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An Ayurvedic Approach in Improving the Quality of Life in Atypical Parkinsonism - A Case Report

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ABSTRACT

Atypical parkinsonism is another form of parkinsonism, which is having a more widespread pathology than seen in Parkinson's disease. A group of neurodegenerative conditions including Multiple system atrophy (MSA), Progressive supranuclear palsy (PSP), and Corticobasal syndrome (CBS) constitute this form of parkinsonism. Due to the widespread pathology including degeneration of striatum, globus pallidus, cerebellum, and brainstem, as well as the SNc, the clinical features tend to resemble to that of Parkinson's disease, but different manifestations are seen. Early involvement of speech and gait, absence of rest tremor, lack of motor asymmetry are the clinical presentations seen in patients with atypical parkinsonism. Additionally, poor or no response to levodopa, and a more aggressive clinical course also differs it from Parkinson's disease. Initially, the diagnosis is difficult, but as the disease progress, a clear diagnosis can be obtained. A 64-year-old male patient was admitted to *Kayachikitsa* IPD complaining of difficulty in walking, slowness of activities, whole body numbness, tremor of hands and chronic constipation. On examination, extrapyramidal signs were positive, sensory system was not much affected, hyperreflexia and decreased muscle bulk was noted. Unified MSA rating scale was used to assess the change in quality of life before and after treatment. *Vatavyadhi* and *Gulma Chikitsa* was adopted. Procedures such as *Churnapinda Sweda*, *Sirodhara*, *Vasti*, *Nasya* were done. Walking and tremor of hands improved significantly. Mild decrease in whole body numbness, overall increase in body strength were obtained.

Key words: Atypical Parkinsonism, *Vatavyadhi*, *Kampavata*

INTRODUCTION

Parkinsonism is a movement disorder that is neurodegenerative in nature and causes significant morbidity in old age.^[1] Among the different forms of Parkinsonism, Parkinson's disease is the most commonly seen one. The features include bradykinesia, tremor and rigidity.^[2] The global burden of Parkinson's disease accounts for approximately 5 million people worldwide. The hallmark pathological

feature of Parkinson's disease is degeneration of dopaminergic neurons in substantia nigra and presence of Lewy bodies in cell bodies.^[3] Atypical parkinsonism is one of the different forms of parkinsonism which differs from Parkinson's disease by its widespread pathology involving substantia nigra, globus pallidus, brainstem and cerebellum.^[3] It and involves multiple system atrophy, corticobasal syndrome and progressive supranuclear palsy.^[4] The early diagnosis of atypical parkinsonism is difficult, and definitive pathology of the disease is being researched.^[5] The clinical features include early falls, absence of rest tremor, speech difficulty, poor or no response to levodopa. Since neuroimaging of dopamine system shows striatal dopamine depletion in both atypical and Parkinson's disease, it is seldom not confirmatory for diagnosing atypical parkinsonism. Further, contrast metabolic imaging of basal ganglia or thalamus network shows decreased activity pattern in globus pallidus and increased activity in thalamus, which is opposite in case of Parkinson's disease.^[3] In

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Multiple system atrophy (MSA), there are cerebellar, autonomic and parkinsonian features, with either parkinsonian or cerebellar features predominating.^[6] In *Ayurveda*, the symptoms can be compared to that of *Kampavata*. *Kampavata* is a *Vatika Nanatmaja Vyadhi* according to Acharya Charaka, and has been described in *Basavarajeeya*.^[7] The condition can be managed by *Vatavyadhi Chikitsa*. *Brimhana* therapy can be administered considering the *Dhatukshaya* nature of the disease. Along with *Brimhana*, specific treatment aiming at *Kampa* can also aid in the better management of the condition.

CASE REPORT

64-year-old male patient complaints of difficulty in walking after getting up from resting position, tremor of hands, whole body numbness, slowness of activities, constipated bowel and tendency to fall on standing for some time and the symptoms worsened since past 5 months.

