

EFFECT OF PANCHKARMA IN MYASTHENIA GRAVIS: A CASE REPORTAtul Joshi¹, Amit Awadhiya², Neha Keshari³, Anup Thakar⁴

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**ABSTRACT**

Myasthenia Gravis (MG) is a long-term neuromuscular disease that leads to varying degrees of skeletal muscle weakness. The condition is caused by breakdown in communication between nerves and muscles. 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 most commonly affected muscles are those of the eyes, face and swallowing. The cause of this disease can be understood in view of *Dhatavgnimaandhya*, *Vyana Vayu Vikriti*. The present observation was conducted with an objective to find out the efficacy of Ayurvedic management in Myasthenia Gravis. Here is a case of 60 years old Hindu male who was diagnosed as Myasthenia Gravis (MG) reported with complaint of slurred speech, low pitch of voice, difficulty to open the mouth and to swallow food and difficulty in elevating right eyebrow since 6 months was registered in OPD of *Panchakarma*, IPGT & RA, Jamnagar. Considering the signs and symptoms patient was treated on the line of *Aavrta Vata Chikitsa*, *Sthanika Abhyanga* with *Bala Taila*, *Nasya* with *Anu Taila*, *Jihwa Pratisarana* with *Vacha Churna* and *Ghritapana* before meal with *Go Ghrita* was administered. Treatment shows significant improvement in the symptoms without any side effects.

Keywords: Myesthenia Gravis, *Aavrta Vata Chikitsa*, *Panchakarma*

INTRODUCTION

The word is from the Greek MYS-"muscle" and AS-THENEIA-"weakness", and the Latin: GRAVIS -"Serious"¹. Myasthenia Gravis is a neuro muscular disorder characterized by weakness and fatigability of skeletal muscles. The condition is caused by breakdown in communication between nerves and muscles. The underlying defect is a decrease in the number of available acetylcholine receptors (AChRs) at neuromuscular junctions due to an antibody mediated autoimmune attack². Myasthenia Gravis is caused by an error in the transmission of nerve impulses to muscles. It occurs when normal communication between the nerve and muscle is interrupted at the neuromuscular junction - the place where nerve cells connect with the muscles they control³.

MG affects 50 to 200 per million people. It is newly diagnosed in three to 30 per million people each year. Diagnosis is becoming more common due to increased awareness. It most commonly occurs in women under the age of 40 and in men over the age of 60. It is uncommon in children. The distinctive of Myasthenia Gravis is muscle weakness that worsens after periods of activity and improves after periods of rest. Certain muscles such as those that control eye and eyelid movement, facial expression, chewing, talking and swallowing are often (but not always) involved in the disorder. The muscles that control breathing and neck and limb movements may also be affected.

In Ayurveda, most of the diseases mentioned under *Vata Vikara* are mainly the conditions related to diseases of the nervous system. The pathogenesis of this disease can be understood in view of *Dhatavgnimaandhya*, *Vyana Vayu Vikriti*. Considering the signs and symptoms patient was treated on the line of *Aavrta Vata Chikitsa*. By considering the symptomatology of the disease as well as the limitations of its treatment in the modern science, an effective & safe modalities of Ayurvedic treatments were adopted in the present observation with the intention to reduce the progression of the disease as well as to provide symptomatic relief.

CASE REPORT:

The present case was a 60-year-old male patient who was diagnosed as Myasthenia Gravis presenting with the complaints of slurred speech, difficulty in swallowing since one month. History of the patient revealed that before one year, patient c/o difficulty in closure of right eyelid, difficulty in elevating the right eye brow and blurriness of vision, for the same he had consulted ophthalmologist there he was advised for vision aid (glasses). After few days he further had difficulty in daily routine works due to blurred vision for which again he had consulted same doctor and was advised for new glasses for right eye as his power had increased. Few months later he observed weakness in right upper limb, he did not take any treatment although he was advised to get admitted in hospital. One day at home his son observed changes in his way of talking and told him about the change in his speech activities on the same day he had consulted neurologist and he underwent relevant investigation which reveals as follow's MRI S/o Normal study, immunology report Acetylcholine Receptor antibody test was raised and RNS report S/O neuromuscular junction dysfunction. Later he was advised to take Tab. Gravitor-60 (1TID) & Tab. omnocort-10 (1OD) for one month but patient did not got any relief. Hence came to IPGT & RA, Jamnagar for better management.

