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CASE REPORT May 2022

Understanding of Guillain Barre Syndrome and its management through Ayurveda - A Case Study

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ABSTRACT

Guillain-Barre' Syndrome is an acute inflammatory demyelinating polyneuropathy caused generally by autoimmune response after certain post infections. GBS damages part of nerves. This nerve damage causes tingling, muscle weakness and paralysis. According to Ayurveda, it can be correlated with *Vatavyadhi - Sarvangaghata.* A 62 Year old male patient, presenting with sudden onset of, complete paralysis of all four limbs (quadriplegia), unable to walk, stand, sit, difficulty in deglutition (dysphagia) and dysarthia. Previously patient admitted and treated in SNMC Medical College, Bagalkot, but did not show any sign of improvement. So, patient was admitted and treated with Ayurvedic treatment for 60 days. As per Ayurvedic classics which is *Apatarpan* a nature (diseases with deprived nourishment of body tissue) preceded by *Jvara* (H/O fever before onset of GBS). Hence the principle of treatment is *Santarpan Chikitsa* (nourishing treatment) includes *Bahyopakramas* (nourishing external treatment modalities), such as *Abhyanga* (oleation therapy) and *Shastika Shali Pinda Sveda* (sudation using hot and processed), *Kalabasti* (medicated enema), *Sirodhara* (gentle pouring of medicated liquid over forehead) and using various Ayurvedic herbomineral compounds. Remarkable results were observed in the form of improvement in the muscle power from zero to five of all four limbs with improvement in speech. There was no difficulty post treatment in deglutition, sitting, standing and walking; and now patient is near to normal movements.

Key words: *GBS, Santarpan Chikitsa, Sastikasalipindasveda, Kalabasti, Sirodhara, Abhyanga.*

INTRODUCTION

Guillain barre syndrome is an acute, frequently severe and fulminant polyradiculopathy that is autoimmune in nature. Guillan barre syndrome is a rare disorder that causes the immune system to attack the peripheral nervous system (PNS).[1] The paralysis is of LMN type with loss of reflexes. Mostly no sensory abnormalities are seen. Bladder and bowel are rarely involved. Sometimes respiratory system may involve causing serious complications including death. The CSF protein is raised. Diagnosis is done by EMG-NCV. Supportive treatment is given with IV immunoglobulin.[2]

As per Ayurvedic classics, this condition can be correlated with *Sarvangagata Vatavyadhi* (*Vata* disorder affecting all parts of the body),[3] GBS is *Apatarpanjanya Vatvyadhi*, hence the choice of treatment is *Santarpana* (nourishing treatment). *Santarpana* did in the form of *Balya* and *Brimhanan Chikitsa* as well as *Bahya* and *Abhyantar Snehana* done in the form of *Alepa Chikitsa, Sarvanga Dhanyaamladhara, Taladhara, Veshtana Karma, Swastika Sali Pinda Sveda, Kalabasti, Sirodhara, Abhyanga.*

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CASE STUDY

A 62 years old male patient (OPD no.- 8864-03/03/2022) came to our institute with the complaints

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of complete paralysis of all the four limbs, inability to walk, stand, do regular activities and severe muscle wasting with a weight of 48 kg. Patient was conscious and vital functions were normal. Patient was admitted in Shri Shivayogeeshwar Rural Ayurvedic Medical College and Hospital, Inchal (IPD no. - 1331-03/03/2022).

Past History

H/O - DM.

No H/O - HTN, Asthma or Tuberculosis.

No H/O - Alcohol consumption or any other drug abuse.

History of presenting symptoms

Patient was healthy eight days before presentation of quadriplegia, but had high grade fever for which he took medication from SNMC Bagalkot. But fever didn't subside. He developed gradual weakness in all the four limbs in approximately three days. For these complaints he got admitted in Shri Shivayogeeshwar Rural Ayurvedic Medical College and Hospital, Inchal. There MRI brain, EMG-NCV and other investigations done. Patient was diagnosed with GBS. Treatment given to patient in SNMC Bagalkot, over a period of eight days included dosage of Tab. Pregabalin and Methylcobalamin (BD), Inj Tramadol, Inj Human actrapid, Tab Ecosprin gold (10mg OD), IV Fluids, Syp Zincovit (2tsf TID), Tab DOLO (500mg BD), Ceftriaxone (1gm BD), Pantoprazole (BD), Physiotherapy and Trans Electrical Nerve Stimulation and As well as IV Immunoglobulin treatment was given, but no improvement noted. Then patient remained bedridden for almost 10 months.

General Examination

The patient was afebrile and his pulse was 80/min, Blood pressure 110/70mmhg. He appeared pale and he had moderate weight (47kg).

Physical examination

The distal greater than proximal and involving the lower limbs more than the upper limbs. Muscle tone was decreased and vibratory sensation was diminished in the distal lower extremities. Muscle stretch reflex were absent.

Systemic examination

Abdomen was mildly distended, non-tender, and bowel sounds were present. Patient was conscious and well oriented and pupillary reaction to light was normal. In the systemic examination, findings of respiratory and cardiovascular system were within the normal limits.