Patient History

64-year-old hypertensive, cardiac patient, with a long history of smoking and chronic constipation complaints of difficulty in walking after getting up from resting position for 5 months. Patient has a long history of neck and low back pain and managed the condition overtime by taking painkillers without medical advice. Apart from these symptoms, patient noticed slight difficulty in walking with tendency to fall, which rapidly progressed within the past 5 months into a short-stepping gait with tendency to deviate to sides while walking along with whole body numbness. He started experiencing abnormal leg movements which are jerking in nature before one and a half months, which worsened during the course of the disease, and for 1 month he requires another person's support for walking. He went for allopathic consultation after a feeling of weakness of left half of body 3 months before, and was referred to neurology department after imaging studies revealed occurrence of CVA. He was prescribed with Syndopa in addition to regular cardiac medicines. Later, his already existing abdominal complaints including constipation, gastric irritation became so severe that he was prescribed

with more medicaments including those for anxiety. He also started noticing slowness of activities, difficulty in buttoning of shirt, generalized debility, tendency to fall or need to sit on standing for some time and urinary incontinence. Before 1 week, patient started developing tremor of hands and he then decided to take Ayurvedic IP treatment for better management of the condition.

Treatment History

Patient was on Syndopa 100 mg twice daily after food, Omeprazole 20 mg twice daily before food, Clopidogrel 75 mg once daily after food, Amixide H one tablet once daily after food for anxiety, Clonam 0.25 mg once daily after food for anxiety.

Systemic Examination

Examination of Central Nervous System

Patient was of moderate built with BMI of 27.1 kg/m², cooperative, anxious, neat and tidy in appearance. He was oriented to time, place, person with intact memory. Speech was fluent with slight slurring and monotonous in nature. Speech comprehension intact and there is no dysarthria or aphasia. All cranial nerves were found to be intact on examination. The muscle bulk on upper limb 10 cm above olecranon process was 27 cm on right side and 25 cm on left side; and 10 cm below olecranon process was 24 cm on right side and 23 cm on left side. On lower limb, the muscle bulk at 18 cm above patella was 36 cm on right side and 38 cm on left side; and at 10 cm below tibial tuberosity, it was 24 cm on right side and 25 cm on left side. Both upper and lower limbs were hypertonic in nature. The muscle power was normal at upper limbs and in lower limb, the power was 4/5. Plantar reflex was positive and all deep reflexes were exaggerated (+++). Finger nose test was possible, there was no dysdiadochokinesia, buttoning and straight-line walking were difficult, tandem walking and knee-heel test was not possible, Romberg's test was positive. Nystagmus and ataxia of gait was absent. Postural tremor was present, and gait was short stepping in nature with reduced arm swing. The sensory system was intact on examination. Signs of extrapyramidal lesion observed were bradykinesia, tremor of hands,

Festinant gait, slight monotonous speech, slightly manifested muscular rigidity, and positive glabellar tap.

Ayurvedic Parameters Examination

- The *Sarira Prakriti* of patient is *Vata-Kapha* and was analysed using TNMC *Prakriti* questionnaire.
- *Doshas* vitiated are *Vyana Vayu, Samana Vayu, Apana Vayu, Sadhaka Pitta, Pachakapitta, Avalambhaka Kapha* and *Tarpaka Kapha*.
- *Dhatu* involved are *Rasa, Rakta, Mamsa, Medas* and *Asthi*
- *Upadathu* involved is *Snayu*
- *Sara* is *Madhyamam*
- *Satwam* is *Avaram*
- *Samhananam - Madhyamam*
- *Vyayama Sakthi - Avaram*
- *Satmyam - Sarvarasa*
- *Pramanam - Madhyamam*
- *Ahara Sakthi: Abhyavaharana Sakthi - Avaram, Jarana Sakthi - Avaram*
- *Vaya - Vardhakya*
- *Kalam: Kshanadi - Greeshmam, Vyadhyavastha - Navam*
- *Desam: Bhoomi - Sadharanam, Deham - Sarvadeham*
- *Rogamargam - Madhyamam*
- *Srotas* affected - *Rasavaha, Raktavaha, Mamsavaha, Medovaha, Asthivaha, Annavaha, Purishavaha*
- *Nidanas* are *Ruksha Asatmya Ahara*, Chronic smoking, Prolonged use of antacids and painkillers
- *Poorvaroopam - Avyaktam*
- *Roopam* - Tremor of hands, jerking movements of lower limbs, slowness of activities, difficulty in walking, numbness of whole body, constipation, urinary incontinence
- *Upasaya - Ushna Laghu Ahara*, mild exercises

