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Guillain-Barré Syndrome: An Ayurvedic Approach To Understanding And Treating It: A Single Case Study

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Abstract

Acute inflammatory demyelinating polyneuropathy Guillain-Barre's syndrome is typically brought on by an immunological reaction following certain post-infections. GBS causes nerve damage resulting in muscle weakness, tingling sensation and paralysis due to nerve injury. (1) It can be comparable to *Sarvangavata*, according to Ayurveda. The fatty myelin coating that surrounds the nerve cells protects them. The neurological system requires an insulating layer to operate properly, which is created as a result. It can also be compared to *medogata vata.* Since myelin contains about 40% water, the dry mass is made up of 60% to 75% lipid and 15% to 25% protein. (2) *Ayurveda* offers *Panchakarma* therapy to lessen the sickness by easing the symptoms of GBS. A 55-year-old male patient was unable to sit, stand or walk due to abrupt onset of weakness in both lower limbs. The patient was also covid 19 positive, one month before the onset of these symptoms. For the same patient has been hospitalised and underwent proper covid management. Eventually complaints of weakness in the lower limbs and GBS led the patient to seek additional medical attention and receive IV Ig injections. After receiving immunoglobulin therapy there was no expected recovery. Hence the patient has been admitted to our hospital as in patient for further management.

KEYWORDS: Guillain Barre Syndrome, Sarvangavata, Panchakarma

INTRODUCTION

Acute, frequently severe, and fulminant polyradiculopathy of autoimmune origin is Guillain-Barre syndrome. An uncommon condition called Guillan-Barre syndrome makes the immune system attack the peripheral nerve system (PNS). The paralysis is of the LMN variety and reflex loss including sensory abnormalities are seen. Rarely are the bowel and bladder implicated.

Sometimes issues with the respiratory system might result in fatal complications. The CSF protein level is elevated. EMG-NCV is used to diagnose. IV immunoglobulin is given as supportive care. Even if intravenous immunoglobulins (IVIG) and plasma exchange (PE) are helpful, they have also been linked to extended illness courses, extreme weakness, discomfort, and weariness. (3)

The expensive expense of these treatments is another barrier, particularly in emerging and underdeveloped nations. Autonomic dysfunctions, pulmonary problems, ventilatory insufficiency, and overall health decline all contribute to mortality. With immune response delays and endogenous peripheral nerve healing, the recovery period may last from months to a year. According to Ayurvedic literature, this illness is associated to Sarvangavata, a vataja disorder that affects all bodily parts. Santarpana (nourishing treatment) is the preferred course of treatment for GBS since it is Apatarpanjanya Vatvyadhi.

This case was treated with the Avaranahara line of treatment like Udwartana followed by the Brihmana line of management which includes Shashtika Shaali Pinda Sweda and Matra Basti.

CASE REPORT

A 55-year-old male patient (OPD No – 21010250) arrived at our institute complaining of weakness in his lower extremities and being unable to walk or sit. The patient was also given the COVID 19 diagnosis, which led to his previously admission to allopathic hospital for covid treatment. Later after a few days, he complained of progressive and ascending weakness and loss of sensation in both lower limbs and he was hospitalized. He was diagnosed to have GBS and managed conservatively. After taking treatment for 15 days patient did not get relief from the symptoms. Hence patient was admitted in IPD department of Panchakarma. (IPD No- 210466).

PHYSICAL EXAMINATION

- Gait – Unable to walk
- Blood pressure - 140/80mmHg.
- Pulse rate – 92/min.
- Respiratory rate – 20/min.
- Temperature – 98.60 F
- Oedema – No
- Pallor – No
- Icterus – No
- Clubbing – No

ASHTASTHANA PARIKSHA

- Nadi (Pulse) - Vatapradhana kapha
- Mala (Stool) - prakruta
- Mutra (Urine) – Catheterised (I/O – 1200ml/1600ml)
- Jivha (Tongue) - Niraama
- Shabda (voice) – clear voice
- Sparsha (Tactilation) - Samashitoshna
- Druk (Eyes) - Prakruta
- Akriti – Madhyama

SYSTEMIC EXAMINATION

- **RESPIRATORY SYSTEM** - on auscultation, normal sounds heard and no abnormality detected.
- **CARDIOVASCULAR SYSTEM -** S1 S2 heard and no abnormality detected.
- **GASTROINTESTINAL SYSTEM -** Soft, non-tender, no organomegaly detected

CENTRAL NERVOUS SYSTEM

HIGHER MENTAL FUNCTION:

CONSCIOUS LEVEL – Fully conscious

ORIENTATION – Well oriented to Time, Place, Person.

