



AYURVEDIC MANAGEMENT OF AMYOTROPHIC LATERAL SCLEROSIS: A CASE REPORT

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ABSTRACT

Amyotrophic lateral sclerosis (ALS) is the most common adult motor neuron disease and it is characterized by selective death of upper and lower motor neurons causing muscle atrophy, weakness and spasticity. The present report deals with a case of ALS diagnosed as kapha avrita praana, udaana and vyaana vata according to Ayurveda. Efficacy of treatment was calculated by using Amyotrophic Lateral Sclerosis Functional Rating Scale – Revised (ALSFRS-R). Before treatment, total score of ALSFRS-R was 17 and at the time of discharge the score was 29. Various panchakarma procedures like udwartana, sarvanga abhyanga, bhashpa sweda, shashtika shali pinda sweda and vasti were implemented along with internal Ayurvedic medicines. Good improvement was observed in items like ‘speech’, ‘excessive salivation’, ‘deglutition’, ‘ability to walk’, and ‘shortness of breath’. No change was noticed in fine motor movements, tremors of both hands and in fasciculation of the tongue. Ayurvedic panchakarma therapy along with internal medication has provided promising results in present case.

Key Words: ALS, Ayurveda, Panchakarma, ALSFRS-R, Spasticity, Atrophy

INTRODUCTION

Amyotrophic lateral sclerosis (ALS), known as Lou Gehrig’s disease, is the most common adult motor neuron disease. ALS is characterized by selective death of upper and lower motor neurons causing muscle atrophy, weakness and spasticity. Denervation of respiratory muscles is the fatal event and it occurs within 5 years of disease onset¹. The term ALS is used synonymously with MND (Motor neuron disease)².

Ayurvedic concept of MND / ALS is not clear; however according to a previous case report MND was diagnosed and treated as ‘Sarvanga vata’³. ALS is a vata and kapha predominant disease and based on signs and symptoms it resembles with kapha avrita praana, udaana and vyaana vata⁴. The present report deals with a case of ALS came for Ayurvedic treatment. Written informed consent was obtained from the patient for publication of this case report and accompanying images.

CASE DESCRIPTION

A 45 years aged male patient, came to our care (21.03.2016) with the complaints of, difficulty in speech and swallowing (especially of liquids), muscle wasting of both upper and lower limbs (Right > Left) and fasciculation’s of tongue, pectoral and forearm muscles with generalized weakness. Patient was unable to move and do his regular activities without support. Breathlessness on exertion, unusual laughter, sleep disturbances, thenar and hypothenar muscle wasting (Right > Left) (Figure 1) and unsteadiness of gait were also observed. The condition was gradually worsening since 2014.

Patient has suffered initially with speech difficulty and later weakness was developed in both upper and lower limbs. Patient took allopathic consultation and treatment but didn’t get proper relief. Gradually muscle wasting, spasticity, tremors of hands,

mood and sleep disturbances and dyspnea on exertion has been developed. Patient was smoker and alcoholic and doesn’t have past history of major medical illness. No family member has suffered with similar problem. At the time of examination, patient was found emaciated, anxious, alert and responding to vocal commands. Speech was feeble, slurred and difficult to understand without the help of patient’s bystander. Muscle tone [shoulders (flexors, extensors & abductors – Rt (3), Lt (4); elbow (flexors & extensors – Rt (4), Lt (4); wrists (flexors & extensors – Rt (3), Lt (3); bilateral hip (grade 4); knee (flexors & extensors – Rt (3) Lt (4); ankle – Rt (3), Lt (3)], deep tendon reflexes were brisk and extensor plantar response was found. Ataxic gait, postural instability, and no bowel / bladder incontinence were found. Weakness of intercostals muscles and decreased ventilator capacity (unable to hold inspiration more than 6 seconds) were noticed.

Hematological, biochemical, serum calcium and thyroid profile reports were normal (27.10.2014). MRI (Magnetic resonance imaging) of brain (19.12.2014) and serum protein electrophoresis report (29.10.2014) was normal. Nerve conduction study (NCS) / Electro myography (EMG) report revealed signs of acute or chronic motor axon degeneration / Anterior horn cell lesion (08.10.2014).

