

A CASE STUDY ON AYURVEDIC MANAGEMENT OF AMYOTROPHIC LATERAL
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ABSTRACT

Amyotrophic lateral sclerosis is an adult onset neurodegenerative disorder characterised by progressive degeneration of cells of the lower cranial motor nuclei, anterior horn cells of the spinal cord and neurons of the motor cortex extending to the pyramidal tracts. A 75 year old male patient had heaviness and weakness in left lower limb for 4 months. The condition rapidly progressed in the 4 months prior and found difficulty in climbing stairs and swelling in the left foot. Gradually he developed slowness of speech hence consulted allopathic hospital and treated with glutamate blockers, muscle relaxant and physiotherapy. His response to allopathic medications found to be slow. The functional rating scale for ALS i.e. ALSFRS-R was used for the assessment. The ALSFRS-R score before treatment was 26 and was increased to 34 after shodhana therapy with markable improvement in speech, walking and appetite. He got significant relief in symptoms by *Vatahara* line of management followed by *Rasayana* therapy as its diagnosed as *Dhatukshayjanya ekangavata*. This case study demonstrates that Amyotrophic lateral sclerosis can be symptomatically managed with Ayurvedic medicines.

KEYWORDS: Amyotrophic lateral sclerosis, *Rasayana*, *Bruhmana*, *Ayurveda*.**INTRODUCTION**

Amyotrophic lateral sclerosis is the most common form of progressive motor neuron disease.^[1] It is a prime example of a neurodegenerative disease and is arguably the most devastating of the neurodegenerative disorders. Although at its onset ALS may involve selective loss of function of only upper or lower motor neurons it ultimately causes progressive loss of both categories of motor neurons types. This disease can be correlated to *Dhatukshaya janya ekanga vata*. As the disease is chronic and progressively debilitating we can infer the *Dhatukshaya*. As the disease involves *ekanga* (lower part of body) and *Vatadosha* likely to be vitiated throughout the course of disease, the diagnosis of *Dhatukshayjanya ekangavata* is made. For the management or to slow down further progression of the disease and for the depleted tissues the effective therapy is *Brihmana* and *Rasayana* therapies.

Patient Information**Brief history of patient**

A 75 year old male patient was presented to our hospital who is not a known case of Diabetes mellitus and Hypertension, k/c/o bronchitis since 2 years was reasonably alright 5 months back. Gradually he noticed heaviness and muscle weakness in left lower limb. So

that he found difficulty while walking and climbing up steps. Initially he didn't give much care initially. Later, he developed swelling in left foot while sitting for a longer time or even walking a distance with occasional fasciculations of tongue. No diurnal variation in the swelling was noticed. Gradually, he also developed slurred speech. So for all these complaints he consulted a neurologist and advised for Concentric Needle electro-Myograph, Nerve conduction study suggestive of diagnosed with Motor neuron disease. Patient was treated with Rilutek 50mg for 3 weeks and they advised to continue physiotherapy. Meanwhile patient was not able to flex his left dorsum of foot, reduced appetite, difficulty while swallowing and fatigue also noted. For all these complaints patient came for further Ayurvedic management.

History of Past Illness

Medical illness: Tuberculosis at the age of 20

Chronic Obstructive Pulmonary Disease since 2 years

Surgical history: Prostatectomy 8yrs back

Herniotomy 10yrs back

Drug History

Tab. Pulmoclear 1-0-1 since 1year

Rilutek 50mg 1-0-0(continuing)

Family history

No relevant family history

Clinical Findings**Central Nervous System Examination**

The patient presents with high stepping gait with foot drop, slurred speech and nasal intonation without any impairment in level of consciousness, emotional state and memory. The cranial nerve examinations were normal except few of the facial expressions like smile were affected with mild difficulty in swallowing i.e., glossopharyngeal nerve affected and fasciculations of tongue. The sensory system was found to be intact. Muscles were flaccid with wasting. Coordination were intact with positive Babinski sign. The power of the muscle were assessed by MRC muscle power scale.

Table 1 Grading of muscle power on the day of admission scoring out of 5.

	Right side	Left side
Upper limb	5/5	5/5
Lower limb	5/5	3/5

Table 2: Muscle measurement chart.

