

## Effective treatment protocol in the management of Parkinson's disease: A case study

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### Abstract

Parkinson's disease (PD) is a degenerative disorder of the central nervous system mainly affecting the motor system. Most of the symptoms in early stage movement-related which include tremors, rigidity, slowness of movement and difficulty with walking and gait. A case study of a male patient, 72 years old having parkinson's disease was treated at National Ayurveda Research Institute for Panchakarma, Cheruthuruthy is discussed in this paper. A course of treatment of 27 days was given to the patient. The treatment protocol comprised of *Abhyanga*, *Pathrapotala sweda*, *Vasthi* and *Shirodhara*. *Mahamasha taila* and *Mashaathmagupthaadi ksheerapaka* described in the *vatavyadhi prakarana* were the medicines used. After 27 days course of treatment, patient got remarkable relief in the symptoms like bradykinesia, tremors of hand and also in postural instability.

**Keywords:** kampavata, parkinson's disease, mahamasha taila, mashaathmagupthaadi ksheerapaka

### Introduction

Parkinson's disease is an idiopathic chronic progressive neurodegenerative disease affecting a greater population of elderly people. The disease usually manifests with a classical triad of symptoms -tremor, rigidity, and bradykinesia. Parkinson's involves the malfunction and death of vital nerve cells in the brain, called neurons. Parkinson's primarily affects neurons in an area of the brain called the substantia nigra. Some of these dying neurons produce dopamine, a chemical that sends messages to the part of the brain that controls movement and coordination. As PD progresses, the amount of dopamine produced in the brain decreases, leaving a person unable to control movement normally. The specific group of symptoms that an individual experience varies from person to person primary motor signs of parkinson's disease include the following:

- Tremors of hands, legs, jaw and face
  - Bradykinesia or slowness of movement
  - Rigidity or stiffness of the limbs & trunk
  - Postural instability or impaired balance and co-ordination
- Later, thinking and behavioural problems may arise, with dementia commonly occurring in the advanced stages of the disease, and depression being the most common psychiatric symptom. Other symptoms include sensory, sleep, and emotional problems. The main motor symptoms are collectively called "parkinsonism", or a "parkinsonian syndrome". Scientists are also exploring the idea that loss of cells in other areas of the brain and body contribute to Parkinson's. For example, researchers have discovered that the hallmark sign of Parkinson's disease — clumps of a protein alpha-synuclein, which are also called Lewy Bodies — are found not only in the mid-brain but also in the brain stem and the olfactory bulb. These areas of the brain correlate to non-motor functions such as sense of smell and sleep regulation. The presence of Lewy

bodies in these areas could explain the non-motor symptoms experienced by some people with PD before any motor sign of the disease appears. The intestines also have dopamine cells that degenerate in Parkinson's, and this may be important in the gastrointestinal symptoms that are part of the disease<sup>[1]</sup>.

In Ayurveda *Kampavata* which is described as a *Nanatmaja* disorder of *Vata*<sup>[2]</sup> can be correlated to Parkinson's disease. *Avarana* and *Dhatukshaya* are the two basic processes which provokes *Vata*. *Dhatukshaya* (depletion of tissues) is the most important phenomenon which constantly involves in the *Samprapti* of this disease. Mainly *snigdhamsha* of the body get depleted by the old age, thereby causing the aggravation of *vata* causing *rookshatha* and *chalathwa*. Here in *kampa vata* also the *chala guna* is the main factor causing the disability in the patients.

### Case Presentation

A male patient of 72 years, Retired professor, approached in the OP department of the hospital was diagnosed as *kampavata* and suggested admission in the hospital for treatment. The presenting complaints of the patient were:

- Slowness of movements and difficulty in walking since 2 - years
- Tremors of both hands since 1 yr
- Slurred speech since 1 yr
- Pain in both knee joints and pain in right shoulder since 3 months.

Patient was a known case of diabetes mellitus since 30 yrs. Three years back he noticed slowness in the movements of his body and also in daily activities. There after developed difficulty in walking also. Gradually other symptoms like slurring of speech, tremors, rigidity and pain in bilateral knee joint and shoulder joint has developed. Meanwhile he

underwent allopathic treatment and did not get satisfactory relief.

**Personal History**

- Patient was having poor appetite and constipated bowels. Micturition was normal and sleep was reduced. Patient was taking sleeping pills to get adequate sleep.

**Examinations**

**General Examination**

- Patient was having normosthenic appearance with normal built and moderately nourished with pulse rate 68 b/min and BP –110/70 mm Hg, Respiratory rate -16 /min, height of 156 cm and weight was 56kg.
- Tongue was uncoated,
- Cyanosis, Clubbing, icterus, pallor and Lymph adenopathy were absent

**Systemic Examination**

**Musculoskeletal Examination**

- Gait – festinant, in stooped posture
- Arms- tremors of both hands
- Pain in bilateral knee joint
- Pain at right shoulder joint associated with painful and restricted movements.

**Central Nervous System Examination**

- Higher mental functions were normal.
- Speech was slurred
- Cranial nerves were intact.
- No abnormalities were seen in any of the cranial nerves examinations.

