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A CASE STUDY OF PANCHAKARMA THERAPY IN PARKINSON'S DISEASE

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Abstract:

Parkinson's disease is a common neurodegenerative disease characterized by the presence of bradykinesia, rigidity, resting tremor and postural instability.[1] The purpose of this case study is to determine the *panchakarma therapy* an effective and safe treatment option that can enhance the speed and degree of recovery, minimal risk associated with *panchakarma* and high patient acceptance in preference to other methods of treatment of Parkinson's disease. The case study illustrates that significant gains in improvement of balance, gait, functional movement made by an individual in relatively short periods of time. Patients with Parkinson's disease may often turn to *Panchakarma therapy* with the hope of improving their quality of life.

Key words: *Kampavata, Karma Basti, Panchakarma therapy, Parkinson's disease.*

Introduction

Parkinson's disease is a neuro-degenerative disease that causes slowness of movement (bradykinesia), muscular stiffness (rigidity), tremor, poor postural stability, soft voice, shuffling gait, sudden cessation of movement called freezing and a paucity of spontaneous movements.[2]

Motor manifestations typically begin on one side of the body, only later affecting the other side as well.[3] It is progressive disorder characterized by insidious onset. The first clinical sign occurs when about 60% of the dopamine-producing cells in the substantia nigra have degenerated.[4] Mean age of onset of disease is in the mid fifties, with increasing incidence and prevalence as age increases.[5]

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The condition occurs in all ethnic groups and there is a 1.8 times greater risk of Parkinson's disease in men. The cause of disease remains uncertain but it is likely to be due to a combination of genetic risk factors and environmental agents.

The main motor symptoms of Parkinson's disease are –

Bradykinesia – slowness of movement

Rigidity – raised tone, which may be asymmetrical or limited to certain muscle groups

Tremor – involuntary shaking, trembling or quivering movement of the muscles. It is caused by the muscles alternately contracting and relaxing at a rapid pace.

Postural instability – balance problems, a later feature of idiopathic Parkinson's disease.

The non motor symptoms are of crucial importance since they have a major impact on quality of life. Neuropsychiatric symptoms are

anxiety disorders, apathy, depression, psychosis, visual hallucinations, dementia and sleep disturbances.

The autonomic disturbances are urinary dysfunction, constipation, sexual dysfunction, postural hypotension, weight loss, dysphagia, sweating and excessive salivation.

The initial treatment of Parkinson's disease suggests, begins with diagnosis, patient education and then discussion of when and which drug treatment to initiate. Drug will not stop the progression of the disease but will usually decrease the symptoms. People with Parkinson's disease usually take medication for the rest of their lives; stopping medication at any time will mean a return of the symptoms. The most effective treatment is dopamine replacement therapy but long term use of L-dopa is associated with motor complications including dyskinesias and motor fluctuations. [6]

To date, all the drug used to treat Parkinson's disease are symptomatic and there is no treatment proven to cure disease or delay its progression. Thus there is need for identifying an agent that will be neuroprotective and slow the progression of neuronal loss that occurs in Parkinson's disease.

Ayurvedic Concept:

Kampavata (Vepathu) is one among *vataj nanatmaja vyadhi* explained by *Acharya Charaka* in *Sutrastana 20*.[7] *Kampavata* was first narrated by *Acharya Madhavakara* under the name of '*Vepathu*'.[8] *Acharya Charaka* and *Vangasen* used the term *Vepathu* instead of *Kampavata* and explained the similar symptoms as that of *Kampavata*.[9] *Basavarajeeyam* explained the symptoms of *Kampavata* are *Karapadtal kampa* (tremors in hands and legs), *dehabramana* (postural instability), *nidrabhagna* (insomnia) and *Matiksheen* (dementia).[10] The symptom like *Stambha* (rigidity), *Cestahani* (slowness of the movement), *Vinaman* (flexed posture), *Vakvikriti* (speech disorders) have been mentioned in other pathological conditions of *Vata vyadhi* which can also be grouped under the feature of *Kampavata.* In *Kampavata Avarana* of *Vata* and *Dhatukshaya* are the chief pathological processes. Charaka has stressed on *Srotoshuddhi, Vatanulomana* and *Rasayana* in general management of *Avarana. Vangasena* has clearly mentioned the treatment of *Kampavata* as *swedana, abhyanga, Anuvasana basti, Niruha basti, Shirobasti, Virechana* and *Shamanaushadhi*.[11]

Case Report

A 67 years old businessman diagnosed with Parkinson's disease presented with complaints of imbalance, early fatigue, and lack of interest in all social activities for the past 3 years. The main signs that caused him to seek medical attention include slowing of all activities, impaired balance and difficulty

with functional movements. Initial symptoms included a tremor of right hand, loss of appetite and general debility. He was diagnosed to have idiopathic Parkinson's disease in local hospital.