Reflexes

All upper and lower limbs reflexes are absent along with no response in the plantar aspect (Both right & left limb).

Muscle power grade

Both upper limb and lower limb of right and left side of the body have Grade 2 muscle power that is, movement which is possible if gravity is eliminated.

Investigations

- EMG-NCV - Suggestive of predominantly motor demyelinating type polyradiculoneuropathy involving the all the four limbs.
- Routine blood and urine investigations - WNL
- MRI Brain - No significant Abnormality seen

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DEPT. OF RADIO-DIAGNOSIS & IMAGING

Patient Name:	SHVAPUTRAYYA HIREMATH	Patient ID:	MRI 1590/91/21
Age:	61 Years	Sex:	M
Hospital ID:	IPD-19636	Study Date:	31-May-2021
Referring Physician:	DR S K MASARADDI		

BRAIN SCREENING: ***PROTOCOL***: *Axial FLAIR, T2WI.*
A subcentimetric round area of altered signal intensity showing diffusion restriction noted in white matter of right frontal region suggestive of Acute lacunar infarct.
punctuate areas of altered signal intensity appearing hyperintense on FLAIR images noted in mid pons region. No Evidence of diffusion restriction/blooming seen. ? Chronic ischemic change ?Metabolic etiology-osmotic demyelination.
Few asymmetrical punctuate T2/FLAIR hyperintensities are noted in bilateral centrum semiovale, peri ventricular and deep white matter. No e/o restricted diffusion.
Third and lateral ventricles are mildly ectatic. Basal cisterns are prominent. Cortical sulci and Sylvian fissures are prominent-Age related changes.
Chronic lacunar infarct in left basal ganglia.
Rest of the cerebral and cerebellar parenchyma shows normal signal
Rest of the basal ganglia and thalamus are normal. Ventricular system is normal.
Brain stem, rest of the posterior fossa and CP angles are normal.

IMPRESSION: MRI Cervico-dorsal spine with whole spine and brain screening study shows –
- **Punctuate FLAIR hyperintense areas in mid pons region. ? chronic ischemic changes. ??Metabolic etiology-osmotic demyelination.** ***Advice: clinical correlation.***
- **Chronic ischemic changes with diffuse age related cerebral atrophy with an acute lacunar infarct in right frontal region.**
- **Disco- degenerative changes at multiple vertebral levels as described.**
- **No obvious signal abnormality changes in the spinal cord. Advise: CSF analysis to R/o Guillain - barre syndrome.**

DR. VISHNUPRIYA
PG RESIDENT, RADIO-DIAGNOSIS

DR. SUGARADDY MDRD.
SENIOR RESIDENT. RADIO-DIAGNOSIS

Note: interpretation of imaging results may vary in the light of clinical data. Kindly correlate clinically and communicate your queries if any.

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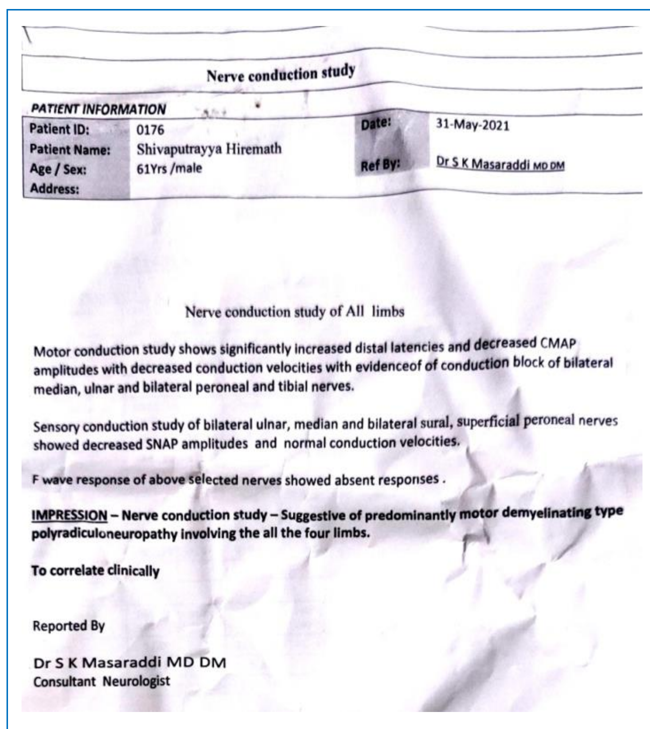

Nerve conduction study

PATIENT INFORMATION

Patient ID: 0176
Patient Name: Shivaputrayya Hiremath
Age / Sex: 61Yrs /male
Address:
Date: 31-May-2021
Ref By: Dr S K Masaraddi MD DM

Nerve conduction study of All limbs

Motor conduction study shows significantly increased distal latencies and decreased CMAP amplitudes with decreased conduction velocities with evidenceof of conduction block of bilateral median, ulnar and bilateral peroneal and tibial nerves.

Sensory conduction study of bilateral ulnar, median and bilateral sural, superficial peroneal nerves showed decreased SNAP amplitudes and normal conduction velocities.

F wave response of above selected nerves showed absent responses .