Past history: No H/o DM/HTN/TRAUMA or any other major medical illness.

Family history:

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

General Examination: (On the day of admission)

The patient found to be well built, moderately nourished, afebrile, normotensive, other parameters like pallor, cyanosis, icterus, lymphadenopathy was absent.

Systemic Examination

CVS: S1, S2 Heard, no murmur RS: Normal vesicular breathing, no added sounds. P/A: soft, no tenderness, no organomegaly.

Table 1:

Motor system	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	Mild hypotonia
	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
Pincer grip	Moderate	Moderate
Hip	Left L/L	Right L/L
	Adduction – 5/5	Adduction – 5/5
Knee	Abduction-5/5	Abduction-5/5
Ankle	Flexion-5/5	Flexion-5/5
	Extension-5/5	Extension-5/5
Knee	Flexion-5/5	Flexion-5/5
	Extension-5/5	Extension-5/5
Ankle	Dorsi flexion-5/5	Dorsi flexion-5/5
	Plantar flexion-5/5	Plantar flexion-5/5
Sensory system	Intact	Intact

Co-ordination test: finger nose test – Altered

Gait: Normal

Right eyebrow - drooping

Ashta Vidha Pariksha

1. *Nadi:* 80 b/ min
2. *Mala:* once daily, complete evacuation
3. *Mutra:* 5- 6 times
4. *Jiwha:* *Alipta*
5. *Shabda:* slurred, low pitch of voice
6. *Sparsha:* *Anushna Sheeta*
7. *Druk:* *Avishesha*

8. *Akriti:* *Sthoola*

DIAGNOSIS:

The case had been diagnosed as myasthenia gravis as it fulfils the clinical features of this disease as follows:

- Difficulty in Swallowing.
- Difficulty to Open the Mouth.
- Low Pitch of Voice.
- Impaired Speech (Dysarthria).
- Difficulty to elevate the right eyebrow.
- Difficulty to Lift the Objects.

Intervention:

Days	Treatment	Duration
Day 1	<i>Sthanika Abhyanga with Bala Taila</i> <i>Sthanika Nadi Sweda</i> <i>Nasya Karma with Anu Taila - 8 drops each nostril</i> <i>Ghritapana with cow's ghee before meal OD 20 ml</i> <i>Vacha Churna Jihwa Pratisarana</i>	21 days

OBSERVATION: (on 21th day)

Motor system	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 tone
	Left L/L	Right L/L
	Normal	Normal
Muscle power	Left U/L	Right U/L
Elbow	5/5	5/5
Wrist	5/5	5/5
Palmar grip	Normal	Normal
Pincer grip	Normal	Normal
Hip	Left L/L	Right L/L
	Adduction – 5/5	Adduction – 5/5
Knee	Abduction-5/5	Abduction-5/5
Ankle	Flexion-5/5	Flexion-5/5
	Extension-5/5	Extension-5/5
Knee	Flexion-5/5	Flexion-5/5
	Extension-5/5	Extension-5/5
Ankle	Dorsi flexion-5/5	Dorsi flexion-5/5
	Plantar flexion-5/5	Plantar flexion-5/5
Sensory system	Intact	Intact

Co-ordination test: finger nose test – Normal

Gait: Normal

Right eyebrow - Normal

There was a significant reduction in the symptoms after treatment like in swallowing, voice, speech and improvement seen in lifting objects, difficulty in elevation of right eyebrow got completely relived.

DISCUSSION

Myasthenia Gravis is caused by a defect in the transmission of nerve impulses to muscles. It occurs when normal communication between the nerve and muscle

is interrupted at the neuromuscular junction - the place where nerve cells connect with the muscles they control. Normally, when impulses travel down the nerve, the nerve endings release a neuro-transmitter substance called acetylcholine. Acetylcholine travels from the neuromuscular junction and binds to acetylcholine receptors which are activated and generate a muscle contraction. In Myasthenia Gravis, antibodies block, alter, or destroy the receptors for acetylcholine at the neuromuscular junction, which prevents the muscle contraction from occurring. These antibodies are produced by the body's own immune system. Myasthenia Gravis is

an autoimmune disease because the immune system - which normally protects the body from foreign organisms- mistakenly attacks itself.