	Right	Left
Biceps	13cm	13cm
Forearm	9cm	8.5cm
Thigh	30cm	29.5cm
Calves	34cm	30cm

Table 3: Grading of Deep tendon Reflexes on admission day.

Biceps	+3	+3
Triceps	+3	+3
Knee	+4	+4
Ankle	+3	+1

Nidana Panchaka**Nidana**

Ahara: Excess consumption of dry food, sometimes he used to have the habit of skipping the meal due to his work pattern. **Vihara:** *Divaswapna* (day sleep), *Ativyayama* (excessive physical exercise), due to his work pattern patient used to suppress natural urges like *mootra*, *puresha*, *kshudha*, *trishna*. **Manasika:** Family related problems were there. **Sahaja karana** : In general

Table 4: Lasuna rasayana course.

Lasuna Rasayana Course	
Date	No: of capsules
8-3-21 – 11-3-21	6capsules
12-3-21 – 15-3-21	12capsules
16-3-21 – 19-3-21	18capsules
20-3-21 – 23-3-21	24capsules
24-3-21	<i>Virechana</i> with <i>Trivrit lehyam</i> (30gm leha with milk) obtained 12 vegas(Madhyama shudhi)

- *Mustadi Rajayapana vasti* in yoga vasti pattern
- *Matravasti* with *kalyanaka ghrta*

dosha do not counteract each other but sometimes due to some adrushta factors, they destroys each other.² This may be taken here.

Poorvaroopa: Unmanifested symptoms.

Roopa: *Mamsa shosha* (wasting of muscles), *Bala hani* (loss of strength), *Chesta hani* (impairment in physical activities)

Samprapti: Due to nidana Vata pradhana tridosha kopa Sthanasamshraya in mamsa and meda mamsa kshaya bala kshaya.

Upashaya: Hetu vyadhi vipareetharthakari ahara, aushadha and vihara

Treatment Plan^[3]

1. *Shodhana*
2. *Rasayana* therapy

Prescribed medications are

- *Brihat vata chintaman(gold)* 1-0-0
- *Lasuna Rasayana*

Table 5: Prescribed medications with ingredients and karma.

YOGA	INGREDIENTS	THERAPEUTIC ACTION
Brihat vata Chintamani ^[4]	Swarnabhasma, Roupya bhasma, Abhraka Bhasma, Louha Bhasma, Pravala Bhasma, Muktabhasma, Rasasindhura, Kumariswarasa	Balya, Uttejaka, Medya, Hrudyā
Kalyanaka ghritam ^[5]	Visala, Haritaki, vibhitaki, Amalaki, Kaunti, Devadaru, Elavaluka, Sthira, Nata, Rajani, Daruharidra, Sariva, Krisna, Priyangu, Nilotpala, Ela, Manjishtha, Danti, Dadima, Kesara,, Talisapatra, Brihati, Malati pushpa, vidanga, Kushtha, Prisni Parni, Chandana, Padmaka	Apasmara, Jwara, Cough, consumption, Suppression of the power of digestion, Phtisis, Vata rakta, Pratisyaya, Tritiyaka and chaturtaka types of vishama jwara, Vomiting, Piles, Dysuria, Visarpa, Itching, Pandu, Unmada, Visha, Prameha, bhuta graha, Gadgada, useful in Pumsavana .
Rajayapana Basti ^[6]	Musta, Ushira, Bala, Aragwadha, Rasna, Manjishtha, Katurohini, Trayamana, Punarnava, Bibhitaka, Guduchi, Shalaparni, Bruhati, Kantakari, Madanaphala, Ghrita, Madhu, Mamsa rasa (goats meat), Shatapushpa, Kutaja phala, Madhuka, Rasanjana, Priyangu, Saindhava lavana, Cow's milk	Shukra mamsa bala janana, Kshata ksheena, Kasa, Gulma, Shula, Vishama jwara, Vardhma, Kundala, Kundalodavarta, Kukshi shola, Mutrakricha, Asrig rjh, Visarpa, Pravahika, Shiroruja, Janu jangha basti graha, Asmari, Unmada, Arshas, Prameha, Adhmana, Vatakrakta, Sadhyobalajanana and Rasayana.
Lasuna rasayana ^[7]	Properties of Lasuna Rasa: Katu pradhana Amla varjitha rasa Guna: Snigda, Tikсна, Pichila, Guru, Sara. Veerya: Ushna Vipaka: Katu Doshakarma: Kapha Vata Shamaka.	Brihmana, Vrsya, Pacana, Saaraka, Bhagnasandaana, Kantya, Kushtagna, Raktavardhaka, Balya, Varnya, Medya, Netrahita, Rasayana, Hridya, shothagna Jirnajwaraghna, Kukshishoolaghna, Vibanda, Gulmaghna, Ruchikara, Ruchikara, Kasaghna.

