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Case Study

PANCHAKARMA INTERVENTION IN THE MANAGEMENT OF MULTIPLE SYSTEM ATROPHY

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ABSTRACT

Multiple System Atrophy (MSA) is a Neurodegenerative condition presenting with motor abnormalities including akinesia, rigidity and postural instability along with either autonomic failure (OH or neurogenic bladder) or cerebellar syndrome. Early involvement of speech and gait, absence of rest tremors, poor response to levodopa helps to differentiate MSA from Parkinsonism. The condition is managed symptomatically and the condition progresses relentlessly to death 7-10 years after onset. There is no direct diagnostic correlation to MSA in Ayurveda, however, it can be comprehended within the spectrum of *Avrutavata*. **Objectives:** By considering MSA as *Kaphavruta vyana*, an attempt has been made to evaluate the efficiency of *Panchakarma* procedures in the conservative management of the disease. **Method:** A case of MSA presented with symptoms of slowness of activities, urinary incontinence, difficulty in standing and walking was managed with *Dashmoola Kashaya Seka, Mustadi Yapana Basti* as per *Kala Basti* schedule. **Result:** The patient was assessed based on Barthel index for dependency. **Conclusion:** *Panchakarma* procedures along with Ayurvedic oral medications are having encouraging results in improving quality of life of patients suffering from MSA.

INTRODUCTION

Multiple system atrophy (MSA), an atypical form of Parkinsonism is a neurodegenerative condition presenting with motor abnormalities including akinesia, rigidity and postural instability along with either autonomic failure (OH or neurogenic bladder) or cerebellar syndrome. MSA is uncommon condition with a prevalence estimated 2-5 per 100,000 individuals[1]. It is of two varieties namely Parkinsonian (MAS-P) and Cerebellar (MSA-C). Tremor not being the prominent symptom, symmetric motor involvement, early involvement of speech and gait and poor response to levodopa differentiates Parkinson's disease from MSA. Brain MRI is a useful diagnostic adjunct however MRI findings are typically seen only with advanced disease condition.

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Neuropathologic changes include neuronal loss and gliosis in many CNS regions, including the brainstem, cerebellum, striatum, and intermediolateral cell column of the thoracolumbar spinal cord. Glial cytoplasmic inclusions that stain positively (for Lewy bodies) are present primarily in oligodendrocytes in MSA, in contrast to neuronal inclusions in PD[2]. The condition is managed symptomatically and the condition progresses relentlessly to death 7-10 years after onset.

While Ayurvedic literature lacks a direct diagnostic correlation for MSA, it can be understood under the spectrum of *Kampavata*. Depending on the *Nidana* and predominance of symptoms, one can consider either *Dhatukshaya* or *Avarana Samprati*[3] in the manifestation of *Kampavata*. *Kaphavruta vyana*, *Kaphavruta Udana* and *Udanavruta Vyana* are the three main *Avarana* which contribute to the varied features of MSA. *Anabhishyandi Sneha*, *Shodhana* and *Vatanulomana* are the line of treatment told for the management of any *Avarana*[4]. This single case study demonstrates encouraging improvement in the general condition of the patient and better quality of life in terms of independency with Ayurvedic management.

MATERIALS AND METHODS

A female patient of age 59 years presented to the OPD of Panchakarma, Government Ayurveda Medical College, Bengaluru, Karnataka, India, who had a history of CA breast in 2008, underwent standard radiotherapy and chemotherapy for the same, with chief complaints of slowness of activities since 6 years, urinary incontinence since 1 year and difficulty in standing and walking since 3 months. 6 years back, initially she noticed mild tremors in her right hand while in rest which progressed gradually and was associated with right-handed slowness. Within 3 months she developed slowness of walking, for which she was prescribed Tab. Levedopa 125mg 2-2-2-2. There was improvement in the tremors, and the tremors subsided over the next year. But there was no improvement in the slowness of walking and she was diagnosed with MSA-P. 3 years back, she underwent bilateral total knee replacement surgery for osteoarthritis of knee joint. Three months after surgery, she was able to walk independently but much slower than before. Gradually, her condition worsened. Since one year she has not been able to control the urge for urination and has recurrent falls while walking because of imbalance. Since last 3 months she has difficulty in standing and walking because of stiffness present in all over the body and needs assistance for the same.