MEMORY – Intact

SPEECH – Intact

Cranial nerve examination:

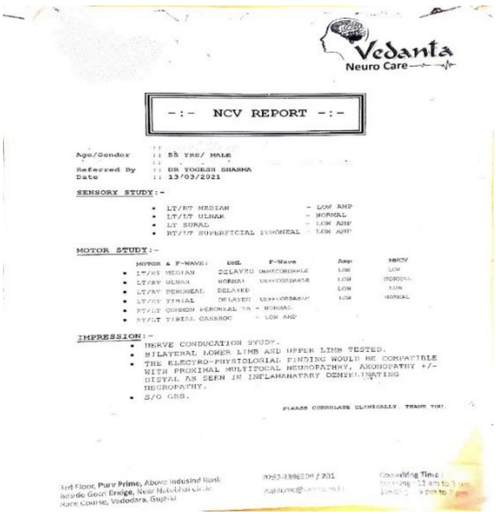
All Cranial Nerves Intact except Spinal accessory nerve – Shoulders droop +

Deep Tendon Reflexes - Lower limb reflexes were absent, and neither of the lower limbs responded to the Babinski sign.
Muscle Wasting - There was no muscular wasting in the upper or lower limbs.

MUSCLE POWER GRADE –

UPPER EXTREMITIES	RIGHT SIDE	LEFT SIDE
	GRADE 4	GRADE 4
LOWER EXTREMITIES	RIGHT SIDE	LEFT SIDE
	GRADE 0	GRADE 0

INVESTIGATIONS
EMG – NCV – Motor conduction studies show decrease amplitude of bilateral median, ulnar, peroneal and tibial nerve with decrease conduction velocities of bilateral median and bilateral peroneal nerve. Because of immobility, a D-Dimer test reveals a high level of D-Dimer protein.
Routine Investigations - Blood results such CBC, CRP, LFT, and RFT were within normal limit.


Vedanta Neuro Care

-:- NCV REPORT -:-

Age/Gender :: 55 YRS/ MALE
Referred By :: DR YOGESH SHARMA
Date :: 13/03/2021

SENSORY STUDY:-

- LT/RT MEDIAN - LOW AMP
- LT/LT ULNAR - NORMAL
- LT SURAL - LOW AMP
- RT/LT SUPERFICIAL PERONEAL - LOW AMP

MOTOR STUDY:-

MOTOR & F-WAVE:	DML	F-Wave	Amp	MNCV
LT/RT MEDIAN	DELAYED	UNRECORDABLE	LOW	LOW
LT/RT ULNAR	NORMAL	UNRECORDABLE	LOW	NORMAL
LT/RT PERONEAL	DELAYED		LOW	LOW
LT/RT TIBIAL	DELAYED	UNRECORDABLE	LOW	NORMAL

- RT/LT COMMON PERONEAL TA - NORMAL
- RT/LT TIBIAL GASSROC - LOW AMP

IMPRESSION:-

- NERVE CONDUCATION STUDY.
- BILATERAL LOWER LIMB AND UPPER LIMB TESTED.
- THE ELECTRO-PHYSTOLOGIAL FINDING WOULD BE COMPATIBLE WITH PROXIMAL MULTIFOCAL NEUROPATHHY, AXONOPATHY +/- DISTAL AS SEEN IN INFLAMANATARY DEMYELINATING NEUROPATHY.
- S/O GBS.

PLEASE CORRELATE CLINICALLY. THANK YOU.

3rd Floor, Purv Prime, Above Indusind Bank, Beside Gotri Bridge, Near Natubhai Circle, Race Course, Vadodara, Gujarat

AYURVEDIC MANAGEMENT - SHODHANA CHIKITSA

Treatment Plan	Days
Sarvanga Udwartana followed by Nadi Sweda as an Avaranahara line of treatment	5 Days
Sarvanga Abhyanga with Ksheerabala taila followed by ShashtikShali Pindasweda	10 Days
Matra Basti with Ksheerabala taila	8 Days
Physiotherapy	15 Days

SHAMANA CHIKITSA

Medicine	**Frequency**	**Time Period**
Lashunadi Vati	2 BD Before Food	5 Days
Panchakol Phanta	30 ml BD Before Food	5 Days
Cap Palsinuron	2 BD After Food	1 Month
Cap Ksheera Bala	1 BD After Food	1 Month

RESULT AND OBSERVATIONS

Patient improvement after taking treatment for 15 days when compared to before treatment

Before Treatment	**After Treatment**
There is a Hughes scale (4) score of 5 on both the right and left lower limbs, indicating that at least some of the day will require assisted ventilation.	Hughes scores of 0 indicate a healthy status for the lower extremities on both the right and left sides of the body.

UPPER EXTREMITIES	RIGHT SIDE	LEFT SIDE
	GRADE 5	GRADE 5
LOWER EXTREMITIES	RIGHT SIDE	LEFT SIDE
	GRADE 5	GRADE 5

DISCUSSION

More than 85% of people who suffer from the G B Syndrome recover fully and functionally if treated in early stages. It is an acute or subacute, typically symmetric lower motor neuron paralysis. If sufficient intensive care is not provided, the illness can potentially reach the respiratory muscles and cause collapse. Immunoglobulin infusions and plasma pheresis, which are both expensive and only temporarily beneficial, may not be within the means of people with poor socioeconomic level. As evidence-based Ayurveda and panchakarma treatments, if recommended by knowledgeable medical professionals, have better results and are more affordable, they can be made available in rural areas of countries like India where critical care and emergency treatments are not easily accessible. When GBS patients experience ascending paralysis and weakness in their hands, feet, and trunk, it was thought that they had medadhatudushti. The patient's bladder incontinence was completely reversed back after 15 days of treatment. Moreover, following treatment, a D-dimer test result was within normal limits and the patient could walk without assistance.

