



AYURVEDIC MANAGEMENT OF GUILLAIN BARRE SYNDROME- A CASE STUDY

Mini V.G,¹ Suneeshmon M.S,² Arundhathi K³

¹Associate Professor, Department of Kayachikitsa, Government Ayurveda College, Thiruvananthapuram, India

²Assistant Professor, Department of Kayachikitsa, Government Ayurveda College, Thiruvananthapuram, India

³Final year PG Scholar, Department of Kayachikitsa, Government Ayurveda College, Thiruvananthapuram, India

Corresponding Author: arundhathi.90@gmail.com

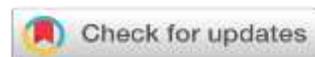
<https://doi.org/10.46607/iamj3310122022>

(Published Online: December 2022)

Open Access

© International Ayurvedic Medical Journal, India 2022

Article Received: 01/11/2022 - Peer Reviewed: 23/11/2022 - Accepted for Publication: 28/11/2022

**ABSTRACT**

Guillain-Barré syndrome (GBS) is acute, rapidly evolving areflexic motor paralysis with or without sensory disturbance. The incidence of GBS, according to WHO is 0.4 to 4 per million per year. Males are at higher risk. In children, it is said to be favourable as compared to adults. There is no direct correlation between GBS in Ayurvedic classics. Here a case of 55 years old male presented with sudden onset of weakness in bilateral lower limbs, unable to get up or roll over in bed, walk and stand with a history of fever brought to OPD of Govt. Ayurveda College, Thiruvananthapuram. The assessment tool used was the Hughes GBS disability scale. From an Ayurvedic perspective, this condition can be considered as *Sarvangavata* which was preceded by *Jwara*. The treatment principle adopted was *Vatavyadhi chikitsa* keeping *jwara* in consideration which included *Rukshana*, *Snehana*, *Sodhana*, *Brimhana*, and *Rasayana*. The patient was able to walk with aid after the treatment.

Keywords: Guillain-Barre syndrome, GBS, Demyelinating polyneuropathy, AIDP, *Sarvangavata*, *Vatavyadhi cikitsa*

INTRODUCTION

Guillain Barre Syndrome, also known as Acute Inflammatory Demyelinating Polyneuropathy (AIDP) is an autoimmune disease, which is an acute, frequently severe, fulminant polyradiculoneuropathy.¹ The incidence of GBS, according to WHO is 0.4 to 4 per million per year. Males are at higher risk (1.5 folds higher) than females.² There is no specific cause for this syndrome, but commonly preceded by a viral infection of the respiratory or the gastrointestinal tract or by vaccinations.³ Both cellular and humoral immune mechanisms contribute to tissue damage in GBS. There are several subtypes of GBS Acute Motor Axonal Neuropathy (AMAN) which causes only motor weakness, Acute Motor and Sensory Axonal Neuropathy (AMSAN) with both motor and sensory involvement, Miller Fisher Syndrome (MFS) which involves paralysis of the eye muscles and loss of balance and coordination.⁴ In GBS, weakness evolves over hours to a few days with a symmetrical onset in lower limbs ascending to upper limbs and cranial area. It is frequently accompanied by abnormal sensations, usually pins and needles or tingling in the extremities.⁵ Autonomic involvement like loss of vasomotor control, with wide fluctuations in blood pressure, postural hypotension, and cardiac dysrhythmias may also be seen.⁶ In the Ayurvedic perspective this condition can be viewed as *Sarvangavata*⁷ which is preceded by *Jwara*. Here the treatment principles of *Vatavyadhi*⁸ especially *Pakshaghata cikitsa* can be adopted which include *Rukshana* (emaciation), *Snehana* (oleation), *Sodhana* (elimination), *Brimhana* (nourishment) and *Rasayana* (rejuvenation).

Case Report

A 55-year-old male, chronic smoker and ethanolic with no known comorbidities presented with bilateral lower limb weakness and difficulty in rolling over for 9 months. There was H/o fever followed by acute onset, rapidly progressing, Ascending weakness involving distal and proximal muscles of both lower limbs which is predominantly motor with a transient involvement of respiratory muscles and lower cranial nerves in the form of dysphagia and

respiratory distress. H/o Proximal weakness of bilateral upper limb (R>L). No H/o bowel or bladder involvement. No headache/vomiting/seizure. He is normotensive, with no H/o palpitation or sweating. No recent trauma, surgery, vaccination, or previous episode of such illness.

