

Panchakarma treatment approach on Spastic Ataxic Syndrome - A Case Report

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Spastic Ataxic Syndrome is a neurological disorder characterized by the simultaneous presence of spasticity and ataxia, indicating dysfunction in both the pyramidal and cerebellar systems. Clinically, it manifests as increased muscle tone, exaggerated reflexes, and impaired coordination, often affecting gait and speech. The syndrome can arise from various aetiologies, including hereditary conditions such as complicated hereditary spastic paraplegias, neurodegenerative diseases, demyelinating disorders, metabolic deficiencies, or cerebral palsy. Here we report a case of a patient diagnosed as autosomal dominant spastic ataxic syndrome with SCA1. She complaint of sudden onset and gradually progressive gait unsteadiness, tremor of both hands, slurred speech was diagnosed as Vatavyadi and Vatahara line of treatment was adopted. The treatment adopted was Rookshana chikitsa with Udwarthana, Utsadanam, followed by Snehapana, Abhyanga ooshmasweda, Virechana, Navadhanyakizhi, Nasya, Pizhichil, Shiropichu, Shirovasti, Ksheeravasti and Pratimarshanasya. Swarna Guggulu, Mashatmaguptadi Ksheera Kashaya, Mahavatavidhwamsa Rasa was advised orally. Total duration of treatment was 60 days. Assessment of the patient was done using SARA scale before and after the treatment.

Keywords: Spastic ataxic syndrome, Vatavyadi, Virechana, Nasya, Shirovasti, Ksheeravasti, SARA scale

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Introduction

Spastic ataxic syndrome involves concurrent dysfunction of the pyramidal and cerebellar systems, resulting in increased muscle tone, exaggerated reflexes, impaired coordination, and an unsteady gait. Spinocerebellar Ataxia Type 1 (SCA1), the most common autosomal dominant form of hereditary ataxia worldwide, frequently presents with a combination of gait ataxia, limb incoordination, spasticity, dysarthria, oculomotor abnormalities, and extrapyramidal signs such as dystonia or parkinsonism. Some patients may also exhibit peripheral neuropathy or mild cognitive impairment. Early clinical recognition, supported by neuroimaging and genetic testing for ATXN3 mutations, is crucial for confirming the diagnosis, guiding symptom management, and providing genetic counselling to at-risk family members. Treatment focuses on managing the underlying cause and supportive therapies like physiotherapy and speech therapy to improve functional outcomes. In ayurveda it is classified under *Vatavyadhi* and *Vatahara Chikitsa* is adopted to reduce the severity and progression of the disease.

Case Report

A 39-year-old female patient who complaints of shivering all over the body, difficulty in walking, speech difficulty and muscle cramps. 4 years before she noticed insidious onset of walking difficulty while climbing down from foot board of bus. Later she felt difficulty in walking through narrow passages and climbing upstairs. She had tremulousness while approaching objects like a cup of tea and is not able to write properly as before. She was under allopathic medication and was taking Evion 400mg tablet twice daily, Admenta tablet and Gabapentin tablet once daily. Whenever she doesn't take the medicine, her symptoms aggravated. Without any help she can't walk properly. Shivering also presented throughout the body. So, she came for ayurvedic management.

Past history of illness

No history of DM, HTN and DLP
Neurological examination

Clinical Finding

HMF - Intact
Cranial nerves

1 - Not intact; anosmia presents bilaterally

7 - wrinkling of forehead absent, involuntary blinking of eyes intermittently

Motor system examination

Muscle tone - hypertonic

Muscle power

	Right limb	Left limb
Upper limb	4	4
Lower limb	4	4

Reflex

	Right	Left
Biceps	2+	2+
Triceps	2+	2+
Knee	3+	3+
Ankle	2+	2+
Plantar reflex	Positive	Positive

Sensory system examination

Stance - impaired
Gait - ataxic gait, poor balance
Coordination test
Finger-to-nose test - dysmetria
Heel-to-shin test - incoordination
Diadochokinesia - present
Tandem gait - unsteady, lose balance
Rebound phenomenon - present

Ashtasthana Pareeksha

Nadi - Vata Pita
Mootram - Anavilam
Malam - Abadam
Jihwa - Anupalipta
Drik - Vyakta
Sparsha - Anushnasheeta
Shabda - Avaykta
Aakriti - Madyama

Dasavidha Pareeksha

Dooshya - Dosha - Vata Pradhana Tridosha, Dhatu - Rasa, Raktha, Mamsa, Majja
Desha - Bhoomi - Sadharana, Deham - Sarvakayam
Balam - Roga - Pravara, Rogi - Madhyama
Kalam - Kshanadhi - Sarva Rtu, Vyadhyavastha - Purana
Anala - Samagni
Ahara - Abhyavaharana - Madhyama, Jarana Sakthi - Madhyama

Prakruthi - Vata Kapha

Vaya - Madhyama

Satwam - Madhyama

Satmya - Sarvarasa satmya

Nidana Panchakam

Hetu - Beeja Dosha, Athi Yana Adhwa, Chinda

Poorva Rupa - Avyakta

Rupa - walking imbalance, slurred speech, shivering all over the body, muscle cramps

Samprapti - Due to *Nidana Seva* → *Vata Prakopa* → causes *Kha Vaigunya* in *Srotas* → *Lakshanas* are produced

Upashaya - Sheetopachara

Diagnostic criteria

The case was previously diagnosed as SCA 1: Genotype – 28 / 50± 3 based on molecular genetic analysis for spino cerebellar ataxia (triplet repeat disorder). Her MRI brain shows bilateral cerebellar atrophy. For assessment SARA scale was taken. Routine investigations were done.

