



AYURVEDIC MANAGEMENT OF MYASTHENIAGRAVIS - A CASE STUDY

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ABSTRACT

Myasthenia Gravis (MG) is a long-term neuromuscular disease that leads to varying degrees of skeletal muscle weakness. The underlying defect is a decrease in the number of available Acetylcholine receptors (AChRs) at neuromuscular junctions due to an antibody-mediated autoimmune attack. It can be understood on the basis of *Srothorodha* and *Agnidusti*. Ayurvedic therapies have shown promising results in Myasthenia Gravis. A 26-year-old female patient approached *Kayachikitsa* OPD of VPSV Ayurveda college, Kottakkal with complaints of complete weakness of body, slurred speech, difficulty in swallowing, drooping of eyelid bilaterally, unable to walk, increased body weight. She was diagnosed with myasthenia gravis and was on treatment. Considering the signs and symptoms, *Sophahara* treatment like *Kashayadhara* with *Sahachara* and *Eranda*, *Dhanyamladhara*, and *Amritha kadidhara* was given. Internal medicines which are *Dipana*, *Sophahara*, and *Vatakapha samana* were given. After the treatment, the patient got considerable relief. This case study throws light into how to approach a case of Myasthenia Gravis from the eyes of Ayurveda.

Keywords: Myasthenia Gravis, Ayurveda, Kashaya dhara, Amritha kadidhara

INTRODUCTION

Myasthenia Gravis (MG) is a long-term neuromuscular disease that leads to varying degrees of skeletal muscle weakness. The underlying defect is a decrease in the number of available Acetylcholine receptors (AChRs) at neuromuscular junctions due to an antibody-mediated autoimmune attack.¹ The word Myasthenia Gravis is derived from the Greek MYS-"muscle" and ASTHENEIA-"weakness", and the Latin: GRAVIS - "Serious."² Muscular weakness and fatigability are the hallmarks of myasthenia gravis. They are caused by an antibody-mediated autoimmune attack directed against AChRs at the neuromuscular junction. The incidence rate of Myasthenia gravis varies with age, gender, and ethnic groups.⁴ Estimates of incidence range from 0.3 to 2.8 per 100,000 worldwide, and the median global estimated prevalence is 10 per 100,000.⁵ MG is characterised by fluctuating and variable muscle weakness, muscle fatigability, and generalised fatigue. Symptoms contribute differently to the degree of clinical disability but collectively impact many aspects of the quality of life of people living with MG⁶. These range from physical exertions, social activities, sleep, psychological health, and professional development⁷. In cases where muscle weakness extends to the respiratory muscles, the condition may become life-threatening.⁸

In ayurveda it is mainly due to *Srothorodha* and *Agnidusti* both in *Kosta* and *Dhatu* levels. *Agnidusti* leads to the formation of *Ama*, which leads to the *Doshakopa* mainly *Vata* and *Kapha*, and which affects the function of *Rasadidhathu*.

Case history

A 26-year-old female patient approached Kayachikitsa OPD of VPSV Ayurveda college, Kottakkal with complaints of complete weakness of body, slurred speech, difficulty in swallowing, drooping of eyelid bilaterally, unable to walk, increased body weight.

History revealed that the complaints started 9 years ago as double vision. Gradually she felt weakness in the body and recurrent falls on walking, difficulty in speech, and difficulty in swallowing. They consulted a neurologist and underwent for investigation. Acetyl choline receptor antibody was found to be positive in the Immunology report and diagnosed as Myasthenia gravis with Hypothyroidism. Later she was advised to take steroids. The symptoms got reduced under medication. During the medication period, she observed that her body weight is increasing. When the dose of medicine reduces, the symptoms reappeared. Gradually the condition worsened, she felt weakness in her body, and the slowness of activities became bedridden and approached VPSV Ayurveda college hospital for Ayurvedic management.

History of past illness

In 2017 she developed increased palpitation while walking, diagnosed as WOLFF PARKINSON WHITE SYNDROME, and Radiofrequency ablation was done.