No history of infection/illness or accident in the past. He is on medication of hypertension for last 8 years.

Motor examination revealed good muscle efficiency in all 4 limbs; both precision and power of hand were good, all deep tendon reflexes were diminished. All sensory functions were normal. Co-ordination tests, including equilibrium and non-equilibrium were negative.

Initially he began to take some allopathic medicine, which reduced the rigidity, improved timing for movements and helped him to cope with the disease. He was referred for physical therapy intervention.

Investigations:

MRI Brain (2007) – Mild global cerebral atrophy with right temporal lobe subcortical gliosis.

NCS (2010) of bilateral median (M+S+F), ulnar (M+S) nerves were performed. NCS parameters were within normal limits.

MRI LS Spine (2012) – Lumbar spondylosis with reduced intervening disc spaces and osteophytes at L2-3 and L3-4 levels. Mild retrolisthesis of L5 over S1 likely due to degenerative changes. L3-4, L4-5, L5-S1 diffuse disc bulge with bilateral facet joint and ligamentum flavum hypertrophy (R>L) resulting in bilateral neural foramina narrowing with mild impingement or right exiting nerve root. L1-2, L2-3 disc bulge with bilateral facet joint arthrosis at these levels.

Material & Methods

A single case study of a 67 years old Parkinson's disease patient was considered and the written consent was taken to participate in the trial. The trial was designed as a thirty days *Panchakarma therapy (Karma Basti)*. The initial assessment was done before the *Panchakarma therapy* and the post therapy assessment was done after 30 days of treatment given. Symptomatic assessment measures were considered to assess the progress of patient symptoms.

Outcomes measures – To assess the efficacy of *Panchakarma therapy*, the symptoms of Parkinson's disease such as bradykinesia, rigidity, tremor and postural instability were noted carefully before and after the commencement of treatment. The UPDRS (Unified Parkinson's Disease Rating Score) scale was applied to the measure the degree of improvement. [12]

Grading	Bradykinesia	Rigidity	Tremor	Postural stability
0	None	Absent	Absent	Normal
1	Minimal slowness, deliberate character, possibly reduced amplitude	Slight, detectable only with mirror movements	Slight & infrequently present	Retropulsion, but recovers unaided
2	Mild slowness, poverty or small amplitude of movement	Mild to moderate	Moderate, bothersome to patient	Absence of posture response, would fall if not caught
3	Moderate slowness, poverty or small amplitude of movement	Marked, but full range of movement easily achieved	Severe, interferes with many activities	Very unstable, spontaneous loss of balance
4	Marked slowness, poverty or small amplitude of movement	Severe, range of movement achieved with difficulty	Marked, interferes with most activities	Unable to stand without assistance

Treatment Protocol

The patient was given *Panchakarma therapy* which includes *Abhyanga* of *Mahamasha taila* for 35 minutes followed by *Nadisweda* of *Dashmool kwath. Karma basti* in which *Anuvasan basti* of *Mahamansha taila* (60 ml) and *Niruha basti* containing decoction of *Kaunch, Ashwagandha, Yava, Kulthi, Pippali and Mulethi* (200ml), *Madhu* (20 ml), *Bala taila* (20 ml) and *Saindhav* (10gms) were administered. As per the classical text total 30 *basti* including 18 *Anuvasan basti* and 12 *Niruha basti* was given for one month. [13]

