



Case Study

ROLE OF PANCHAKARMA IN PARKINSON'S DISEASE – A CASE STUDY

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ABSTRACT

Parkinson's disease is a degenerative disorder of the central nervous system. The motor symptoms of Parkinson's disease result from the death of dopamine-generating cells in the substantia nigra, a region of the midbrain; the cause of this cell death is unknown. Early in the course of disease symptoms include (1) shaking (tremor) (2) rigidity (3) slowness of movement (bradykinesia) and (4) difficulty with walking and gait (postural instability). Later, cognitive and behavioral problems may arise, with dementia commonly occurring in the advanced stages of the disease. Other symptoms include sensory, sleep and emotional problems.

In Ayurveda, most of the diseases of the *Vata* are essentially the conditions of degenerative diseases of the nervous system. *Kampa vata* is one condition which is caused by imbalance of *Vata*. The treatment of '*Kampavata*' consists of both internal and external administration of drugs in different forms aimed to reverse the '*Vata*' imbalance. Here a case of 75 years male patient presented with tremors in both hands and postural instability and the pathology of which is to be identified with *Dhatukshayaja Vata Vyadhi* which is provisionally diagnosed as *Kampavata* and its line of treatment was adopted based on *Nirupasthambita Vata Vyadhi Chikitsa*. The present case reveals certain set of *Panchakarma* modalities of treatments showing significant improvement in the symptoms of Parkinson's disease without causing any side effects.

KEYWORDS: Parkinson's disease, *Kampavata*, *Abhyanga*, *Shirobasti*, *Shashtika shali pinda sweda* & *Basti*.

INTRODUCTION

Parkinson's disease (PD) is a heterogeneous and genetically complex disorder of largely unknown etiology. It is the second most common neurodegenerative disease in the general population. Approximately four million people worldwide are estimated to be living with PD. Incidence of Parkinson's increases with age, but an estimated four percent of people with PD are diagnosed before the age of 45^[1]. Epidemiological studies have shown that increased risk with exposure to pesticides, rural living, and drinking well water, and also decreased risk in cigarette smoking and caffeine. Genetic causes are also there as 10-15% is familial in origin^[2]. On the basis of signs and symptoms, Parkinson's disease can be correlated with *Kampavata* a disease explained under the *Vataja Nanatmaja* disorders in Ayurveda. During the ancient time of *Charaka* and *Sushruta* set of symptoms like *Kampa*, *Stambha*, *Chestasanga*, *Vakvikriti* etc. were described in different contexts, and are explained under *Vatika* disorders. As a separate clinical entity *Kampavata* was first narrated in *Madhava Nidana* under the context of *Vepathu*.^[3] However, now the authors like Govind Das Sen, Basavaraja gave a detailed description by explaining the clinical features of *Kampavata* are similar to that of Parkinson's disease. Modern treatments are effective in managing the early motor symptoms of the disease, mainly through the use of levodopa and dopamine agonists. As the disease progresses and dopaminergic neurons continue to be lost, these drugs eventually become ineffective at treating the symptoms and at the same time produce a complication called dyskinesia, marked by involuntary

writing movements.^[4] Surgery and deep brain stimulation have been used with a chance of risk to reduce motor symptoms as a last resort in severe cases where drugs are ineffective. By considering the symptomatology of the disease as well as the limitations of its treatment in the modern science, an effective & safe modalities of *Panchakarma* treatments were adopted in the present study with the intention to reduce the progression of the disease as well as to provide symptomatic relief.

CASE REPORT

The present case was a 76 year old male patient presenting with the complaints of tremors both hands, slow body movements and swaying while walking since 6 months. History of the patient revealed that before 6 months he gradually developed tremor and later he noticed rigidity in movements. The tremors used to aggravate at rest & was absent during movements. Initially he neglected the symptoms. After 4 months, he developed *Kampa* (tremor) in his both hands. Since 8 months patient noticed *Shirogaurava*, Tendency to fall forwards while walking, slowness of movements and speech. Patient also c/o constipation & incomplete evacuation of stools since 2 months. He has also started to notice difficulty in doing day to day activities like slowness in eating food and pressing buttons of TV remote and loss of memory. For this he consulted an doctor & was diagnosed as Parkinson's disease and he was prescribed with medicines (Tab. Syndopa 110mg, Tab. Resalact 0.5mg). He took these medications for about 4 months, while taking this

medicine he felt weakness of body and as he did not notice any significant changes in his present complaints. Gradually the disturbance was increased in intensity i.e., the patient noticed slowness of speech and reduced swinging of arms while walking and patient also started noticing giddiness and disturbed walking and movements. His daily activities affected more than before. From past 2 months his bowel habit is disturbed, i.e. he passes stools which are hard in consistency with incomplete evacuation and sometimes on alternative days. Patient's bladder is not affected by the illness. Hence patient was brought to SKAMCH & RC Bangalore for further treatment.

