

## Case Report

### **Role of Jyotishmati Taila Nasya in the Management of Parkinson's Disease**

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**Abstract:** Parkinson's disease is a slowly progressive disease of late adult life and is one of the most prevalent neurological disorders. In Charaka Samhita 'Vepathu' has been described as one of eighty types of *Nanatmaja* disorders of *Vata* and *Kampa* has been mentioned as one of the *Vatikavikara*. Because of its crippling nature and non-availability of curative treatment, this disease has remained a great problem in the aging society. Though in modern medical science a lot of research work has been done still no definite radical therapy is available for this disease. Ayurveda, the ancient science of life being always remains the first choice of treatment for chronic disabling disease. Many simple unexplored treatment wonders are hidden in Ayurvedic texts that have definite success in management but are not clinically use because of lack of knowledge, lack of scientific validation or above all lack of faith. This paper is about management of a known case of Parkinson with non-invasive, non steroidal, cost effective and safe Ayurvedic treatment.

**Keywords:** Ayurveda, Nasya, Kampavata, Parkinson's disease.

#### **INTRODUCTION**

Parkinson's disease is a progressive neurodegenerative disorder. The disease affects approximately 2 out of 1000 people, and most often develops after age of fifty, the clinical course is chronic and progressive with severe disability attained after approximately ten years.

On the basis of signs and symptoms, Parkinson's disease can be correlated with *Kampavata* a disease described under the heading *Vata.Nanatmaja* disorders in Ayurveda. In time of Caraka and Susruta cluster of symptoms like *Kampa* (tremor), *Stambha* (rigidity), *Chestasanga* (bradykinesia and akinesia), *Vakvikriti* (disturbance in speech) etc. were described in different contexts, and are clubbed as part of *Vatika* (neurological) disorders [1, 2]. As a separate clinical entity of *Kampavata* was first narrated by Acaraya Madhavakara (author of Ayurvedic treatise *Madhava Nidana*) under the name of "Vepathu". However, it was the *Basvarajiyam* who for the first time gave an unanimous description by explaining the clinical picture of *Kampavata* and all clinical features described by him are similar to that of Parkinson's disease [3].

In modern medical science, the goal of treatment for this disease is to alleviate symptoms that interfere with the patients activities of daily living and to prevent or limit its complication, as Parkinson's disease is a progressive disease leading to crippling of the patients. Mainstay treatment for Parkinson's disease is dopamine replacement therapy, other drugs like anticholinergic drug and dopamine agonists are also used but as disease progresses these drugs effects diminished and even increasing doses are also not responsive. Further these drugs having undesirable side effects. Some new

stereostatic surgical methods are also employed but having great risk and there is chance of failure. So Parkinson's disease remained unabated at the face of scientific society. Thus there is a need for effective, rejuvenative therapy devoid of any side effect.

#### **Case Report**

A male patient of age 62 year presented with the complaint of tremor in upper limb (resting tremor and pin-roll type), slowness in movement and slightly slurred speech. The symptoms developed within six months and have slow progression. There was no history of any trauma, any other chronic illness like diabetes, hypertension etc.

#### **Clinical Examination**

##### **Dashvidha Pariksha**

*Prakriti* : Vata Pittaja

*Vikriti* : Vataja kaphaja

*Sara*: Madhyama

*Samhana* : Madhyama

*Ahara Shakti* :

*Abhyarana Shakti* : Avara

*Jarana Shakti* : Avara

*Vyayam Shakti* : Avara

*Vaya* : Vridha

*Satva* : Madhyam

*Satyama*: Madhyam

*Bala* : Avara

##### **Astavidha Pariksha**

*Nadi* : Vata Kapha (64/min)

*Jihva* : Malavritta

*Mala*: Niram

*Mutra*: Bahumutrata

*Sabda*: Kshama, Kala (low tone speech)

*Sparsa : Ruksha (dry, rough)*  
*Drika : Samanya*  
*Akriti: Samanya*

**Samprapti Vighatana**

*Dosha: Vataja kaphaja (Vata dominated)*  
*Dushya: Ras, Rakta, majja.*  
*Srotas : Rasvaha, Raktavaha,vatavaha.*  
*Adhithana: Shira, hridaya*  
*Samuthana: Pakvashya*  
*Agni: Manda*

**General Physical Examination**

B.P.=130/90mmHg, P/R = 64/min, Pallor-ve, Icterus-ve, Cynosis-ve, Clubbing-ve, Oedema -ve.  
**CVS:** S<sub>1</sub> S<sub>2</sub> Normal  
**Chest:** B/L equal air entry with no added sound  
**CNS:** Higher function normal