Intervention

Treatment was done in two phases. Firstly, *Rookshana Chikitsa* was done through *Udwarthana* with *Kolakulathadi* and *Jeevanthyadi Churnam* followed by *Utsadana* with *Jeevanthyadi Churna* and *Dasamoola Churna* with *Ksheera* and *Dhadhi*. Internally *Rookshana* was done with *Panchakola Churna*. Once *Samyak Rooksha Lakshana* was attained *Snehapana* was carried out using *Rasnadasamoola Ghrita* and *Shadpala Ghrita* for 6 days (total quantity *Sneha Matra* on last day 180 ml). Then *Abhyanga* and *Ooshma Sweda* was done for 3 days followed by *Virecana* using 2 *Misraka Sneha* soft gel capsule. Secondly after *Samsarjana Karma* patient was subjected to *Navadhanyakizhi*, *Nasya*, *Pizhichil*, *Shiro-Picchu*, *Shiro-Vasti*, *Ksheeravasti* and *Pratimarshanasya*. *Thalam* with *Mahamasha Tailam* and *Kachooradi Churnam* was done throughout the treatment at 4pm.

Assessment

Improvement of patient was assessed using SARA scale before starting treatment and after completion of treatment. Marked improvement was seen after treatment as shown in Table[1]

SN	Examination	Score before intervention	Score after intervention
1.	Gait	5	3
2.	Stance	4	2
3.	Sitting	4	2
4.	Speech disturbance	5	3
5.	Finger chase	4	3
6.	Nose finger test	4	2
7.	Fast alternating hand movement	2	1
8.	Heel – shin slide	3	2
	Total score	31	18

Result

The SARA is a tool for assessing ataxia. It has eight categories with accumulative score ranging from 0 (no ataxia) to 40 (most severe ataxia). Once each of the 8 categories have been assessed, the total is calculated to determine the severity of ataxia.

The score was 31 before the treatment but it was reduced to 18 after the treatment. There was significant reduction in imbalance during gait and stance. Moderate improvement was noted in the coordination movement tests.

Significant improvement in speech disturbance was also noticed after the treatment. The patient can now carry out her daily activities independently without needing assistance.

Discussion

The symptoms such as *Gamanakruchrata*, *Vaksanga* and *Anga Graha* indicates towards *Vatajavikara*. When we delve into *Sadhya-Asadhya*, SCA is hereditary in origin; therefore, it can be considered as *Adibala Pravritta Vyadhi* in *Ayurveda*. Based on the nature of the disease SCA is progressive degenerative condition indicate towards *Chirakari Avastha* of the *Vyadhi*. *Adibala Pravritta Vyadhi* and *Chirakari Avastha* result it into *Yapya*. [2]

- The general *Vatopakrama* is the treatment principle adopted here. [3]
- First the patient was given *Rookshana* therapies both internally and externally, it brings about *Rukshata*(dryness), *Kharatva*(roughness) and *Vishada*(clear the sliminess). [4]
- *Udvatana* causes *Vataharatva*, provides stability to body parts and *Utsadana* produces lightness of the body. [5]

- *Shodhanatha Snehapana* was carried out to produce *Deepta Antaragni* (profound digestion), *Pratyagra Dhatu* (enlivened tissues), *Bala* (physical strength) and *Dridendriya* (stable senses).[6]
- *Rasanadasamoola Gritham* is beneficial in *Sarva Vathaamaya*[7] and *Shatpala Ghrita* clears the channels (*Srotasam Vishodanam*).[8]
- *Virechana* causes balance of *Agni* and *Doshas*; and *Nasya* was given to strengthen the *Urdwa Jatru* and for *Indriya Prasadana*
- *Asthi* and *Majja* is the seat of *Vata* also *Asthi* and *Vata* have *Ashraya Ashrayi Sambandha*. *Ksheera Basti* nourishes the *Asthi Dhatu* and there by pacifies its *Ashrayee Vata Dosha*. [9]
- *Nava Dhanya Kizhi* has *Vatahara* property and is good for curing neurological conditions
- *Shirobasti* has been reported to be having an excellent result on such disorders as it gives strength to the central nervous system. It calms down both the mind and the senses which allow the body's natural healing mechanism to release stress from the nervous system by pacifying *Vatadosha*, particularly *Pranavayu*. The procedure of *Sirovastu* imparts benefits of both *Snehana* and *Swedana*[10]

Conclusion

Currently there is no definitive management for spastic cerebellar ataxia. SCA symptoms are often seen as an imbalance of *Vata Dosha*, especially affecting *Majja Dhatu* (nervous tissue) and *Sira* (nerves). So *Vatahara* line of treatment is adopted. The treatment mainly focuses on symptomatic management, slowing disease progression and improving the quality of life. The patient shows subjective improvement in walking, there was significant improvement in overall balance, speech and power after the treatment.

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