- *Anupasayam - Ruksha Seta Asatmya Ahara*, heavy works and exercises, cold applications
- *Samprapti: Nidana - Vata Prakopa, Rasa Rakta Dushti - Sthanasamsraya* in *Snayu, Grahani* - manifestation of *Roopas*

Diagnostic Assessment

From the clinical presentations and poor response to levodopa, and after careful examination, diagnosis was reached. Unified MSA rating scale was used to assess the quality of life of the patient before and after treatment.^[8] Diagnosis was concluded as Atypical parkinsonism (*Kampavata*) (Multiple system atrophy)

Therapeutic Intervention

The treatment was mainly focussed on to improve the quality of life of the patient, considering the rapid progressive nature of the disease. *Vatavyadhi Chikitsa*, mainly *Dhatukshayajanya Vyadhi Chikitsa* was adopted. *Brimhana* was the prime objective along with management of tremor and associated conditions. The internal medicines given are included in table 1 and external therapies given are included in table 2.

Table 1: Internal medicines

Date	Medicine	Dose	Time
04/04/24	<i>Gandharvahasthadi Kashaya</i>	15 ml <i>Kashaya</i> with 45 ml luke warm water	6am, before food
	<i>Gandharvahastha Eranda Tailam</i>	10 ml with <i>Kashaya</i>	6 am, before food
	<i>Vaiswanara Churnam</i>	1 teaspoon with hot water	12 pm, Before food
	<i>Ashtavargam Kashayam</i>	15 ml <i>Kashaya</i> with 45 ml luke warm water	6pm, before food
	<i>Dhanwantaram tab</i>	0-0-1	With <i>Kashaya</i>

	<i>Balarishtam + Aswagandharishtam</i>	30 ml -0-30 ml	After food
08/04/24	<i>Kapikachu Churnam with Aswagandha Churnam</i>	5 gm each with milk	Bed time
	<i>Suntibaladi Churnam</i>	2 teaspoon Churna in 2 litres of water	Frequently
14/04/24	<i>Gandharvahasthadi Kashayam</i>	15 ml <i>Kashaya</i> with 45 ml lukewarm water	6 am, Before food
	<i>Rasonadi Kashayam</i>	As <i>Ksheera Kashayam</i>	8 pm
	<i>Vaiswanara Churnam</i>	1 teaspoon with hot water	12 pm, Before food
	<i>Balarishtam + Aswagandharishtam</i>	30 ml-0-30 ml	After food
	<i>Aswagandha Churnam + Kapikachu Churnam</i>	1 teaspoon each with milk	Bed time
	<i>Suntibaladi Churnam</i>	2 teaspoon Churna with 2 litres of water as <i>Toyam</i>	Frequently