**Reflexes**

Upper limb: +3, 3+  
 Lower limb: knee Jerk 3+ (B/L)  
 Ankle Jerk: 2+  
 Plantar response: extensor  
 Muscle Power: 5/5 in both Upper & lower limbs, sensory intact.  
 Muscle tone: Cog wheel type rigidity in B/L upper limbs more pronounced in right side.  
 Muscular Atrophy: absent

**Sign & Symptom grade before treatment**

*Kampa* (Tremor) - +1  
*Gatisanga* (bradykinesia) +1  
*Vakavikriti* (disturbance in voice) +1  
*Stambha* (rigidity) +1

**Table 1: Signs & Symptoms Grading Scale**

Grading	<i>Kampa</i> (Tremor)	<i>Gatisanga</i> (bradykinesia)	<i>Vakavikriti</i> (disturbance in voice)	<i>Stambha</i> (rigidity)
<b>4</b>	Bilateral violent tremor along with tremor in tongue and / or in eyelids lips and not suppressed or diminished by desired movement	Unable to raise from bed and walk without assistance	Incomprehensive words, monotonous voice, echoing, speaks only on insistence of examiner	Marked rigidity in major joints of limbs, patients maintain abnormal sitting postures, stared eyes
<b>3</b>	Tremor not violent but present in less number of organs mentioned above	Can walk slowly but need substantially help, shuffling with retropulsion/ propulsion lack of associated movement	Monotonous voice, spilt consonance but understandable speaks free with examiner	Patients sit properly but Cog-wheel rigidity demonstrable in major joints slow eye ball movements without staring appearance
<b>2</b>	Bilateral tremor	Can walk without assistance slowly with shuffling with retropulsion/ propulsion	No echoing dysarthria present but speech is clearly understandable monotony present	Rigidity demonstrable on one of major joints
<b>1</b>	Unilateral slight tremor present at rest decreased by action, increases by emotion and stress and disappears during night	Can walk without assistance slowly but with shuffling gait	Variable tone of voice, slight slurring of speech	Cog-wheel rigidity feebly present and on continuous examination vanishes
<b>0</b>	No tremor	Can walk brisk without aid	Normal speech	No rigidity

**Assessment of Akinesia & Bradykinesia**

Following tests were applied to assess the effect of therapy on bradykinesia

*Picking of Pins with hands*  
*Buttoning time*  
*Marie sign (Blink rate per minute)*  
*Rapid alternating movements (Score)*  
*Chest expansion*  
*Walking time*

**Investigation**

TLC =6400/cumm, Plt= 238000/cumm, N<sub>58%</sub>, L<sub>25%</sub>, M<sub>02%</sub>, E<sub>01%</sub>, B<sub>00%</sub>, Hbgm= 12.4gm/dl, Total RBC Count= 3.89million / cumm, RA Factor= -ve, S. Bilirubin =0.8mg/dl, FBS= 100mg/dl, B.Urea= 24mg/100ml, S.Cretanine= 0.8mg/ 100ml, S.Cholesterol= 124.0mg/100ml, S.Triglyceride =

100.0mg/100ml, S.Uric acid= 4.3mg/100ml, SGPT= 24U/L, SGOT= 30U/L.

### Treatment

According to Ayurveda Parkinson disease can be correlated with *Kampavata* a disease comes under the heading of *Vatavyadhi*. Therefore management was planned to alleviate the Vata. Here it is important to mention that in *Kampavata vata* is vitiated due to *dhatukshaya* as well as *avarana*. Ayurveda says that nose is the entrance of head i.e. medicine given through nose reaches directly into brain.

### Nasya therapy

For this very purpose, Jyotishmati taila was chosen in the dose of 4drops/nostrils for seven continuous days.

### Administration of Nasya

The procedure of giving *Nasya* therapy may be classified into the following three headings

*Purvakarma* (Pre-measures)

*Pradhanakarma* (*Nasya* therapy)

*Paschatkarma* (Post measures)

### Purvakarma

Before giving *Nasya*, prior arrangement of the material and equipments should be done.

### Preparation of patient

1. Patient should take light food at least half an hour before the procedure.
2. Natural urges should not be suppressed and should be passed before main procedure.
3. Now the patient gets ready for *Nasya karma*. He should lie down on *Nasya Shaya* (special bed for procedure). *Before Nasya, Mridu Abhyanga* ( mild massage) should be done on scalp, forehead, face and neck for 3 to 5 minutes by medicated oil like Bala Taila, Panchaguna Taila etc [4].
4. *Snehapana* (oral intake of oil) should not be given immediately before *Nasyakarma* [5].
5. According to Ayurvedic texts *Svedana* should not be given to the head. *Mridu Svedana* (mild sudation) may be given for elimination of *Doshas* and liquification of *Doshas*. *Tapa sveda* (a type of mild sudation) may be given on *Shira* (forehead), *Mukha* (face), *Nasa* (nasal area), *Manya*, *Griva* and *Kantha* (anterior and sides of neck region) region. Cloth dipped in hot water may be useful for *Mridu Sveda*.
6. After *Svedana* smooth massage should be applied on regions of Gala, Kapola and Lalata.

