameter is moderate. Gait disturbance among 17 patients, 2 patient got severe disturbance in walking, 9 patients got shuffle with short steps, 6 patients with festination. After treatment only one patient got complete relief & others were shifted to lower grades. Posture (Avamanan) - There was no improvement in posture significantly.

<table>
<thead>
<tr>
<th>After Treatment</th>
<th>1</th>
<th>14</th>
<th>1</th>
<th>1</th>
<th>-</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posture</td>
<td>P0</td>
<td>P1</td>
<td>P2</td>
<td>P3</td>
<td>P4</td>
<td>Total</td>
</tr>
<tr>
<td>Before Treatment</td>
<td>1</td>
<td>10</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>During Treatment</td>
<td>1</td>
<td>10</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>After Treatment</td>
<td>1</td>
<td>10</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
</tbody>
</table>

'p' value < 0.267

DISCUSSION:
Particularly in later years of life span, Apan vayu accumulates & may become aggrivated. When this is combined with vata increasing life style the stage is set for vata prasar (overflow) in circulation. Overflow causes Vyān vayu to become disturbed within rasadhatu. Systemic signs of vata disturbance occur, such as dryness of membrane of body. When vata relocate (sthansanshray) in the tissue of brain, damaging portion of brainstem causes altered coordination & tremors. Vata enters in Mamsadhatu causing muscle rigidity & in Manovaha srotas causing depression.

Kampavata is considered as one of the disease provoked vata due to dhatukshay, oleation through abhyanga & Brihanmashadi tail matra basti useful in pacifying vata & building ojas and also plays nourishing action on the nervous system.

Kappikacchu (Macuna pruriens) contains Levodopamine or L-dopa within its seeds. L-dopa is precursor of dopamine, the neurotransmitter which is absent or decreased in Parkinson’s disease. In addition it contain serotonin, 5 HTP, Nicotine it could potentially have psychedelic effects.

CONCLUSION
1) The treatment measure is most beneficial for initial stage of disease.
2) The therapy had no effect on stooped posture.
3) 8 patients got marked relief, 6 got moderate relief & 3 patients got mild relief.

Thus this treatment proves to be effective in symptomatic relief for Kampavata.
REFERENCES

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