	External treatment medicines <i>Kolakulathadi Churnam</i> <i>Dhanyamlam</i>		
09/04/24 to 11/04/24	Internal medicines Additionally, <i>Kapickachu Churna</i> and <i>Aswagandha Churna</i> in milk and <i>Suntibaladi Toya</i> given with previous internal medicines	<i>Churna Pinda Sweda</i> in <i>Karpasastyadi</i> and <i>Mashasaindhava Tailam</i> .	Whole body numbness reduced; tremor of hands reduced.
	External treatment medicines <i>Kolakulathadi Churnam</i> <i>Karpasastyadi Tailam</i> <i>Mashasaindhava Tailam</i>		
09/04/24 to 15/04/24	Internal medicines Same as before	<i>Matravasthi</i> with <i>Pippalyadi Anuvasana Tailam</i> - 100 ml	Patient had urge for defaecation, however, consistency of bowel and satisfaction on proper evacuation was irregular
	External treatment medicines <i>Pippalyadi Anuvasana Tailam</i>		
10/04/24 to 23/04/24	Internal medicines Same as before and was revised on 14/04/24 by adding <i>Rasonadi Ksheera Kashaya</i> instead of <i>Ashtavargam Kashayam</i>	<i>Dhanwantaram Tailam Pichu</i> on lower abdomen and pelvic region	Urinary incontinence reduced significantly and frequency of toilet visits for urination

Table 2: External therapies

Date	Medicine	Procedure	Outcome
04/04/24 to 08/04/24	Internal medicine <i>Gandharvahasthadi Kashayam</i> <i>Ashtavargam Kashayam</i> <i>Dhanwantaram tablet</i> <i>Vaiswanara Churnam</i> <i>Gandharvahastha Eranda Tailam</i>	<i>Churna Pinda Sweda</i> with <i>Kolakulathadi Churna</i> in <i>Dhanyamlam</i> steam	Patient felt easiness of joints, slight improvement (subjective) in walking

	External therapy medicines <i>Dhanwantaram Tailam</i>		also reduced.
14/04/24 to 18/04/24	Internal medicines Same as before External treatment medicines <i>Ksheeram</i> <i>Karpasastyadi Tailam</i> <i>Mashasaindhava Tailam</i>	<i>Ksheeradhooma</i> with face massage with <i>Karpasastyadi Tailam</i> and <i>Mashasaindhava Tailam</i>	No significant change in symptoms
16/04/24	Internal medicines Same as before External treatment medicines <i>Erandamoola Kwatham</i> - 800 ml <i>Saindhavam</i> - 15 gm <i>Satapushpa Kalkam</i> - 20 gm <i>Makshikam</i> - 100 ml	<i>Kashaya Vasti</i>	Patient complained of abdominal distension and constipation in between treatment and thus <i>Kashaya Vasti</i> was given. <i>Vasti Dravya</i> passed within 5 minutes and abdominal distension was relieved. However, constipation persisted next day also.
17/04/24 to 23/04/24	Internal medicines Same as before	<i>Pratimarsha Nasya</i> with <i>Dhanwantaram 101 Avarthi Tailam</i> , 2 drops	Tremor of hands was almost negligible and patient felt an

	External therapy medicines <i>Dhanwantaram 101 Avarthi Tailam</i>	each nostril in morning	increase in overall strength of body.
19/04/24 to 23/04/24	Internal medicines Same as before External therapy medicines <i>Bala Aswagandhadi Tailam</i>	<i>Sirodhara</i> with <i>Bala Aswagandhadi Tailam</i>	Tremor of hands was almost negligible and patient felt an increase in overall strength of body. The abnormal jerking movements of lower limbs showed slight improvement and thus patient had much easiness while getting up from sitting position and on walking.
21/04/24	Internal medicines Same as before External therapy medicines <i>Sukumara Ghritam</i>	<i>Musthadi Rajayapana Vasti</i>	Constipation persisted in the following days also.
23/04/24	Discharged		

RESULTS

Patient Perspective

From patient’s perspective, there was improvement in walking as he required support to walk before and after treatment, he was able to walk on his own. Hand

tremor got cured completely. Bowel remained unsatisfactory. Whole body numbness was also reduced to some extent. Urinary urgency and incontinence were significantly reduced. After 3 weeks of follow-up, patient reported satisfactory bowel, occasional gastric irritation, reduced whole body numbness.

Analysis using unified MSA rating scale.

