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Motor Neuron Disorder

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Ayurvedic management of Motor Neuron Disorder (Mamsa Majjagata Sarvanga Vata) - A Case Report

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Motor neuron disorders are a group of progressive neurological diseases that affect motor neurons. As motor neurons degenerate, the brain's ability to initiate and control muscle movements diminishes, leading to severe disability and, eventually, death. A 52-year-old male patient apparently healthy 1 year ago, gradually over a period of 6-7 months patient experienced reduction of strength in bilateral lower and upper limb, slurred speech, fasciculation over thigh region. Patient observed progression of the above symptoms which made him unable to stand and walk without support, difficulty in swallowing. Patient visited National Institute of Mental Health and Neurosciences, Bengaluru where magnetic resonance imaging of brain (impression: Grade 1 small vessel ischemic changes) and electromyography were done (impression: preganglionic neurogenic involvement of bulbar, cervical, thoracic and lumbar segments with evidence of ongoing denervation and chronic re-nervation: likely pathology-anterior horn cell). Diagnosed it as motor neuron disorder advised medications and physiotherapy (for 6 months). Later, after 1 year, patient visited SDM Ayurveda hospital 11.11.2024. Here, this was diagnosed as Mamsa-Majjagata Sarvanga Vata, based on the symptoms Bala Kshaya/Chesta Nivrutti (reduced strength), Vak Stamba (difficulty speaking), Mamsa Kshaya (muscle wasting). Patient was treated for 20 days with Ayurveda according to stages of the disease (Ama, Kapha Dosha, and Vata). Sarvanga Kayaseka, Agnichikitsa Lepa, Ksheera Vaitarana Basti, Brihat Vata Chintamani Rasa, Saraswatharishta, Agnitundi Vati, Vak Shuddhikara Choorna, and physiotherapy were adopted. Assessed for changes in clinical features, Medical Research Council muscle scale for strength, Barthel Index. These assessments were shown significant improvements.

Keywords: Mamsa Majjagata Vata, Motor neuron disorder, Sarvanga Vata, Shamana Medications, Basti

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Introduction

Motor neuron disorders (MND)[1] is a group of progressive neurological diseases that affect motor neurons.

The most common form, Amyotrophic Lateral Sclerosis (ALS), causes gradual deterioration of muscle function, impacting movement, speech, swallowing, and breathing.

As motor neurons degenerate, the brain's ability to initiate and control muscle movements diminishes, leading to severe disability and, eventually, death. Patient visited National Institute of Mental Health and Neurosciences, Bengaluru where magnetic resonance imaging (MRI) of brain and electromyography (EMG) were done.

Diagnosed it as motor neuron disorder advised medications and physiotherapy (for 6 months). Here, we diagnosed it as Mamsa-Majjagata[2] Sarvanga Vata[3], based on the symptoms Bala Kshaya/Chesta Nivrutti (reduced strength), Vak Stamba (difficulty speaking), Mamsa Kshaya (muscle wasting).

Patient was treated for 20 days with Ayurveda according to stages of the disease (Ama, Kapha Dosha and Vata). Agnitundi Vati[4], Vak Shuddhikara Choorna[5], Chandraprabha Vati[6], Saraswatharishta[7], Brihat Vata Chintamani Rasa[8], Kalyanaka Ghrita[9], Sarvanga Kayaseka, Abhyanga[10], Agnichikitsa Lepa, Ksheera Vaitarana Basti, and physiotherapy were adopted.

Assessed for changes in clinical features, Medical Research Council muscle scale for strength, Barthel Index. These assessments were shown significant improvements.

Case Report

Aatura Parichaya

Age: 52 yearsGender: maleReligion: Hindu

Socio economic status: Middle class

Educational status: Degree

Occupation: FarmerMarital status: Married

■ IPD number: 079364

Date of admission: 11/11/2024

■ Date of discharge: 30/11/2024

Source of history: Patient and patient wife

Pradahana Vedana

- Reduced strength in bilateral (b/l) upper and lower limb since 1 year
- Unable to stand without support since 3 months
- Unable to walk with and without support since 2 months
- Difficulty speaking- unable to utter "RA"," UHH","PAH","GHA" since 2 months
- Difficulty swallowing and breathing since 1 month
- Brisk fasciculation over b/l thigh regions since 1month
- Heaviness in the body since 1 month
- Muscle wasting over thigh and b/l web spaces since 1 month

Vedana Vrittanta

A 52-year-old male patient apparently healthy 1 year ago, gradually over a period of 6-7 months patient experienced reduction of strength in bilateral lower and upper limb, slurred speech, fasciculation over thigh region.

