

## Ayurvedic Management of Dystonia Parkinsonism - A Case Report

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### Abstract

### Case Report

Dystonias are the third common group of movement disorder after Parkinson's disease and essential tremors. It is characterised by involuntary muscle contractions that causes repetitive movements. Because of the structural lesions in basal ganglia, many a times Parkinsonism and dystonia may co-exist in presentation. In some hereditary forms, it manifested as rapid onset of dystonia Parkinsonism. In X-linked Dystonia Parkinsonism, dystonia usually starts focally, later Parkinsonism sets into it. The reported case was presented with symptoms such as tremors, retrocollis etc. more or less compared to the symptoms of kampavata, akshepaka, manyasthamba which are discussed under the spectrum of vatavyadhi in Ayurvedic parlance. So for the management, vatavyadhi chikitsa was adopted with consideration for ama, involvement of other doshas and also the role of avarana. Rookshana, snehapana, sweda, sodhana, nasya and rasayanas along with suitable samana therapies were selected. Patient was having considerable symptomatic relief within short time span which was promising and worth reporting.

**Keywords:** Dystonia, Parkinson's disease, Vatavyadhi, Rasayana, Kampavatha, sodhana.

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## INTRODUCTION

Parkinson's disease is a neurodegenerative disorder and is one of the most common movement disorders seen in general neurological practices. The progressive nature of the disease most often makes the management a bit challenging. It is characterised by the early bereavement of dopaminergic neurons in the substantia nigra and other pigmented nuclei [1]. The first description of Parkinson's disease by James Parkinson in 1817 primarily suggested that it is characterised by tremor with a decrease in muscle power, in his own words "involuntary tremulous motion, with lessened muscular power, in parts not in action and when supported; with a propensity to bend the trunk forward, to pass from a walking to a running pace, the senses and intellect being uninjured [2]". But it is less suggestive about the core features i.e., the explained tetrad of Parkinson's disease, hypo and bradykinesia, resting tremors, postural instability and rigidity. Other evident features are expressionless facies, stooped posture, axial instability and festinating gait [3].

In several neurodegenerative, genetic, toxic and metabolic disorders, Parkinsonism and dystonia may co-exist, resulting from the structural lesions in the basal ganglia [4]. In X-linked Dystonia Parkinsonism,

Dystonia usually starts focally in upper limbs or oromandibular regions. Later Parkinsonism sets into it forming the combination with dystonia and when evident, slow periodic resting tremor, bradykinesia and other features manifest. The focal dystonia may be seen more prevalently in lower extremities than in craniofacial area, in neck and shoulder area, and least prevalence in trunk i.e. 2.6%. When manifested in neck region it may present as torticollis, laterocollis, retrocollis, anterocollis or combination of thereof with or without shoulder elevation [5].

Dystonia is characterised by prolonged co-contraction of the opposing agonist and antagonist muscles and comprise the third most common movement disorder after Parkinson's disease and essential tremor [6]. Some hereditary forms manifested as rapid onset dystonia Parkinsonism. The stressful event rapidly produces a combination of dystonia, dysphagia, slurred speech, postural instability and a wide stance [7]. In Ayurveda the symptoms of dystonia and Parkinsonism both show the characteristics of vatavyadhi, such as sarvangavatha, akshepaka and kampavatha[8].

### Presenting Complaints with history

A 48-year-old Indian Muslim male from Malappuram, presented with tremors in left hand with a slightly stooped posture attended the OPD almost one month back and was admitted for further evaluation and management. In his own words, he presented with complaints that he can't hold his neck in a straight position as it was falling repeatedly to the left side and on applying force to bring it back, he was feeling severe pain. Also, tremor was observed in left hand from almost 2 years. He was a known case of Diabetes Mellitus for the last 20 years on allopathic medication.

He was working abroad for the past 25 years and underwent a stressful life through out. Almost two years back, he noted that his neck was gradually falling to the left side and he have to forcefully bring it to straight position by himself. Within months, he can't keep it straight even for a short period of time. In a few months, tremors started developing mainly in any stressful situation he had to face. Within three months tremors persisted for the whole day even in resting hours and started affecting his day to day activities and had difficulty in buttoning shirt, can't hold plate, can't have food by him, but tremors reduced while lifting objects with a considerable weight or similar activities.

There was no speech/swallowing difficulties. On detailing the history, he revealed that he had severe stress from almost 20 years with significant financial crises; also, for almost 15 years he can't recognise smell, he sought help of his friends for selecting soaps as well as perfumes. He continuously had dreams or nightmares relating to his stressful past.

He underwent allopathic treatment and was on Syndopa, Parkin, Epiril as medications along with Botox Injection at frequent intervals. With these medicines, he felt tiredness always and remained in bed with lack of interest in mingling with people, lack of interest in doing daily activities. So he himself stopped all these medications 8 months back and took acupuncture treatment which had given him a slight relief.

### CLINICAL EXAMINATION

On examination of vitals - pulse rate was 72/min regular and of full volume, heart rate -72/min with normal S1 and S2, blood pressure -116/76 mm hg, Respiratory rate was recorded as 16/min.

On neurological examination, he was conscious, oriented, and responded well with comprehension. All higher mental functions were intact except slight impairment in recent memory. On cranial nerve examination, his olfactory nerves were affected and anosmia was reported. Also, spinal accessory nerve was affected presenting with a difficulty in shrugging left shoulder. On motor nerve examination, he had comparatively less power of grade 2 in left upper and lower limbs with a rigid muscle tone and hyper reflexia of grade 3 in left upper limb. He had a festinant gait with a positive Rombergs test and normal finger nose test, heel-shin test and diadochokinesis.