Diagnosis, Assessment & Treatment

Patient has satisfied the MND / ALS diagnostic criteria (El Escorial criteria for MND/ALS – World Federation of Neurology)⁵. Total two assessments were carried out before and after panchakarma (five major body cleansing procedures) treatment based on the scoring of Amyotrophic Lateral Sclerosis Functional Rating Scale – Revised (ALSFRS-R). ALSFRS-R is composed of 12 questions and each question is rated on 5 point (0-4) scale. The questions deal with speech, swallowing difficulties, motor functions and respiratory problems⁶. The

patient was diagnosed as “Kapha avrita prana, udaana and vyana vata” according to Ayurveda.

Treatment is aimed to remove kapha avarana (occlusion by kapha dosha) followed by kevala vata chikitsa (management of vata dosha). Various panchakarma procedures like udwartana

(powder massage), sarvaanga abhyanga (full body oil massage), bashpa sweda (sudation in steam chamber), vasti (enema procedures) and shashtika shali pinda sweda (rice bolus massage) were implemented. Line of treatment was flexible and modified according to the necessity and tolerance of the patient (Table 1).

Table 1: Intervention

Duration	Medicine	Dose	Frequency	Anupaana
21.03.2016 to 26.03.2016	1. Panchakolasava	20 ml	twice a day, after food	with water
	2. Maha Kalyanaka ghrita	10 ml	twice a day, before food	with hot water
27.03.2016 to 11.04.2016	1. Panchakolasava	20 ml	twice a day, after food	with water
12.04.2016 to 31.05.2016	1. Ksheerabala 101 Avarti sofgels	2 cap	twice a day, before food	with water
	2. Kalyana avaleha choornam	5 gm	thrice a day, after food	with honey
	3. Aja ashwagandhadi lehyam	10 gm	twice a day, after food	with water
Panchakarma intervention				
21.03.2016 to 26.03.2016	1. Udwartana with Kola kuluthadi choorna			
27.03.2016 to 11.04.2016 (Kaala vasti schedule)	Sarvanga abhyanga with Dhanwantaram kuzhambu and Bashpa sweda & Niruha vasti (A. Dashamoola & Rasna saptaka kwatha - 500 ml B. Madhu - 100 ml C. Shudha bala tailam - 100 ml D. Gandharva hastadi eranda tailam - 100 ml E. Hingu vachadi choorna kalkam - 20 gm F. Saindhava lavana - 6 gm) (or) Anuvasana vasti with Pippalyadi anuvasana tailam – 100 ml			
12.04.2016 to 21.04.2016	1. Shashtika shali pinda sweda			
22.04.2016 to 29.04.2016 (Yoga vasti schedule)	Sarvanga abhyanga with Dhanwantaram kuzhambu and Bashpa sweda & Ksheera vasti (A. Erandamoola & Bala ksheera paka - 400 ml B. Madhu - 100 ml C. Shudha bala tailam - 100 ml D. Gandharva hastadi eranda tailam - 100 ml) (or) Anuvasana vasti with Shatahwadi anuvasana tailam – 100 ml			
30.04.2016 to 15.05.2016	1. Sarvanga abhyanga with Dhanwantaram kuzhambu 2. Bashpa sweda 3. Prayogika dhoomapana with dhooma varti 4. Anuvasana vasti with Shatahwadi anuvasana tailam – 100 ml (at alternate days)			



Figure 1: Thenar & hypothenar muscle wasting with spasticity

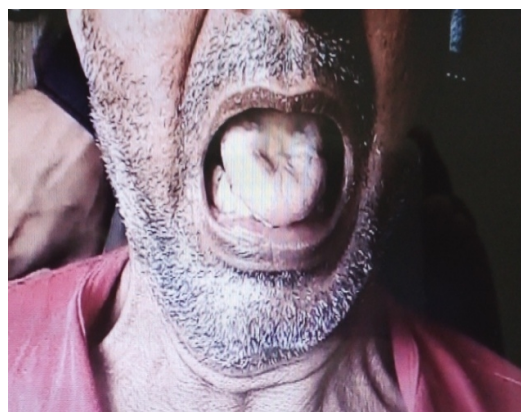


Figure 2: Fasciculations and atrophy of tongue

DISCUSSION

Patient had vata prakopa lakshana's like, kaarshya (emaciation), gaatra kampa (tremors), sphurana (fasciculations), nidra nasha (sleeplessness), balopaghata (fatigue), dainya (depression), and shoka (weeping) and kapha prakopa lakshana's like, gaatra guruta (heaviness of body), praseka (excessive salivation) and shwaasa (dyspnea)⁷; Stabdhata (rigidity/spasticity), agni maandya (loss of digestive capacity), swara bheda / vaakgraha / vaak pravritti abhaava (speech difficulties), gamana kricchrata / gati vaishamya (difficulty in walking or movements) etc; avrita vata lakshana's⁸ were also seen in the patient.