Table 1: Physical Findings

Higher mental functions	Conscious, oriented to time, place and person Speech – Hypophonia Memory – intact		
Cranial nerves	Within normal limits		
Sensory system	Normal		
Motor system		UL	LL
	Muscle Tone	Normal	Cog wheel rigidity
	Muscle power	5/5	5/5
	Muscle bulk	Normal	Normal
	Reflexes	Biceps, Triceps, Knee, Ankle + + Plantar – Areflexia	
Coordination	Glabellar tap sign – Positive Dysdidochokinesia – Present		
Other findings	• Hypomimia • Bradykinesia • Stooped posture		

Table 2: *Dashavidha Pareeksha*

Prakruti		*Pitta Kapha*
Vikruti		*Vata kapha*
Sara		*Madhyama*
Samanana		*Madhyama*
Satva		*Avara*
Saatmya		*Sarvarasabhyasa*
Ahara Shakti	***Abhyavaharana Shakti***	*Pravara*
	Jarana Shakti	*Pravara*
Vyayama Shakti		*Avara*
Vayah		58 yrs- *Madhyama*
Pramana		*Madhyama*

Table 3: *Nidana Panchaka*

Nidana	*Aharaja*: *Snigdha, Abhishyandi ati sevana* *Viharaja*: Doing work soon after intake of food, skipping meals, *Yaana* *Manasika: Chinta* Other*: Vyadhiksheena*
Purvaroopa	*Gatisanga*
Roopa	*Gatisanga, Vaksanga, Sthabdhata, Cheshtahani*
Upashaya- Anupashaya	Nothing specific

Table 4: *Samprapti Ghataka*

Dosha	*Vata kapha*	***Udbhavasthan***	*Pakvashaya*
Dushya	*Majja*	***Sancharasthana***	*Sarvashareera*
Agni	*Jataragni, Dhatvagnia*	***Vyaktasthana***	*Sarvashareera*
Agnidushti	*Mandagni*	***Adhishtana***	*Shiras*
Srotas	*Majjavaha*	***Rogamarga***	*Madhyama*
Srotodusti	*Sanga*	***Sadhyasadhyata***	*Kricchrasadhya*

Treatment Protocol Adopted

Panchakarma procedures along with oral medicines were administered.

Details of treatment given in Table 05.

Table 5: Treatment Protocol Adopted

<table>
<tr><th>Treatment</th><th></th><th>Duration</th><th>Observation</th></tr>
<tr><td colspan="2">• Sarvanga Abhyanga with Dhanvantara Taila followed by Dashamoola Kashaya Seka
• Lashunadi vati 1-0-1</td><td>7 days</td><td>Reduction in stiffness</td></tr>
<tr><td colspan="2">• Koshta Shodhana with Gandharva hastadi eranda taila</td><td>1 day</td><td>-</td></tr>
<tr><td colspan="2">• Kala basti pattern
• Mustadi Yapana basti
• Anuvasana basti with Guggulu tiktaka ghrita</td><td rowspan="2">15 days</td><td rowspan="2">Reduced dependency level</td></tr>
<tr><td>Mustadi Yapana Basti
Madhu – 60ml
Saidhava lavana – 12gms
Guggulu tiktaka ghrita– 80ml
Shatapushpa kalka – 12gms
Mustadi Yapana Basti Kalka- 12gms
Mustadi Yapana Basti Kashaya – 200ml
Aja Mamsarasa – 100ml</td><td>Anuvasana basti
Guggulu tiktaka ghrita – 60ml
Shatapushpa churna – 6gms
Saindhava lavana – 6gms</td></tr>
<tr><td colspan="2">• Shirodhara with Ksheerabala Taila</td><td>7 days</td><td>Improved sleep</td></tr>
</table>

Assessment: Assessment of the symptoms was done based on Barthel Index for Dependency and the condition of the patient got improved from severe dependency to moderate dependency and the same is shown in Table 06.