Sarvanga Udwartana increases blood circulation by widening tiny channels with the intention of reducing Avarana of Kapha and alleviating Vatadosha.

Nadisweda helps convey nerve impulses with the least amount of stimulus necessary for muscle contraction by facilitating the opening up of blockages in nerves, conduction of impulses further contributing in remyelination.

Sarvanga Abhyanga with KsheeraBala Taila – Vitiated Vata dosha is responsible for Karma Kshaya/ karmahaani, was treated with abhyanga using ksheerabala taila. The Sarvanga Abhyanga, which is beneficial for all 80 forms of Vataroga and acts as Vatashaamaka when combined with Ksheerabala taila, is also very good for treating neuromuscular ailments and musculoskeletal issues. (5)

Shashtik Shali Pindasweda, possessing Snigdha, Guru, Sthira, Sheeta, and Tridoshaghna properties. It is a form of Snigdha Sweda that strengthens and staves off aging by stimulating the sympathetic nervous system. (6)

Ksheerabala Taila Matra Basti - Due to its Brimhana (nourishing) activity, Ksheerabala Taila Matra Basti may have provided the Dhatu with nourishment, improving the Dhatu's ability to nurture the limbs physically.

Physiotherapy - To assist and augment the muscle activity, joint compression, rapid ice, and muscle tapping and stroking were applied.

Lashunadi vati (7) and Panchakola Phanta (8) – They are good for stimulating Agni and digestion of Ama. Additionally, lashunadi vati will assist in eliminating the clot that has formed as a result of immobility, preventing deep vein thrombosis.

Palsinuron enhances CNS and PNS metabolic processes and stimulates neuromuscular transmission. regulates blood flow to the injured areas, dispels anoxia, and activates the brain's neurological systems. supports the feeding of the blood vessels and the nerves.

Ksheerabala The herb Ksheerabala is also utilized as a nerve tonic. Insomnia, CNS issues, and arthritis are all treated with it. The performance of the sense organs is also improved. Acting as Bruhmana, Indriya Prasadaka, and mentioned in Vataroga.
Knowing that GBS is autoimmune in origin, we might infer that the immune system is hypersensitive. In the development of autoimmune illnesses, there are two key phenomena.
1. An incorrect assessment of the physique.
2. An immune system attack that aims to kill body tissues. (9)

When describing vataprakriti, shighraguna causes a mistaken assessment of body tissue to arise. According to Charaka, this shighraguna enables us to detect in people Alpasmriti (lesser memory) and shigraghrahita (early identification). Alpasmriti affects the WBC's ability to recognize bodily tissues when it exists at that level. Therefore, autoimmune illnesses must also be treated with a strategy that lowers shighraguna vata. (10) When pitta prakriti lakshana occurs, Charaka experiences an immune system attack. indicated that the pitta's tikshna guna is in charge of tikshnagni and tikshnaparakrma. [increased hunger and fighting propensity] When we compare this result of with the immune system, a rise in tikshnaguna results in the destruction of extrinsic infections, the pitta and vata shighragunas, and at the immunological level bring about hypersensitivity, judgement errors, and tissue damage, and we can hypothesize that this is one way an autoimmune disease can manifest. Therefore, it is crucial to take pitta tikshnaguna into account and address it when providing medical care to many autoimmune diseases.
Ayurvedic medicine and Panchakarma therapies for the treatment of GBS have been found to be effective in easing the symptoms of the condition. No other symptoms worsened throughout the follow-up period, indicating excellent recovery from GBS with long-lasting benefits.

CONCLUSION

This study points us in the path of ayurvedic therapy while also giving us confidence and a better understanding for handling such instances in ayurveda hospitals. Because immunoglobin therapy is an expensive option. Ayurvedic treatments have a good cost-effectiveness rating. It also supports the notion that Ayurvedic kriya, Ayurvedic diagnosis, pittadharakala, majjadharakala relation, and clinical understanding of the fundamental ideas of guna in the treatment of Anuktavyadhi serve as a crucial link between contemporary diagnostic techniques and Ayurvedic treatment of GBS. GBS and other neuromuscular problems can be effectively treated using Ayurvedic medicine including Panchakarma procedures and the oral use of Ayurvedic medications without adverse effects and the total disappearance of all alleviates symptoms and enhances quality of life. Because the LMN type of GBS in this case study correlates with Apatarpana Janya Vatavyadhi, so Vatavyadhi line of treatment according to symptoms were given. Vata Prakopa is present here and is linked to Dhatu Kshaya along with other doshas. As a result, in this case study, it is demonstrated how GBS is treated using the Ayurvedic techniques of Shodana and Shamana treatment. The results demonstrated a substantial role of ayurveda in treating severe, disabling disorders like GBS.

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