MND shows predominant involvement of both vata and kapha in samprapti (pathogenesis). The aggravated kapha causes avarana (obstruction), leads to vata prakopa (aggravation of vata) and produces MND. The clinical picture of MND resembles with 'kapha avrita praana, udaana and vyaana vata'⁴. Similar diagnosis is made in present case and line of treatment planned according to that.

Initially to remove kapha avarana, rookshana (rough) procedure like udwartanam with kola kuluthadi choornam along with internal medicines like panchakolasava were selected. After sex days of udwartana, patient felt lightness in body and increased appetite. Kevala vata chikitsa like snehana and swedana by patra pottali pinda sweda was started by using dhanwantaram kuzhampu. Along with patra pottali pinda sweda & bashpa sweda, one kaala vasti and one yoga vasti schedule were prescribed with ten days gap in between the two schedules. Kaala vasti schedule contains 16 vasti's (10 anuvasana vasti's & 6 niruha vasti's) and yoga vasti schedule contains 8 vasti's (5 anuvasana vasti's & 3 niruha vasti's). Kaala vasti schedule starts with anuvasana vasti followed by 12 vasti's (6 niruha vasti's and 6 anuvasana vasti's alternatively) and ends with 3 anuvasana vasti's. Yoga vasti schedule starts with anuvasana vasti followed by 6 vasti's (3 niruha vasti's and 3 anuvasana vasti's alternatively) and ends with anuvasana vasti.

To tackle speech difficulty, excessive salivation, emotional lability and deglutition problems, kalyana avaleha choornam and dhoomapana were prescribed. Ksheerabala 101 avarti softgels and Ajashwagandhadi lehyam were prescribed to deal with muscle wasting, fasciculations, tremors and generalized weakness. Nasya karma was tried and stopped because the patient was unable to spit the nasya medicine (due to weakness of pharyngeal muscles). Maha kalyanaka ghrita was prescribed as shamana snehapana (internal administration of ghee). At the time of discharge (15.05.2016) internal medicines were prescribed to tackle vata dosha (Table 1).

Before starting treatment, total score of ALSFRS-R was 17, at the time of discharge the score was 29. Patient showed good improvement in items like 'speech', 'excessive salivation', 'deglutition', 'ability to walk', and 'shortness of breath'. Patient had problems with deglutition (especially with liquids), slurred speech, dyspnea (on slight physical exertion or on talking for a minute), dribbling of saliva and generalized weakness before starting treatment. It was observed that, after starting kalyana avaleha choornam, there was good improvement in speech and excessive salivation. Patient felt good relief in generalized weakness with ksheerabala – 101 avarti softgels and Ajashwagandhadi lehyam. Frequent episodes of dyspnea and deglutition problems with liquids were totally disappeared during treatment period. At the time of discharge, the patient is

able to walk with support (improvement in walking speed and ease), felt energetic, spasticity of both upper and lower limbs decreased with overall improvement in general condition. No change was observed in fine motor movements of both hands. There was no improvement in fasciculation & atrophy of the tongue (Figure 2) and in tremors of both hands.

CONCLUSION

The ayurvedic diagnosis of kaphavrita praana and udaana vata is suitable for progressive bulbar palsy / pseudo bulbar palsy variant of MND and kaphavrita vyaana vata is suitable for progressive muscular atrophy variant of MND. Ayurvedic diagnosis of MND may vary from patient to patient and at different stages in same patient. Drugs like kalyana avaleha choornam are seems to be beneficial in improving speech difficulties in MND patients. Ajashwagandhadi lehyam and Ksheerabala 101 avarti oil are beneficial to tackle muscle weakness and atrophy. Panchakarma procedures like sarvanga abhyanga, bashpa sweda and vasti seems to be beneficial to tackle with spasticity of limbs and to arrest the progression of ALS. Present study finding can't be generalized, further long term follow up studies on large sample are required to substantiate the above claims.

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