Table 6: Assessment of Symptoms Before and after the Treatment was done Using Barthel Index for Dependency

		Before *Seka*	After *Seka*	After *Basti*	After *Shisrodhara*
1	Feeding	10	10	10	10
2	Bathing	0	5	5	5
3	Grooming	5	5	5	5
4	Dressing	5	5	10	10
5	Bowel	10	10	10	10
6	Bladder	0	0	5	5
7	Toilet use	5	5	10	10
8	Transfer	5	5	10	10
9	Mobility	5	10	10	10
10	Stairs	0	5	5	5
	Total	**45**	**60**	**80**	**80**
		Severe Dependency	Severe dependency	Moderate dependency	Moderate dependency

DISCUSSION

Cell division is attributed to the function of *Vata dosha*[5]. As the patient had a history of CA breast, it is suggestive of increased activity of *Vata dosha*. Even-though the condition was managed by standard radiotherapy and chemotherapy, aggravated *Vata dosha* was not brought under control. The various *Aharaja nidanas* point towards *Kapha dosha vriddhi* in the body. This increased *Kapha Dosha* in turn contributes to *Margavarodha* of *Vata Dosha* which was already in the state of *Vridhi Avastha*, further leading to *Dhatukshaya*. *Garta guruta, Sarvasandhyasti ruja, Gatisanga* and *Stambha* are the features present in the patient suggestive of *Kaphavruta Udana Vata*[6,7].

- As the patient was presented with symptoms of *Kaphavarana* like *Gatisanga, Stabdhata, Gourava*; intitially *Avaranahara* line of treatment is adopted. *Dhanvantaram taila* being *Vatakaphahara*, it is used for *Abhyanga* as a *Poorvakarma* to *Seka*. As *Dashamoola Kashaya Seka* is *Vatakaphahara*, it helped in relieving *Stabdhata*.
- *Koshta shodhana* with *Gandhrva Hastadi Taila* was administered a day prior to *Basti karma* for quick removal of fecal materials. It also helps in better absorption and assimilation of the *Basti dravyas.*
- *Basti,* an *Ardha Chikitsa,* plays an important role in the management of all *Vatavyadhi*[8]. Network of nerve fibres in GIT is called as enteric nervous system, a second brain. *Basti* causes mechanical or chemical stimulation of this gut brain. *Yapana basti* is a type of *Basti* which can be given to *Swastha* as well as *Atura* for the purpose of *Sadya-Balajanana*, *Shukara-Mamsajanana* and *Rasayana*[9]. The drugs used in *Mustadi Yapana Basti* like *Madhu, Usheera, Bala, Laghu Panchamoola* etc. contain anti-oxidants and flavonoids which have neuro-protective action. One of the important ingredient, *Aja Mamsarasa* is a source of Arginine[10], which is an essential amino acid for the survival and functionality of neuronal cell.
- *Guggulu tiktaka grita* possesses *Tikta, Ushna* and *Teekshna* properties which serves the dual purposes - *Margavarodhahara* and *Brimhana.* Presence of functional bitter taste receptors in brain[11] suggests a direct connection between bitter tastes and the central nervous system. Hence administration of *Guggulu Tiktaka Grita* in *Niruha* and *Anuvasana Basti* acts on the target organ i.e., brain.
- A specific number of *Anuvasana basti* is essential to target a particular *Dhatu.* Administered 9th *Anuvasana Basti* will reach *Majja Dhatu*[12] and hence *Kala Basti* pattern which consists 9 *Anuvasana bastis* is followed to target *Mastishka Majja.*
- *Shiras* is considered as *Uttamanga* and *Moola* of *Shareera*. When Shiras is the *Adhishtana* for *Vatavyadhi*, *Shirobasti*[13] is indicated to achieve *Vatahara* and *Brimhana* effect. *Taila* is best *Sneha* among all *snehadravya* to combat aggravated *Vata dosha*. As the patient's *Satva* was *Avara* and there was psychological involvement, *Shirodhara* with *Ksheerabala Taila* has been done to achieve *Vatahara, Brimhana* and *Tarpana* effects.