Patient observed progression of the above symptoms which made him unable to stand and walk without support, difficulty in swallowing.

Patient visited National Institute of Mental Health and Neurosciences, Bengaluru. Diagnosed it as motor neuron disorder advised medications and physiotherapy (for 6 months).

Recently, he started to suffer with breathing difficulty on supine position, muscle wasting along with above complaints. Later, after 1 year, patient visited SDM Ayurveda hospital on 11.11.2024.

Vayaktika Vrittanta

Diet: Mixed diet (non-veg once a week)

Appetite: Reduced

Bowel: Regular (once /day)

Sleep: Adequate (lateral or sitting position)

Micturition: 4-5 times / day

General Examination (clinical findings)

Nourishment: Moderate

Built: Moderate built

Cyanosis: Absent

Lymphadenopathy: Absent

Tongue: CoatedEdema: Absent

Pallor: Absent

■ Temperature: 97.6°F

Icterus: Absent

■ Blood pressure: 120/80 mmhg

Clubbing: Absent

■ Heart rate: 78 beats per min

• Respiratory rate: 20 cycles per min

Examination

- CNS conscious and oriented to person, place and time
- CVS S1S2 heard, no murmurs
- RS Chest clear, no crepitation

Cranial Nerve

- Smell intact
- Visual acuity 6/6 b/l eye
- Pupil b/l equal and reacting to light
- EOM full in all direction, no nystagmus
- Fundus b/l normal
- Mild bifacial weakness +
- Gag reflex b/l ++
- Tongue Fasciculation ++

Motor System

- Diffuse fasciculation over b/l thighs, tongue
- Power 3/5 B/L upper and lower limb
- Hand grip 4/5
- Tone hypotonic
- Reflexes exaggerated
- Sensory fine touch and pin prick normal
- Gait not elicited (patient was not able to walk)

Ashthasthana Pariksha

- Nadi Vataj
- Mala Niram
- Mutra Samanya
- Jiwha Saama
- Drik Samanya
- Shabda Ksheena
- Sparsha Ruksha
- Akruti Ksheena

Dashavidha Pareeksha

- Prakruthi Vata-Kapha
- Vikruthi Vata and Kapha, Dooshya Rasa, Rakta, Mamsa, Medha, Asthi, Snayu
- Sara Madhyama
- Samhanana Madhyama
- Pramana Madhyama
- Saatmya Madhyama
- Satva Madhyama
- Ahara Shakti and Abhyavarana Shakti Avara,
 Jarana Shakti Avara
- Vyayama Shakti -Avara
- Vaya Madhyama

Prayogashalyeeya Pareeksha (Investigation done):

- MRI brain 29/4/2024: Grade 1 small vessel ischemic changes, Mild asymmetry of cerebral hemisphere.
- EMG 3/7/2024: Preganglionic neurogenic involvement of bulbar, cervical, thoracic and lumbar segments with e/o ongoing denervation and chronic re-nervation (likely pathology-anterior horn cell)
- MRI WHOLE SPINE 29/4/2024: Cervical and lumbar spondylosis, diffuse bulge in C5-C6, L4-L5, L5-S1levels.

Assessment Criteria

- Clinical features,
- Medical Research Council muscle scale for strength,
- Barthel Index

Chikitsa Adopted (Interventions)