IMPRESSION – Nerve conduction study – Suggestive of predominantly motor demyelinating type polyradiculoneuropathy involving the all the four limbs.

To correlate clinically

Reported By

Dr S K Masaraddi MD DM
Consultant Neurologist

Ayurvedic management - *Shodhana Chikitsa*

Treatment Plan
Alepa Chikitsa (1st round)
Sarvanga Dhanyaamla Dhara (1st round)
Taladhara - (Vacha Churna) (1st round)
Veshtana Karma - (Moorchita Taila) (1st round)
Sastika Sali Pinda Sveda (1st and 2nd round)
Kala Basti - (Rajayapana Basti) (1st and 2nd round)
Abhyanga - (Narayana Taila) (2nd round)
Shirodhara (2nd round)

Shamana Chikitsa

Medicine	Frequency
Tab Rasarajeshwarirasa	OD
Cap Palsineuron	BD
Tab Ekangaveera Rasa	BD
Tab Vishatinduka Vati	BD
Dhanadanayadhi Kashaya	TID
Cap Nuro-XT	TID
Mashabaladi Kashaya	TID

Gait Change's

SN	Week	Gait
1.	1st week	Unable to get up
2.	3rd week	Stand with support
3.	5th week	Walk with support
4.	6th week	Stand without support
5.	7th week	Walk without support

Weight Change's

SN	Week	Weight
1.	1st week	48kg
2.	3rd week	53kg
3.	5th week	55kg
4.	6th week	58kg
5.	7th week	60kg

Showing Improvement of patient after treatment

SN	Signs and symptoms	Before treatment	After treatment
1.	Torso balance	With support	Yes
2.	Grasp of object	No	Yes
3.	Holding object	No	Yes
4.	Without initiation Holding objects	No	Yes
5.	Release of object	No	Yes
6.	Able to rise the shoulder	No	Yes

7.	Stability	No	Yes
8.	Knot Tying	No	Yes
9.	Propelling of object	No	Yes
10.	Eating	No	Yes
11.	Holding glass of water	No	Yes
12.	Clothing	No	Yes
13.	Squatting	No	Yes
14.	Standing	No	Yes
15.	Combing	No	Yes
16.	Writing	No	Yes
17.	Bathing	No	Yes
18.	Walking	No	With support
19.	Weight	48kg	60kg
20.	Climbing the stairs	No	With support

Result and Observations

Improvement seen in patient after treatment compare to before treatment. Patient admitted on 03/03/2022. Above treatment was started and continued for 60 days.

Before treatment	After treatment
Both upper limb and lower limb of right and left side of the body have Grade 2 muscle power that is, movement which is possible if gravity is eliminated.	Both upper limb and lower limb of right and left side of the body have Grade 5 (normal).

Discussion

The G B Syndrome is an acute / subacute relatively symmetric lower motor neuron paralysis from which greater than 85% of patients obtain a full/functional recovery.

Here in this case of LMN type of GBS which can be correlated to *Apatarpanajanya Vatavyadhi* of ayurveda the *Viparith Chikitsa* is given in form of *Santarpanadhi Chikitsa* and *Pathya.*

Patient was treated systematically with both *Shodhana* and *Shamana Chikitsa* which is sequentially explained before. *Shodhana Chikitsa* like *Alepa Chikitsa,*[4] *Sarvanga Dhanyaamladhara,*[5] *Taladhara, Veshtanakarma, Shashtikashali Pinda Sweda,*[6] *Kalabasti,*[7] *Abyanga,*[8] *Shirodhara*[9] were given and also the *Shamana Chikitsa* were included like *Rasarajeshwari Rasa,*[10] *Ekangaveera Rasa, Vishatinduka Vati, Dhanadanayadhi Kashaya,*[11] *Mashabaladi Kashaya.*

There was a gross improvement in both gait and weight along with different signs and symptoms of patient following treatment from 1st week to 7th week with complete difficulty to get up till walk without support, weight increased from 48kg to 60kg and also patient was able to perform his work by himself.

LMN type of GBS is one type in which there is Gross reduction in muscle power, here both upper and lower limb of right and left side of body attained with grade 5 muscle power after completion of treatment.

Conclusion

GBS is a severe acute paralytic neuropathy with rapid progression usually occurring post infections which can be correlated to *Vatavyadhi* of Ayurveda. As in this case study it's a LMN type of GBS its correlated to *Apatarpana Janya Vatavyadhi* hence, *Vatahara Chikitsa* and *Santarpana Chikitsa* were being followed for period of 7 weeks. Here there is *Vata Prakopa* associated with *Dhatu Kshaya* with association of other *Doshas*. Preceded with *Jwara* and *Stamba* of extremities suggestive of involvement of other *Doshas* along with *Vata*. Hence, in this case study it is seen how GBS is being treated with Ayurvedic mode of *Shodana* and *Shamana* treatment along with other *Santarpana Chikitsa* and after the treatment follow up showed sustenance of all positive outcomes. Ayurveda management of GBS showed improvement in motor and sensory deficits following ayurveda treatment

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have been beneficial to the patient. Outcome showed significant role of ayurveda in severe debilitating disorder like GBS.

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