### Ayurvedic clinical examination

Dasavidhapareeksha or tenfold clinical examination was performed. His sareera prakrithi was of Kaphapitha and manasa prakrithi was rajasatamasa prakrithi. Dosha involved in the disease manifestation was vata dosha, he belonged to a sadarana bhumidesa and kala was hemantha rithu. He presented with a madhyama in sathva and madhyama in vayas. His abhyavaharana sakthi and jarana sakthi were also madhyama. Srothas involved in the pathology were rasavaha, mamsavaha, medhovaha and asthivaha srotus.

### Diagnosis and assessments

Considering the detailed history and clinical examination, the case was diagnosed as Dystonia-Parkinsonism. Using Unified Parkinson's Disease Rating Scale [9] the disease was rated and he had major impairments in the domain of Activities of Daily Living with certain impairments in the domain of motor examinations. On assessing the quality of life using PDQ-39[10] the first four domains among eight of them were affected i.e., mobility, activities of daily living, emotional wellbeing and stigma.

**Table-1: procedure with rationale**

Procedures	No of days	Medicines	Rationale
Udhwartana	4	Kolakulathadichurna[11]	Rukshana
Ruksha Churnapinda sweda	7	Kolakulathadichurna	Rukshana and swedana
Snehapana	7	Sahacharadisevyam[12]	Snehana, Avarana vatha hara
Abhyanga Ushma sweda	3	Sahacharadi Thaila[13]	Snehana and swedana
Virechana	1	Avipathichurna[14]	Sodhana, Raktaprasadana
Nasya	2	Anuthaila[15]	Srothosodhana
	10	Mahamashathaila[16]	Vatahara, Kampahara
Virechana	1	Hareethakyadiyoga[17]	Rasayana poorvakarma
Rasayana	21	Rasnadasamoola ghrita[18] with lasuna swarasa[19]	Rasayana indicated in avaranaja vyadhis

## DISCUSSION

In clinical practise, Parkinson's disease presented mainly in two different forms one is kampa dominant ie. Vathika and other is sthamba dominant ie. Kaphaja. Both of them related to movements primarily and vata is the main dosha leading to manifestation here. Vata has the property of chalatva and its vikrithi leads to such manifestations. Virudha ahara, vihara, ratri jagarana, atichinthana, physical exertions etc leads to aggravation in Vata and along with altered manasa doshas, it is manifested as the disease. So while planning the treatment, addressing vata is being given, the primary concern.

Considering the role of avarana or association of kapha, the management was commenced with udwarthana along with internal medicines Ashtavarga kwatha[20], Kaisoraguggulu [21], Maharasnadi kwatha[22], Chandraprabhagulika[23] and Athmagupta choorna. Ashtavarga kwatha and maharasnadi kwatha were primarily indicated in vata associated with Kapha and is also if avarana is being suspected in the pathogenesis. Studies in Athmagupta churna had already proved its action on dopamine and associated conditions [24]. Bala churna [25] and sankupushpi churna[26] were also administered considering the stress factors and their rasayana effect. From the third day of udwarthana, he noted slight improvement in the power of his upper limb and he tried to hold things. Udwarthana has the property of sthairyakara and enhances the nerves as well as the motor functions [27].

Rookshana was found to be upasaya and churnapinda sweda was planned in the rooksha mode as the next procedure as it provides both rukshana and swedana. It also had given considerable relief for the patient. Then snehapana was scheduled and based on agni and koshta, started with a dose of 30 ml and enhanced up to 220 ml in ascending doses, till the samyaknigda signs were observed. Sahacharadi taila sevyā was selected for snehapana as it is indicated in Vatha conditions associated with kampa, akshepaka etc. Following snehapana, abhyanga along with ushmasweda was done and then virechana with 30 gms of Avipathy churna was administered on the next day.

For reversing the srothorodha and considering the focus of dystonia, many of the symptoms were of urdhwajathrugatha and hence nasya[28] was opted as the next treatment. It was started with anu thaila for the purpose of sirosodhana, but on the second day patient was having discomfort such as headache and heaviness so the medicine was switched over to. Mahamashathaila of dose 3ml, which is indicated in pakshaghata, hanusthamba, apatantraka. Upanaha with kolakuthadi churna was done on the neck for the pain and stiffness over there. After changing the medicine from the fifth day, he reported to have relief in the pain on neck and shoulder region. He seems to be confident that he can

hold his neck in a straight position for a few seconds without support after the procedure.

Considering the age, dosha and progressive nature of disease, rasayana was planned after hareetakyadi sodhana as poorva karma for rasayana. Lasuna swarasa along with rasnadasamooladi ghrita was selected as rasayana drug and advised to continue upto 21 days. Though the primary indication of rasnadasamoola ghrita is kasa, vatha vyadhis such as sirakampa and sarvangaroga are also mentioned as an indication. With this the, patient got much improvement symptomatically and was discharged advising follow up after one month.

## CONCLUSION

The prevalence of Parkinson's disease increases with age and it affects 1-2 per 1000 at any time and affect 1% in those are above 60 years. Nearly 10% of patients have a genetic predisposition. The incidence and prevalence of Parkinson's disease do increase with advancing age [29]. Dystonia many a time co-exist with Parkinson's disease. All the presentations of this were similar to the symptoms of vata vyadhi with Kampa, stamba and sankocha. Hence considering the age, progressive nature of disease and the associated stress factor vatopakramas along with rasayana were selected as the management protocol. The selected protocol observed as effective in the symptomatic improvement, especially in those of dystonia in a short period of time. Furthermore evaluations regarding follow ups along with more documentation are needed for generalisation of the observed results.

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