Table 1: Treatment with timeline adopted

Date	Treatment	Observations	
11/11/2024 to	 Sarvanga Kayasheka with Dashamoola Kashaya and Dhanyamla. 	On 15/11/2024 ■ Tongue - ama (reduced)	
15/11/2024	■ Upanaha to b/l knee with Jatamayadi Choorna and Parisheka Thaila		
	 Vestana to b/l thighs with Parisheka Thaila 	 Body heaviness reduced 	
	 Agnitundi Vati 1 tid b/f (before food) 	 Heaviness presents only on thighs 	
	■ Chandraprabha Vati 1 tid a/f (after food)	■ Speech improved	
	Saraswatharistha 15 ml tid a/f	 Breathlessness reduced 	
	 Vak Shooddhikara Choorna 3 gms tid to rub on tongue 	 Fasciculations on tongue reduced 	
	Physiotherapy	 Fasciculations in left thigh reduced 	
		Sleep on supine position	
		Able to stand without support (around 7 to 10 mins)	
		Difficulty swallowing reduced	
16/11/2024 to	 Agnichikitsa Lepa for 30 mins on heaviness area (thighs) 	On 24/11/2024	
24/11/2024	 Anuvasana Basti with Kalyanaka Ghrita 40 ml 	Heaviness of thighs reduced	
	■ Saraswatharistha 15 ml tid a/f	 Fasciculations in right thigh reduced 	
	■ Vak Shooddhikara Choorna 3 gms tid to rub on tongue	 Able to walk with walker and one attender support (10-12 steps) 	
	■ Bruhata Chintamani Rasa (Suvarna Yukta) 1 at 6 pm with honey		
	Physiotherapy		
	 Ksheera Vaitarana Basti (Administered after lunch - Bhukte Deeyate) (V) uha: Chincha - 50 ml, Guda - 25 ml, Saindhava - 5 gms, Ksheera - 50 ml, Ashwagandha rita 20 ml + Ksheerabala Thaila 20 ml = 40 ml 	On 24/11/2024 • Able to walk with walker (12-15 steps/bathroom)	
Sch	nedule:	Speech improved	
	25/11 26/11 27/11 28/11 29/11 V V V	■ Gait improved	
	Sarvanga Abhyanga with Ksheerabala Thaila and Shastika Shali Pinda Sweda		
	■ Saraswatharistha 15 ml tid a/f		
	Vak Shooddhikara Choorna 3 gms tid to rub on tongue		
	■ Bruhata Chintamani Rasa (Suvarna Yukta) 1 at 6 pm with honey		
	Physiotherapy		

Result

Table 2: Assessments

Criterias	Before treatment	After treatments
Chesta Nivrutti/ Bala Kshaya	Present	Improved
MRC muscle strength scale	3 (all limbs)	4- (all limbs)
Standing	Unable to stand	Able to stand without support
Walk	Unable to walk	Able to walk with walker
Speech	Slurred (1 or 2 words)	Improved (sentences)
Swallowing	Difficult	Normal
Dyspnea (on supine)	Present	Absent
Fasciculation	Present	Absent
Heaviness in the body	Present	Absent
Muscle wasting over thighs and b/l web	Present	Present
Barthel Index	45 (partially dependent)	65 (minimally dependent)

Discussion

Ayurveda treatments have demonstrated their effectiveness in managing Mamsa Majjagata Sarvanga Vata (~MND). Agnitundi Vati as Deepana, helped in this patient. Chandraprabha Vati has Kapha Hara, Medo Hara action. Heaviness was reduced. Agnichikitsa Lepa also reduced heaviness.

Sarvanga Kayaseka played a crucial role in opening the minute bodily channels (Srotas), enhancing blood and lymphatic circulation. This therapy alleviates Kapha and Vata imbalances, while removing obstructions (Avarana or Srotorodha/Ama), preparing the body for subsequent treatments such as Abhyanga (oil massage) and Basti (medicated enema).

Sarvanga Abhyanga, along with Baashpa Sweda (steam therapy) and Naadi Sweda (localized steam), may be reduced muscle spasticity, reduced fasciculations, increased joint flexibility, enhances circulation, and alleviates pain. Among these treatments,

Basti is considered the most significant for managing Sarvanga Vata, as it supports both gross and fine motor functions, nourishes tissues, and improves overall health and quality of life, particularly in patients with motor neuron disease (MND). Ksheera Vaitarana Basti is Ama/Kapha Hara and Vata Hara along with Brumhana quality (According to Vangasena), as this patient was having heaviness, Ama Lakshanas. As strength of patient was Avara. Vaitarana Basti after lunch was administered (Bhukte Api Deeyate)

Ksheerabala Thaila has Brumhana, Vatahara action, which helped in this patient. Ashwagandha Ghrita may be acted as a neuro-protective agent and possesses antioxidant properties. Saraswatharistha has Medya, Swarya action. This action helped in this patient as speech abnormality was there. Brihat Vata Chintamani Rasa (BVC Rasa) fortified with Swarnabhasma (gold ash) are known to enhance sensory and motor functions, support cognitive and offer immunomodulatory effects. health, Integrating physiotherapy into the treatment plan further aids in improving mobility and muscle strength, making it a vital component in the comprehensive management. Thus, Deepana, Amahara/Kaphahara, Vatahara, Mamsa Majjagata Vata Chikitsa,

Pakshaghata/Sarvanga Vata Chikitsa subsequently adopted (according to stage/Avastha) and resulted in significant improvement.

Conclusion

Ayurveda treatment protocol adopted in MND shown significant improvement in clinical features ~ muscle strength, speech, and gait. MND can be treated according to Kapha Avruta Vata, Mamsa Majja Gata Vata and Sarvanga Vata. Multicentric clinical trials can be conducted on MND with this Ayurved treatment protocol.

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