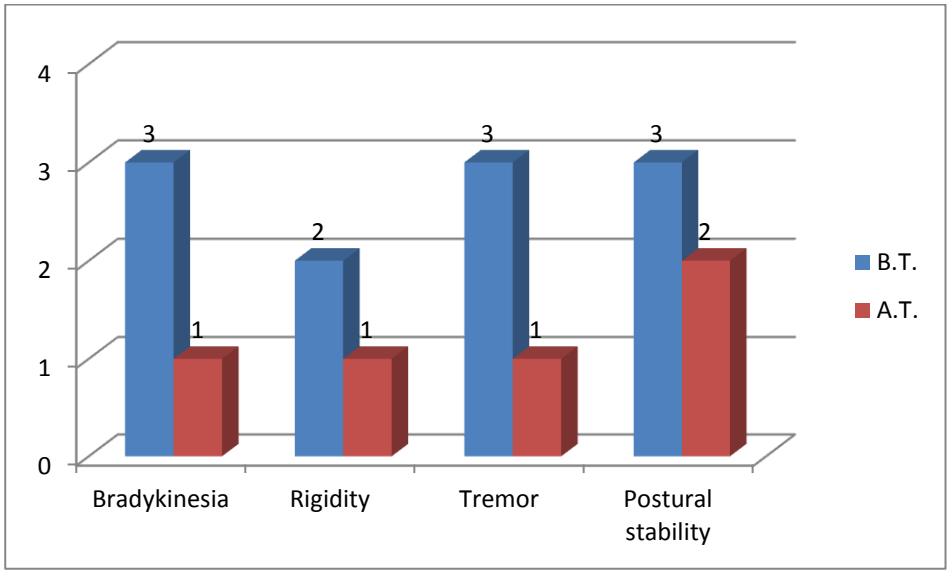
Result

There was significant improvement in overall functional status after 30 days treatment with *karma basti*. Clinical assessment was made from the interrogation and gradation of scoring pattern. Initially before starting the treatment the grading score for bradykinesia, rigidity, tremor and postural stability were 3, 2, 3 and 3 respectively. After commencement of one month *panchakarma therapy* the degree of improvement in grading score were bradykinesia – 1, rigidity – 1, tremor – 1 and postural stability – 2. The percentage of Unified Parkinson's Disease Rating Score improvement for each symptom was calculated. In bradykinesia, rigidity, tremor and postural stability the relief percentage were 66.66%, 50%, 66.66% and 33.33% respectively. The therapy showed improvement in right hand tremors, rigidity, loss of appetite, general debility and the social activities of daily living. There was no side effect observed during the treatment as well as after the completion of treatment.

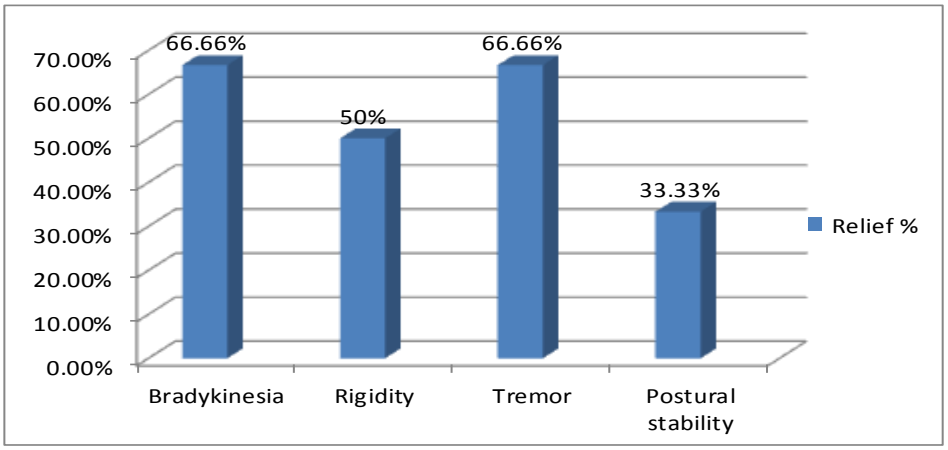
Table showing Grading Score and Relief Percentage of Individual Symptoms of Parkinson's Disease

Sr. No.	Symptoms	Grading Score		Relief	Relief Percentage
		B.T.	A.T.		
1	Bradykinesia	3	1	2	66.66%
2	Rigidity	2	1	1	50%
3	Tremors	3	1	2	66.66%
4	Postural stability	3	2	1	33.33%

Graph Showing Grading Score (Before and After Treatment) of Individual Symptoms of Parkinson's Disease



Graph Showing Percentage Relief of Individual Symptoms of Parkinson's Disease



Discussion

Parkinson's disease is a degenerative disorder of the central nervous system characterized by tremor and impaired muscular co-ordination. According to Ayurvedic texts *Kampavata* is considered as

one of the disease provoked *Vata* due to *dhatukshay* and a*varana*.[14]There are depletion of r*akta dhatu* and *avarana* of *prana, vyana* and *samana vayu*. In elderly, a*pan vayu* get vitiated. *Basti chikitsa* is one of the best treatments for *vata vyadhi*. Oleation through *abhyanga* and *karma basti* is useful in pacifying *vata* and building *ojas* and also plays nourishing action on the nervous system.