DISCUSSION

Amyotrophic lateral sclerosis is difficult to treat and in Ayurveda we can find the *dhatukshayajanya ekangavata* features similar to that of patient symptoms. Hence in the present case was given *shodhana*, *bruhmana* as well as *rasayana* line of therapy.

Considering *Lasuna* as the best among *vatahara dravya* as well as role of *lashuna* as a *rasayana* in the treatment of *vata margavarana* and was administered Followed by *lasuna rasayana* course trivrit leha virechana was given. *Virechana* procedure being a detoxification therapy helps in removing the aggravated doshas. The patient was advised to follow the strict *Pathya ahara* and was advised to refrain from day sleep so as to avoid all the aggravating factors of *Vata*. In *Vatavyadhi* the pathologies are either *Margavarodha*, *Marmabhighata* or *Dhatukshaya*.^[8] Hence therapies having *deepana* (appetizer), *ama pachana* (digestives), *vatashamaka* (pacify vata), *bruhmana* (Nourishing) and *balya* (strengthening) properties were selected. *Brihat vata Chintamani* rasa is the best *vatahara* drug especially in neurological debilities. Basti is the best treatment for vitiated vata dosha. Here Yapana basti was adopted as it has the ability to support life and promote longevity.^[9] Mustadi rajayapana basti is having *sadhyo balajanana* (improves strength quickly), *vatashamaka* (pacify vata dosha) and *rasayana* properties. *Rajayapana basti* having a positive impact on both neurological disorders and in motor system involvement.

Amyotrophic lateral sclerosis being *adrishtaja vyadhi* or *daivakrita* the *ghrita* such as *Kalyanaka ghrita* which is *balya*, *Alakshmithna* (destroys misfortune), *paparakshoghna* (protection against evil spirits) *balapradam* (provides strength) is selected for *matrabasti*.^[10] Thus the overall effect of panchakarma procedures along with oral medications delayed the progression of the disease. The results were assessed by ALSFRS-R scoring parameters which includes 12 aspects of physical function, ranging from one's ability to swallow and use utensils to climbing stairs and breathing. Each function is scored from 4 (normal) to 0 (no ability) with a maximum total score of 48 and a minimum total score of 0. Assessment was made in different stages of treatment i.e., before treatment, after enema therapy, after *shodhana* and on last follow up. The scoring before treatment was 26 while after *shodhana* treatment was 34. There was marked improvement in speech, walking, climbing stairs and no improvement in handwriting or buttoning the shirts.

Table Showing ALSFRS-R scores at different time periods of treatment 0= severely affected, 4=Normal.

Parameters	Before treatment	After basti treatment	After shodhana therapy
Speech	2	2	3
Salivation	2	3	3
Swallowing	3	4	4
Handwriting	3	3	4
Cutting food	1	1	2
Dressing and Hygeine	2	2	3
Turning in bed	3	3	2
Walking	2	3	3
Climbing stairs	0	1	1
Dyspnea	3	3	4
Orthopnea	2	1	2
Respiratory insufficiency	3	3	3

CONCLUSION

Amyotrophic lateral sclerosis is a serious condition which predominantly affects the motor functions of the body. Early diagnosis of the disease may help in preventing the further complications. *Dhatukshayajanya ekanga vata* can be considered for the diagnosis here where the treatment protocol of Shodhana (here *virechana*), *bruhmana*(*nourishing*), and *rasayana* could be beneficial in helping the patient to prevent the further progress of disease and complications. This line of *Ayurvedic* intervention helps the patient to be self-reliant.

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