**Treatment Protocol**

**Total Duration of the Treatment: 27 Days**

**Internally**

- Mashaathmagupthaadi ksheera paka - 90 ml BD before food
- Kapikachu capsule 2 BD

**Materials and Methods**

**Externally**

- *Abhyanga* with *Maha masha taila*<sup>3</sup> for 10 days(1<sup>st</sup> day to 10<sup>th</sup> day)
- *pathra pinda sweda* with *maha masha taila* for 7 days (11<sup>th</sup> day to 18<sup>th</sup> day)
- *Mathra vasthi* was given with *mahamasha taila* from 13<sup>th</sup> to 21<sup>st</sup> day
- *Mashaathmagupthaadi ksheeravasthi*<sup>4</sup> was given at from 15<sup>th</sup> day to 20<sup>th</sup> day
- *shirodhara* with *Maha masha taila* was given for 7 days.(21<sup>st</sup> day to 27<sup>th</sup> day).

**Table 1**

| Maashaathmagupthaadi ksheera vasthi             | Quantity |
|---|----------|
| Madhu   | 120ml    |
| Saindhava                                       | 15gm     |
| Mahamasha taila                                 | 120ml    |
| Mashaathmagupthaadi kalka                       | 30gm     |
| Mashaathmagupthadi ksheerapaka (milk decoction) | 500ml    |

During the period of the treatment the patient had followed strict diet and medicines regularly.

**Observation &Result**

- Treatment was given for 27 days totally.
- After the initial phase of 7days of *Abhyanga*, there was slight reduction in the knee joint pain and also reduction in the right shoulder joint pain was noticed.
- After the application of *pathra pinda sweda*, there was marked change in the bilateral knee joint pain and also in the shoulder joint pain.
- Difficulty in walking and the tremors were also shown slight improvement.
- After the 5 days schedule of *vasthi*, patient got 50% improvement in the symptoms like bradykinesia, tremors of hands.
- After a span of 7 days of *shirodhara*, improvement was observed in the parameters like slurred speech and recurrent falls in the patient.
- Also his insomnia got marked relief (50%).

**Table 2**

| Assessment Chart               |                  |   |   |    |    |    |    |    |
|--------------------------------|------------------|---|---|----|----|----|----|----|
| Parameters                     | Day of treatment |   |   |    |    |    |    |    |
|                                | 1                | 4 | 8 | 12 | 16 | 18 | 24 | 28 |
| Tremors                        | 6                | 6 | 6 | 5  | 5  | 4  | 4  | 3  |
| Bradykinesia                   | 8                | 8 | 7 | 5  | 5  | 4  | 4  | 4  |
| Slurred speech                 | 5                | 5 | 5 | 5  | 4  | 4  | 4  | 3  |
| Mask face                      | 6                | 6 | 6 | 6  | 5  | 5  | 4  | 4  |
| Forward bending                | 5                | 5 | 5 | 4  | 4  | 4  | 4  | 3  |
| Pain in joints                 | 8                | 8 | 7 | 5  | 5  | 4  | 4  | 4  |
| Pill rolling movements of hand | 6                | 6 | 6 | 5  | 5  | 4  | 4  | 3  |
| Sleeplessness                  | 8                | 8 | 7 | 6  | 6  | 5  | 5  | 4  |

(Maximum score for each parameter was given 10 and minimum was 0)

**Discussion**

Vitiation of the *vata dosha* is the principal cause for this condition. Old age is the peak phase of vata vitiation. when we analyse, the causative factors for *vata prakopa* in this patient was *rookshahara* (dry food) *alpahara* (reduced food intake) and *katu rasa aahara* (spicy food) were present in this patient.

These food habits of the patient has contributed for the build-up of *vata dosha* in his body which has attained more strength when he entered in the old age. So in the process of destructing the underlying pathology (*samprapthi vighattana*) we basically adopted the measures correcting the patient’s life style thereby controlling further *vata prakopa*. As the disease

is a *nanathmaja vata vyadhi*, the main focus of treatment was on mitigating vata; in order to fulfil that, the treatment protocol including *Abhyanaga* (oil massage), *Pathrapotala Sweda* (sudation therapy), *Vasthi* (medicated enema therapy) and *shirodhara* (pouring oil over the head) was given to the patient. As described above in the introduction, parkinson's disease is a condition resulting due to the dopamine deficiency in the brain. The drug *aathmaguptha* or *kapikachu* is one of the best sources of the amino acid levodopa, which is a direct precursor to dopamine, the powerful neurotransmitter in the brain [5]. *Mahamasha taila* consists of *brimhana* and *dhathu poshana* (nourishing the body elements) ingredients, found to be very effective in degenerative conditions due to *vata prakopa*, in conditions like *pakshaghata*, *sirakampa*, *paadakampa*, *greevakampana sirashoola*, etc. *Vasthi* (medicated enema therapy) is considered as the prime treatment for vitiated *vata* [6], mitigates the chief culprit of this disease.

### Conclusion

After a course of 27 days, patient got remarkable symptomatic relief. Out of the symptoms maximum relief (50%) was found on tremors, bradykinesia and on pain in the joints. Also sleeplessness, slurring of speech and pill rolling movement has got 40% improvement. Rather than the reduction in the percentage of the scales, the subjective feeling of contentment after the treatment protocol was significant in the study. The study throws gleam on the logical combinations of this treatment protocol for *kampavata* can be implemented in similar cases and thereby we can improve the quality of life of the parkinsonian patient especially in old age thus helping them to "add life to their years". This study has to be further conducted in large samples in order to validate precisely about the efficacy of this treatment protocol.

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