Past history: No H/o DM/HTN/Trauma or any other major medical illness.

Family history: No history of same illness in any of the family members.

General Examination

On the day of examination patient found to be well built, moderately nourished, afebrile, normotensive, other parameters like pallor, cyanosis, icterus, lymphadenopathy was absent.

Systemic Examination

Intervention

CVS : S1, S2 Heard, no murmur

CNS : Well oriented, conscious.

RS : Normal vesicular breathing, no added sounds.

P/A : Hard, no tenderness, no organomegaly.

Ashta Vidha Pariksha

1. *Nadi* : 80 b/ min
2. *Mala* : Constipated, incomplete evacuation
3. *Mutra* : 5- 6 times
4. *Jiwha* : *Alipta*
5. *Shabda* : *Avishesha*
6. *Sparsha* : *Anushna Sheeta*
7. *Druk* : *Avishesha*.
8. *Akriti* : *Madhyama*

Diagnosis

The case had been diagnosed as Parkinson's disease as it fulfills the clinical features of this disease as follows:

- Tremor
- Bradykinasea
- Rigidity

Table 1: Showing the Treatment Given in 2 Phases

Phases	Advised	Duration
1 st Phase	1. <i>Shirobasti</i> 2. <i>Sarvanga Abhyanga</i> 3. <i>Sarvanga Shastika Shali Pinda Sweda</i>	Performed for 30 mins. } Performed for 30 mins. } X 7 days Performed for 20 mins. }
2 nd Phase	1. <i>Sarvanga Abhyanga</i> 2. <i>Sthanika Swedana</i> 3. <i>Rajayapana Basti. (Kala Basti)</i>	Performed for 30 mins. } Performed for 10 mins. } X 16 days Performed for 05 mins. }

1. *Shiro Basti* and 2. *Sarvanga Abhyanga* with *Moorchita tila taila*.

3. *Sarvanga Shastika Shali Pinda Sweda*: *Shastika shali* rice is boiled in *Ksheera* (milk) to which *Balamoola Kwatha* and *Dashamoola Kwatha* are added and *Pottali* is prepared by which *Sweda* is done.

Table 2: Showing The Chart of *Rajayapana Basti* Given For 16 Days

Days	1	2	3	4	5	6	7	8
Basti	A	N	A	N	A	N	A	N
Days	9	10	11	12	13	14	15	16
Basti	A	N	A	N	A	A	A	A

A- *Anuvasana Basti* - *Brihat Chagaladi Ghrita* = 80 ml

N- *Niruha Basti* -It is prepared in *Khalwa yantra* by taking following ingredients:

1. *Madhu* = 80ml
2. *Saindava lavana* = 10gms
3. *Sneha* = *Bruhat Chagaladi Ghrita* = 80 ml
4. *Rajayapana Kalka* = 30gms.
5. *Rajayapana kwatha* = 300ml
6. *Aja Mamsa Rasa* = 200ml.

CRITERIA FOR ASSESSMENT

Assessment of the effect of treatment on signs and symptoms have been done based on subjective and objective parameters by adapting a grading pattern before and after the treatment as follows.^[5]

Table 3: Showing the Grading of the Clinical Features of Parkinson's disease

Grading	Tremor	Bradykinesia	Disturbance in Voice	Rigidity
4	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
3	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 Cogwheel rigidity demonstrable in major joints slow eye ball movements without staring appearance
2	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
1	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
0	No tremor	Can walk brisk without aid	Normal speech	No rigidity

OBSERVATION AND RESULT

There was a significant reduction in the symptoms after treatment in tremor, rigidity, bradykinesia, speech. The tremors reduced from grade 3 to grade 1 after the treatment. There was an improvement in speech from grade 2 to about grade 1. And Rigidity got relieved from grade 4 to grade 2, Bradykinesia also reduced from grade 2 to grade 0.

Parameters	Before treatment	After treatment
Tremors	Right-3	Right-1
	Left- 3	Left-1
Rigidity	4	2
Speech	2	1
Bradykinesia	2	0

Rationality behind selection of Panchakarma procedure

The treatment of Parkinson's disease according to Modern Medicine includes mainly through the use of levodopa and dopamine agonists. As the disease progresses and dopaminergic neurons continue to be lost, these drugs eventually become ineffective at treating the symptoms and at the same time produce a complication called dyskinesia, marked by involuntary writing movements. Surgery and deep brain stimulation have been used with a chance of risk to reduce motor symptoms as a last resort in severe cases where drugs are ineffective. Hence treatment which is cost effective, which improves the quality of life in the patient and with nil or minimal side effects is the need of hour in this particular disease.