### Pradhana Karma [6-8]

The patient should lie down in supine position in head lowered position and foot part is to be slightly raised. Head should not be excessively flexed or extended. After covering the eyes with clean cotton cloth, the tip of the patient's nose was raised with the left thumb and with the right hand the luke warm

medicine (*Sukhoshna* drug) was dropped in both the nostrils in proper way [9].

### Paschat Karma [10-12]

After administration of medication through nasal passage patient should lie in supine (*Uttana*) position for about 2 minute or for counting numbers upto 100. After an administration of *Nasya* feets, shoulders, palms and ears should be massaged. The head, cheek and neck should be again subjected to sudation [13].

### Note

The patient should avoid swallowing of *Nasya* *Aaushadhi* [14]. Patient should spit out the excessive medicines which have come into the oropharynx [15]. Medicated *Dhumapana* and *Gandusha* are advocated to expel out the residue mucous lodged in gullet (*Kantha*) and *Shringataka*.

### Treatment after Nasya Therapy

After the completion of *Nasya* therapy, patient was put on following oral treatment:

Ashwangadha curna - 3g Madhuyasti curna - 3g	Twice in a day, boiled with one cup of water till one cup of milk remains.
Arjunarista- 3TSF Lauhasava - 3TSF	twice in a day after meal mixed with equal amount of water

### RESULT

There was significant improvement found in the patient after seven days treatment with Jyotishmati taila nasya. Tremors were totally abolished (0 grade), patient was able to walk without any aid (bradykinesia = 0 grade), the speech was also improved (grade=0) and no rigidity was observed after completion of treatment (grade = 0). There was no side effect observed during the treatment as well as after the completion of treatment.

### DISCUSSION

*Kampavata* is a *Nanatmaja* disorder of *Vata*, In Ayurvedic texts all the symptoms of Parkinson disease is not clumped under the heading of single disease rather the symptoms are described as types of *Vatavyadhi*. A more precise description of *Kampavata* was firstly found in Basavarajiyam (1400 AD). As in Ayurvedic classics syndromes are described rather than disease and therefore following the pattern *Kampavata* is not described as separate entity and described as a type of *vatavyadi* that denotes that this symptom appears when there is defect in nervous system and may accompanied with many other symptoms according to involvement of different component of nervous system.

*Avarana* and *Dhatuksaya* are the two basic processes which incite *Vata*, in *Kampavata* both causes are active. There is depletion of *Rakta dhatu* and *avarana* of

*prana*, *vyana* and *samana* [16]. *Prana vayu* is vitiated and causes obstruction of *samana* as well as *vyana vayu*. Thus there is mainly vitiation of *Prana vayu*, residing at chest and head. *Nasya* is said to be the best treatment for the disease of head and neck mainly those that are related to brain as this route provides direct administration of the drug to the brain escaping the need of the drug to cross the blood brain barrier. Therefore it gives significant improvement in short duration. Considering this concept, *Nasya* was chosen for the management of Parkinson's disease. *Jyotismati taila* is chosen as *sadhana nasya* and *avara* (minimum) dose of it's given to the patient (4 drops/ nostrils). *Jyotismati (Celastrus paniculata)* is included under *medhya dravya* (memory booster/ neuro regenerator). Scientific studies showed that it stimulate a significant decrease in the brain levels of malondialdehyde, with simultaneous significant increases in levels of glutathione and catalase. The findings of research study indicate that the aqueous extract of *Celastrus paniculatus* possess cognitive-enhancing properties and an antioxidant effect [17]. *Ashwagandha (Withania somnifera)* and *Madhuyasti (Glycyrrhiza glabra)* are also included in *medhya rasayana* group and scientific studies proved their role in neuroregeneration [18-20]. Therefore they were selected to maintain the ongoing process of nuro-regeneration. According to principal of Ayurveda, there is depletion of *Rakta dhatu* in *Vatavyadi* therefore to replenish it, *Lauhasava* (an iron preparation) and *Arjunarista* (cardiac protective drug) were added during follow-up trial period.

## CONCLUSION

Though it is a case study and available data is not sufficient for postulating any exact conclusion regarding the mode of action of drug and an intensive scientific study is required to hunt the mechanism of drug and its future prospective. But then also from this very preliminary study it can be concluded that neroregeneration is might be possible with certain drugs, if they are given through proper route and in proper dose. The only need is to document such studies to make some good future research proposal.

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