CONCLUSION

There is no permanent cure or definite management for MSA in contemporary science. Dependency always makes patients life very miserable. By the application of Ayurvedic treatment principles and *Panchakarma* procedures in the management of MSA cases, we can improve the quality of life of the patient in terms of independency and here is the evidence for the same.

REFERENCES

1. Loscalzo, Fauci, Kasper, Hauser, Longo, Jameson, Harrison, Harrison's Principles of Internal Medicine, 21st Edition Vol. 2, McGraw-Hill, 2022, pp. 3432
2. Loscalzo, Fauci, Kasper, Hauser, Longo, Jameson, Harrison, Harrison's Principles of Internal Medicine, 21st Edition Vol. 2, McGraw-Hill, 2022, pp. 3433
3. Acharya YT, ed., Charaka Samhita of Agnivesha elaborated by Charaka and Drdhabala with Ayurveda Dipika commentary by Sri Chakrapanidatta, Chikitsasthana, 28th chapter, 59th verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp.619
4. Acharya YT, ed., Charaka Samhita of Agnivesha elaborated by Charaka and Drdhabala with Ayurveda Dipika commentary by Sri Chakrapani datta, Chikitsasthana, 28th chapter, 239th verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp.627
5. Acharya YT, ed., Susruta Samhita of Susruta with the Nibandha sangraha Commentary of Sri Dalhan acharya and the Nyayachandrika Panjika of Sri Gayadas acharya on Nidaasthana, Sharirasthana, 5th chapter, 3rd Verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp. 363
6. Acharya YT, ed., Charaka Samhita of Agnivesha elaborated by Charaka and Drdhabala with Ayurveda Dipika commentary by Sri Chakrapani datta, Chikitsasthana, 28th chapter, 224th verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp.626
7. Acharya YT, ed., Susruta Samhita of Susruta with the Nibandha sangraha Commentary of Sri Dalhan acharya and the Nyayachandrika Panjika of Sri Gayadasacharya on Nidanasthana, Nidanasthana, 1st chapter, 36th Verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp. 263
8. Acharya YT, ed., Charaka Samhita of Agnivesha elaborated by Charaka and Drdhabala with Ayurveda Dipika commentary by Sri Chakrapani datta, Siddhisthana, 1st chapter, 38-40th verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp.683
9. Acharya YT, ed., Charaka Samhita of Agnivesha elaborated by Charaka and Drdhabala with Ayurveda Dipika commentary by Sri Chakrapani datta, Siddhisthana, 12th chapter, 16th verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp.733
10. Amino acids in goat meat, cited 2023 December 15, Available from: https://fitaudit.com/food/148056/ amino
11. Ana Catarina duatre et al., The druggability of bitter taste receptors for the treatment of nerodegerative disorders, Biochemical Pharmacology, Volume 197, March 2022, 114915
12. Acharya YT, ed., Susruta Samhita of Susruta with the Nibandha sangraha Commentary of Sri Dalhan acharya and the Nyayachandrika Panjika of Sri Gayadasacharya on Nidaasthana, Chikitsasthana, 37th chapter, 74th Verse, Varanasi: Chaukhamba Surbharati Prakashan, 2014, pp. 363
13. Pt. Paradakara HSS, ed., Commentary by Hemadri on Astangahrdaya of Vagbhata with the commentaries Sarvangasundara of Arunadatta and Ayurveda rasayana of Hemadri, Chikitsasthana, 22nd chapter, 17th verse, Varanasi: Chaukhamba Sanskrit Samsthan, 2016, pp.723

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