Drug history: Wysolone 40mg (1tds) , Gravitator60mg(1tds), Thyronorm75mg

Family history

No family history of the same illness in any one of the family members

General examination

Weight – 82kg

Height- 150cm

Pallor, cyanosis, and icterus were absent

Systemic examination

CVS -S1, S2 heard, No murmur

RS – normal vascular breathing

CNS – all cranial were intact expect facial and trigeminal

Coordination test – intact

Gait – unable to walk

Table 01: Muscular system examination

	Left U/L	Right U/L
MUSCLE WASTING	Absent	Absent
	Left L/L	Right L/L
	Absent	Absent
MUSCLE TONE	Left U/L	Right U/L
	Normal	Normal
	Left L/L	Right L/L
	Normal	Normal
MUSCLE POWER	Left U/L	Right U/L
ELBOW	3/5	3/5
WRIST	3/5	3/5
PALMAR GRIP	MODERATE	MODERATE
PICER GRIP	MODERATE	MODERATE
	Left L/L	Right L/L
HIP	2/5	2/5
KNEE	2/5	2/5
ANKLE	3/5	3/5
SENORY SYSTEM	INTACT	INTACT

Dasavidha pareeksha

Prakriti of the patient is *Kapha-Pitta*. *Vikriti*(morbidty) was *Tridosha pradhana with Kapha- Vata Anubandha*. *Satwa*(psyche), *sara*(excellence of tissues), and *samhanana*(compactness of organs) are *Avara*. *Aharasakti*(digestive power) is *Pravara*. *Vyayama sakti*(capacity of exercise) is *Avara*, *Satmya*(suitability) is *Madhyama* and *Pramana*(body proportion) is *Pravara* .

DIAGNOSIS

The case had been diagnosed as Myasthenia Gravis as it fulfils the clinical features of this disease as follows:⁹

- Eyelid drooping
- Double vision
- Weakness in arms, hands, fingers, neck, face, legs
- Difficulty in swallowing
- Slurred speech

Based on the signs and symptoms in terms of Ayurveda, it can be correlated with *Sopha*, *Samavata* and *Ojo-vismra*

Table 02: Intervention

PROCEDURE	MEDICINE	DURATION	OBSERVATION
<i>Kashaya dhara</i>	<i>Sahachara+Eranda</i>	14 DAYS	Speech slightly improved Swallowing difficulty reduced
<i>Dhanyamladhara</i>	<i>Dhanyamla</i>	5 days	Patient feels lightness of body and walk up to 30 minutes, can do activities without help. Speech became clear and double vision reduced
<i>Amritha kadidhara</i>	<i>Guluchi+Kadi</i>	14 days	Weakness of the body is reduced , speech becomes clear, having no difficulty in swallowing

Table 03: Internal medications

ARDHAVILWAM KASHAYA	90ml BD before food	1 month
DEVADARVYADI ARISTA	20ml BD after food	
SHADDHARANAM TABLET	1 BD	
NAVAGUGGULU TAB	1 BD	
AVILTHOLADI BASMA	½ tsp with kanji	

Table 04: Observation at the time of discharge

MUSCULAR SYSTEM	Left L/L	Right L/L
	Normal	Normal
	Left U/L	Right U/L
	Normal	Normal
MUSCLE TONE	Left L/L	Right L/L
	Normal	Normal
	Left U/L	Right U/L
	Normal	Normal
MUSCLE POWER	Left L/L	Right L/L
HIP	5/5	5/5
KNEE	5/5	5/5
ANKLE	5/5	5/5
	Left U/L	Right U/L
ELBOW	5/5	5/5
WRIST	5/5	5/5
PALMAR GRIP	5/5	5/5
PINCER GRASP	5/5	5/5

SENSORY SYSTEM	INTACT
GAIT	CAN ABLE TO WALK WITHOUT ANY DIFFICULTY

Table 05: Assessment criteria

The assessment was done based on complaints of the patient and also using a gradation system developed by the Myasthenia Gravis foundation of America¹⁰