There is no direct reference for the treatment of Parkinsons in Ayurvedic classics but depending on the clinical features as it is compared to *Kampa vata* the *Dosha* and *Dushya* involved can be assessed and accordingly treatment can be provided. In this particular disease where the disease is due *Dhatukshayaja Vata Vyadhi*^[6] and its line of treatment should be adopted based on *Nirupasthambita Vata Vyadhi Chikitsa*^[7]. It is understood that *Abhyanga* helps to relieve the diseases caused due to *Vatadosha* and the body attains *Dradhata* (strength). It is also said to be *Jara*, *Shrama*, *Vatahara* and *Pushti*, *Ayu*, *Swapna*, *Twak Dardhyakara*^[8]. *Abhyanga* provides a

passive form of exercise even for those who cannot perform of exercise even for those who cannot perform active physical exercise because of debility and old age.^[9] *Brimhana* type of *Basti* along with *Shastika shali pinda sweda* plays an important role. Hence *Rajayapana Basti* is adopted in the present study. The drugs present in *Rajayapana Basti* as explained in *Charaka siddhi sthana*^[10] are very cost effective, easily available and without any known side effect. From the above description it is understood that *Brimahana* type of *Chikitsa* is adopted in *Dhatukshayaja vata vyadhi*.

DISCUSSION

In the present case which was diagnosed as Parkinsons, is a disease presenting with tremors, rigidity, bradykinasea and postural instability and the pathology of which is to be identified with *Dhatukshayaja Vata Vyadhi* and its line of treatment has to be adopted based on *Nirupasthambita Vata Vyadhi Chikitsa*^[10].

In this regard the treatment was planned with certain set of *Panchakarma* modalities of treatment consisting of both *Bahir Parimarjana* and *Antah Parimarjana Chikitsas* performed in 2 phases. The aim of the treatment was adopted was to impart *Brimahana* affect which was very much required to relieve the symptomatology pertaining to *Apatarpana* presentation of

the disease. Here in this case the choice of treatment was given in 2 phases:

In 1st phase *Sarvanga Abhyanga* was given with *Moorchita tila taila* because *Abhyanga* has got *Vatahara* effect and *Shamanahara* effect. “*Abhyangam Nityam Acharyeth Sa Jara- Shrama-vatah...*” [11] Parkinson's disease is a kind of *Jara Vyadhi*, so this can be appreciated through *Abhyanga* and using of *Taila* are beneficial in controlling or regulating the functions of *Vata* and *Kapha*. So *Abhyanga* was adopted. *Sarvanga shasthika shali pinda sweda* was adopted with *Dashamoola kwatha choorna*, *Balamoola kwatha choorna*, *Shali* and *Ksheera* because of its *Vatahara* effect *Brimhana* effect along with *Swedana* effect.

In 2nd phase *Sarvanga Abhyanga* with *Moorchita tila taila* was adopted and as the patient is of 76 years *Maha Swedana* was not used but *Adhoshaka sthanika sweda* was done. *Basti* is one of important therapies among all the treatments hence *Acharya Charaka* described “*Sarvam chikitsamapi chikitsardhimitibruhanti*”. Extensive description regarding *Yapana basti* is found in *Charaka siddhi sthana*. There it has been quoted that *Yapana basti* is that form of *Basti* which can be given to *Atura* and *Swastha* as well as without much complications, especially in this disease *Rajayapana basti* is given which has the properties of *Mamsa Balajanana*, *Shula hara*, *Janu*, *Uru*, *Jangha Graham*, *Tridosahara*, *Sadyo balajanana*, *Rasayana*. *Yapana basti* is indeed a *Rasayana* type *Basti*. It might be possible that *Basti* by stimulating many factors in GIT physiology effects on regulatory functions of these peptides either by moderation or by stimulation. These further stimulated Enteric nervous system (ENS) which works in synergism with Central Nervous System (CNS), so the drugs absorbed can acts directly on neurons and modify neural function or they may reflexly acts by sending afferent impulses to central nervous system via the chemoreceptors, baro-receptors or the peripheral nerves.[12] The drugs used in *Rajayapana basti* are *Madhu*, *Mamsarasa*, *Guduchi*, *Bala*, *Rasna*, *Usheera*, *Laghu Panchamoola* contains anti oxidant, higher amounts of flavonoids (which have neuro protective action). This confirms to their *Rasayana*, *Sanjeevana* property.

CONCLUSION

Taking into consideration that many of the *Samanya Vata Vridhi Lakshanas* like *Kampa*, *Bala*, *Indriya bhramsa*, *Shakrath graham* were present in this patient and moderate *Dhatu kshaya lakshanas* were observed. The line of treatment that were adopted was *Snehana vata hara* and *Brimhana*. Encouraging results were observed. Further study in larger sample is required. To generalize the above treatment protocol for Parkinson's disease.

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