The score reduced from 43 to 26 after treatment. The table showing the score is given below.

Table 3: Unified MSA rating scale

	Before treatment	After treatment
Part 1 - Historical review	20	13
Part 2 - Motor examination scale	19	10
Part 3 - Autonomic examination	Present - urinary incontinence, mild orthostatic hypotension	
Part 4 - Global disability scale	4	3

DISCUSSION

Atypical parkinsonism, although not as common as Parkinson's disease, is a debilitating disorder due to its rapid progress. The symptoms of atypical parkinsonism can be seen in the features of *Kampavata*. The treatment mainly focusses on improving the quality of life by reducing tremor, improving motor activities and speech difficulties. The treatment in this case is staged as *Vata Anulomana*, *Agni Sameekarana* initially, along with specifically managing *Kampa*, walking difficulty, followed by *Brimhana* measures. Internally, *Gandharvahasthadi Kashaya* along with *Gandharva Eranda Tailam*, *Vaiswanara Churnam*, *Dhanwantaram* tablet, *Ashtavargam Kashaya*, *Balarishta*, *Aswagandharishta*, *Kapikachu Churna*, *Aswagandha Churna*, *Shuntibaladi Churna* and *Rasonadi Kashaya* are given. The drugs of *Gandharvahasthadi Kashaya* are of hot potency, is carminative and has purgative effect. *Gandharva Eranda Taila* has antioxidant, and purgative property. *Vaiswanara Churna* which is

mentioned in *Gulma Chikitsa* is an excellent yoga that increases digestive power by its *Agni Deepana* property. *Ashtavargam Kashaya* has anti-inflammatory and analgesic properties.^[9] *Balarishta* is mentioned in *Vatavyadhi Chikitsa* and acts as a general nerve tonic for pacifying the aggravated *Vata*. *Aswagandharishta* also acts as a nervine tonic. *Kapikachu Churna* is beneficial for managing tremor as it is a richest source of levodopa. *Aswagandha Churna* has anti-stress, anti-inflammatory and neuroprotective properties.^[10] *Suntibaladi Churna* is proven for its effect on numbness. Externally, *Churna Pinda Sweda* with *Kolakulathadi Churna* in *Dhanyamla* was done first. It helps in managing the initial *Avarana* and *ama* condition and thus bringing lightness to *Sarira*. Later, *Churna Pinda Sweda* with *Karpasastyadi* and *Mashasaindhava Taila* was done. *Karpasastyadi Taila* is beneficial for all *Vata Rogas* and is *Brimhana* in nature. *Mashasaindhava Taila* is indicated for *Sankuchita Anga* in *Vatavyadhi chikitsa*. These bring about laxity to joints and improve motor activities. *Matravasti* with *Pippalyadi Anuvasana Taila* will pacify *Vata Dosha* and provides strength to *Sareera*. Considering the bowel of the patient and abdominal distension, *Pippalyadi Anuvasana Vasti* is a good choice. *Dhanwantara Taila Pichu* on *Adhonabhi* is used to manage urinary incontinence as it strengthens and nourishes the detrusor muscle.^[11] *Nasya* with *Dhanwantaram 101 Avarti Taila* helps to improve the symptoms by its *Vatahara* and *Balya* properties.^[12] *Sirodhara* with *Bala Aswagandhadi Taila* is also *Brimhana* in nature. At the time of discharge, patient was advised to follow *Pathya* including *Laghu Ahara* and walking.

CONCLUSION

The incorporation of Ayurvedic treatment modalities along with modern medication demonstrated a notable difference in improving the quality of life in atypical parkinsonism symptoms. However, continuous intake of internal medicines and periodical Ayurvedic external therapies are required to sustain the effect and prevent the progress of the disease. Further exploration in the field of atypical parkinsonism is required in Ayurveda as there is no

definitive way of management of atypical parkinsonism.

Patient Consent

Patient consent form had obtained.

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