	BT	AT
Slurred speech	2	0
Fatigue with solid food	2	1
Chocking of food	1	0
Shortness of breath	2	0
Impairment in the ability to brush and comb hair	2	0
Impairment in the ability to raise from the chair	2	0
Double vision	2	0
Eyelid droop	2	0
Pain in the right half of the head and face	0	0
Contraction of facial muscles	0	0
Weakness right half of the body	0	0

DISCUSSION

Myasthenia Gravis is caused by a defect in the transmission of nerve impulses to muscles. It occurs when the normal communication between the nerve and muscle is interrupted at the neuromuscular junction. When the impulses pass through the nerve, the nerve endings release the neurotransmitter Acetylcholine. Acetylcholine travels through the neuromuscular junction and binds to Acetylcholine receptors which are activated and generate a muscle contraction. In Myasthenia Gravis, antibodies produced by our immune system block, alter, or destroy the receptors for Acetylcholine at the neuromuscular junction, which prevents muscle contraction from occurring. Myasthenia Gravis is an autoimmune disease because the immune system - which normally protects the body from foreign organisms- mistakenly attacks itself.

In the view of ayurveda, it is mainly due to *Srothorodha* and *agnidusti* (both in *Kosta* and *Dhatu*). *Agni dusti* leads to the formation of *Samavastha* in the body. Which hamper the proper functioning of *Dosha*, mainly *Vata* along with *Kapha*. Since *Vata-dosha* is mainly responsible for the proper functioning of neurotransmitters, here the functioning of *Vata* is obstructed by the *Samadhathu*. *Dhatwagni* is responsible for the formation of the *Utharothara dhatu*. Impaired *Dhatwagni* leads to *Rasa raktadi dathu dusti*.

DISCUSSION ON TREATMENT

In this present case, the main presentation is *Sopha*, caused by the use of steroids for a long time, *Sophahara Chikitsa* was mainly adopted. Since the main *Dosha* involved was *Kapha* along with *Vata* and by considering the *Rogi bala*, *Rookshasweda* was done as *Kashayadhara* with *Sahachara* and *Eranda*, which is *Kapha – Vata samana*, *Agniprasadaka*, also acts as *Amapachana* and helps to clear the channels of circulation. *Dhanyamladhara* was given for 5 days. *Dhanyamladhara* is *Preenana*, *Sramahara*, *Klamahara*, *Deepana*, *Dahanasana*, *Vibandhaghna*, *Srotovishodhana*, *Jwarahara*, *Pachana* etc. As it is predominant in *Laghu*, *Ushna*, and *Tikshnaguna*, it helps in mitigating the vitiated *Kapha* and *Vata dosha*. This helps

in the proper circulation of *dhatu*s in the body and helps to improve immunity.

*Ardhivilwam kashaya*¹¹ due to its *Rookashaguna* and *Ushna virya* acts as *Kapha- Vata hara*. It is mainly indicated in *Sopha*. It helps to correct the *Dhatwagni*. *Devadarvarista*¹² acts as *vatasamana*. It is detoxifying in action and helps to correct *agni* and is *rak-taprasadhana*.

Shaddharanam gulika is *Dipana*, *Amahara*, corrects *Amasayagata vata*. Helps to improve *Agni* in both *Kosta* and *Dhatu* levels, thus leading to proper transportation of *Dhatu*s in the body.

Aviltholadi basma is *Ruksha* and *Ushna virya* acts as *Vata-Kaphagna*. It is *Dipana*, which helps to correct *Agni* and is indicated in *Sopha*. Due to its properties, it corrects *Dhatwagni* and helps in proper functioning of *Dhatu*.

CONCLUSION

In Ayurveda, Myasthenia gravis is due to the impaired *Agni* that happens in the *Kosta* and *Dhatu* levels. The main presentation of the patient was *Sopha* due to the long-term use of steroids, so *Sophahara* and *Agnidipana cikitsa* was mainly adopted. It helps in relieving the symptoms and thus improving the quality of life of the patient.

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