The drugs used in *Karma basti* includes *Kaunch beej* contains Levodopamine or L-dopa, precursor of dopamine. In addition it contains serotonin, 5 HTP, Nicotine it could potentially have psychedelic effects.[15] *Ashwagandha* and *Mulethi* are included in M*edhya rasayana* group and scientific studies proved their role in neuroregeneration.[16-17] There is depletion of *Rakta dhatu* in *Vatavyadhi* therefore to replenish *Kulthi* is added to it.[18] *Yava* is strength promoting because it clarifies obstruction to channels of circulation or its specific action.[19] *Pippali* scrapes toxic build up from cell walls, arteries and tissues to reduce excess body weight.[20]

Conclusion

The case study presented suggest that the disability of Parkinson's disease can be lessened with early *Panchakarma therapy* as gains are made in musculo-skeleton flexibility, alignment and functional movements It also suggests that *Panchakarma therapy* offer a cure for Parkinson's disease and help to ease symptoms and make coping with disease easier. Patients with Parkinson's disease may often turn to *Panchakarma therapy* with the hope of improving their quality of life. Further studies using a rigorous scientific method are needed to determine the safety and efficacy of therapy.

References

1. Huges, A.J., Daniel, S.E., Kilford, L. And Lees, A.J. (1992) Accuracy of clinical diagnosis of idiopathic Parkinson's disease: a clinico-pathological study of 100 cases. J Neurol Neurosurg Psychiatry 55:181-184.
2. Fahn S. Description of Parkinson's disease as a clinical syndrome. Ann.N.Y.Acad. Sci 2003;991:1-14. [PubMed:12846969]
3. Rajput AH, Rozdilsky B, Rajput A. Accuracy of clinical diagnosis in Parkinsonism-A prospective study. Can.J.Neurol.Sci 1991;18:275-278[PubMed:1913360]
4. Booij J, Tissingh G, Winogrodzka A, van Royen EA. (1999). Imaging of the dopaminergic neurotransmission system using single-proton emission tomography and positron emission tomography in patients with Parkinsonism. Eur J Nucl Med, 26:171-82.
5. Ng DC. (1996). Parkinson's disease. Diagnosis and treatment. West J Med. 165:234-240.
6. Olanow CW, Poewe, Levodopa in the treatment of Parkinson's disease. 2004 Sep; 19(9):997-1005

7. Charak Samhita with Ayurveda Dipika commentary by Charapanidatta, Chowkhamba Krishnadas Academy, 2nd edition, Varanasi, Sutra Sthana 20, Sloke no. 11, 2006
8. Madhavkara, Ed Dr. Brahmanand Tripathi; Madhava Nidanam with Madhukosha Teeka; Chaukambha publications Vol. 1, Chapter. 22, P.551
9. Jain Shankarlalji, Vangasena Samhita, Vatavyadhi chapter, Khemraj Sri Krishnadas Publication, Mumbai, 1996.
10. Shastry RD editor, Basvarajiyam Basavraj. Chapter 6, Chawkhamba Sanskrit Series, Varanasi, 1987.
11. Charaka Samhita, with Ayurveda Dipika commentary by Chakrapanidatta, Chowkhamba Krisnadas Academy, 2nd edition, Varanasi. Chikitsa Sthana 28, 2006.
12. UPDRS, Hoehn & Yahr, Scwab & England_SVUH_MedEI_tools, Scales in Parkinson's disease
13. Kasture Haridas Shridhar, Ayurvediya Panchakarma Vidnyan, Baidyanath Ayurved Bhavan Ltd. Nagpur, 6th edition 1999: Karma Basti : 377.
14. Charaka Samhita, with Ayurveda Dipika commentary by Chakrapanidatta, Chowkhamba Krisnadas Academy, 2nd edition, Varanasi. Chikitsa Sthana 28, 201-204, 2006.
15. Sastri JLN, Study of Essential medicinal plants in Ayurveda. Dravyaguna Vidnyan. 2nd edition. Kapikacchu chapter, Chowkhambha publications, Varanasi.
16. Andrade C, Aswath A, Chaturvedi SK, Srinivasa M, Raguram R; A double blind, placebo-controlled evaluation of the anxiolytic efficacy of an ethanolic extract of Withania somnifera. Indian J Psych., 2000; 42(3):295-301.
17. Chakravarthi K, Avadhani R; Nootropic action of Glycyrrhiza glabra root extract on the Dendritic Morphology of Hippocampal CA1 Neurons in one month old albino rats. International Journal of Bioassay, 2013, 2(5):783-788.
18. Chunekar K, Pandey G. Bhavprakashnighantu (Indian Materia Medica) 638.
19. Rahul Jain, Praveen Raghuwanshi, Satish B Patil.Yava (Barley) – A key to the lifestyle disorders. Ayurpharm Int J Ayur Alli Sci. 2013;2(5):138-143.
20. Deepti Bisht, Sharma YK, Mehra BL. A clinical study to evaluate the efficacy of Pippali Rasayana in certain respiratory disorders. Ayu-vol.30, No.3, 2009, 337-341.

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