The patho-physiology of this disease MG can be understood in Ayurveda on the basis of *Dhatavgnimaandhya*, *Vyana Vayu Vikriti*. The homeostasis of synthesis, secretion and action of hormone are all under the control of *Vata (Vyana Vayu)* which is the *Chala Dravya* in the *Sharira*. If the *Gati* of *Vata* is obstructed due to *Saama Dhatu* and *Rasa Raktadi Paribrhamana* is hampered hence proper *Dhatuposhana* does not occur (This can be understand as antibodies in MG attack a normal human protein, the nicotinic acetylcholine receptor, or a related protein called Musk a muscle-specific kinase this leads to impairment in the neuro muscular junction). *Acharya Chakrapani* says *Dhatu* themselves are nutrient for the other *Dhatu* and the *Urja* of *Sharir-dhatu* depends upon *Anupahata dhatvagni*. *Vyana Vayu* provides *Tarpana* to all *Dhatu*s, which explained as the exchange of metabolites at this level. This exchange can take place when particular pressure is maintained here by *Vyan Vayu*. As *Acharya Vagbhatta* mentioned that *Gati*, *Utkshepana*, *Avkshepana*, *Nimesh* and general activities related to mobility are under the control of *Vyana Vayu*.⁴ If *Gati* of *Vyana Vayu* is hampered by *Avarana* in a specific place in the body leads to “*Kha Vaigunya*” at particular *Sthanas* and leading to manifestation of disease. In myasthenia gravis a muscle-specific kinase leads to impairment in the neuro muscular junction and muscle can't get the signal to respond. If we see the *Lakshnas* of *Kapha Aavrta Vyana Vayu* there was clearly said that “*Gati Sanga Tatha Adhika*”⁵ i.e. patient did not able to do his work in actual manner. Considering the *Vyadhivrutt*, *Lakshanas* presented are same as the symptoms of *Kaphavritta Vyana Vayu* i.e. variation in the curvature of eyebrow, eyes and mandible, difficulty in swallowing of food, variation in the voice, distorted speech, pain in eyes, hence patient was treated on the line of *Kaphavritta Vata Chikitsa*. *Sthanika Abhyanga* with *Bala Taila*, *Nasya* with *Anu Taila* as it is having the property of *Tridoshghna*, *Ghritapana* with cow's ghee, *Jihwa Pratisarana* with *Vacha Churna* were done. Treatment shows significant improvement in the symptoms without any Side effects.

DISCUSSION ON TREATMENT:

Myasthenia Gravis is an auto immune neuromuscular disorder, patient will be having varying degrees of weakness of the skeletal (voluntary) muscles of the body, As *Acharya Charaka* mentioned *Ana-abhis-yandi*, *Snigdha* and *Srotoshodhak Chikitsa* in the context of *Kaphavirrita Vyana Vayu*⁶. So *Sthanika Abhyanga* was adopted with *Bala taila* which helps in the nourishment of the *Dhatu* and increases their strength and helps in promotion and regulation of the proper functioning of *Vata*. *Swedana* in the form of *Nadi Sweda* was done, *Swedana* helps in reliving *Sthamba*, *Gaurava* and *Shula*⁷, it offers more oxygen, nutrients, more polymorphs and more endorphins to the affected area which is beneficial for healing of the local pathology as well as nourishing the body. As *Dosha Dushyasamurchana* has occurred mainly in *Mukha* and *Kantagata* i.e., *Urdhwa-Jatrugata*. Based on symptoms presented in this case *Aavrta Vata Chikitsa* was adopted i.e., *Nasya Karma* with *Anu Taila* helps in pacifying *Tridosha*, improves voice (*Swarya*) quality, soothes throat and it nourishes the *Dhatu* thus helps in reliving the symptoms. *Ghritapana* as *Shamana Sneha* with cow's ghee helps in *Swara Prasadana*, *Rasayana*, and nourishes the *Dhatu*. *Vacha Churna Jihwa Pratisarana* was done as *Vaka Shakti Prabhodhanartham* i.e., effective in managing speech disorder.

CONCLUSION

The analysis of Myasthenia gravis in terms of Ayurveda concludes that the MG is a symptom complex where we can't correlate particular Ayurvedic term but based on the symptoms here we have taken as *Aavrta Vata* and treated accordingly. The treatment methods explained in classics is helpful in giving significant relief in signs and symptoms of the disease MG, thereby improving quality of daily life of the person who is suffering.

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