History of Presenting Complaints

The patient had an acute onset of low-grade fever with chills and dull body aches. He was managed in a nearby hospital and the fever subsided for the day but spiked after 2 days. On walking, he noticed swaying of the body to the right side with mild weakness of the right lower limb. On the second day of fever, he had buckling of his right knee and twisting of the ankle but could stand by himself. His leg was externally rotated and plantar flexed in position. On day 3, was unable to stand, couldn't move his right lower limb at all, and was unable to raise even a glass of water with his right upper limb. On day 4, developed difficulty in swallowing and coughed on taking food with pooling of secretions in the mouth. He used to spit out food, amount of speech was reduced. On day 5, the temperature spiked again had breathing difficulties and became unconscious. He was kept in ICU for 3 days, regained consciousness, and started food intake. Swallowing difficulty, pooling of secretion, and speech were improved by then. He could get up from a supine position but was unable to sit without support, and had difficulty rolling over in bed. The weakness persisted on the right upper limb and both lower limbs. The weakness was ascending from distal to proximal involvement (R>L). On CSF examination Albumino-cytological dissociation was noted, planned for plasma exchange and IVIg therapy, but the patient couldn't follow up due to covid scenario. He was admitted to Government Ayurveda College, Thiruvananthapuram after 9 months for better IP management. The dietary pattern of the patient was irregular, he used to have less amount of food for the last 5 years, and preferred spicy, sour, and dry fried food items. His appetite was altered, had hard stools, and he was addicted to smoking and alcohol (for 20yrs). He leads a sedentary life.

General Examination on Admission

The patient came in a wheelchair, was conscious, alert, oriented, cooperative, lean built, and under nourished, sitting with an erect spine, knee extended, and plantar flexed. Afebrile, with a pulse- 90/min, regular rhythm, full volume. Respiratory rate- 16/min, abdominothoracic. Blood pressure- 110/70mmHg. On physical examination, symmetrical thinning of muscles on B/L upper limbs was noted. Involuntary fine twitching movements were present on the upper arm(R) were not elicited by tapping, and were not present always. Wasting was seen over B/L lower limbs. No fasciculation. Findings of the Respiratory and Cardiovascular system were within normal limits, the abdomen was scaphoid and non-tender, bowel sounds were present, and all cranial nerves were intact on examination. The sensory system was intact.

Diagnostic Criteria- Brighton Criteria

Bilateral and flaccid weakness of the limbs.
 Decreased or absent deep tendon reflex in weak limbs.
 Monophasic illness pattern & interval between onset and nadir of weakness between 12 hrs and 28 days

and subsequent clinical plateau.

Electrophysiological findings are consistent with GBS.

Cytoalbuminologic dissociation (elevation of CSF protein level and CSF total white cell count < 50 cells/ μ L).

Absence of an identified alternative diagnosis for weakness.

Investigations Done:

Nerve Conduction Velocity

Absent /reduced CMAP amplitude from bilateral peroneal (EDB and TA), tibial, femoral, left radial, musculocutaneous, axillary, suprascapular, and intrascapular nerves. Evidence of conduction velocity slowing from bilateral median, ulnar and tibial nerves. F waves were absent/prolonged from all tested nerves. The sensory conduction study was within normal limits. H reflex was absent from bilateral tibial nerves.

CSF Analysis: CSF cytology (centrifuged) – Mild lymphocytic pleocytosis Gram stain – no inflammatory cells, no organism seen.

Table 1 Before treatment

Motor system	Left UL	Right UL	Left LL	Right LL
Muscle wasting	Upper arm- 26cms Forearm – 23cms	Upper arm - 24cms Forearm – 22cms	Present Thigh- 38cms Leg – 28cms	Present Thigh – 37cms Leg – 28cms
Muscle tone	Reduced	Reduced	Hypotonic	Hypotonic
Muscle power				
Shoulder				
Flexion	5	4		
Extension	5	4		
Adduction	5	4		
Abduction	5	4		
Elbow				
Flexion	4+	4+		
Extension	4+	4		
Wrist				
Dorsiflexion	4+	4+		
Palmar flexion	4+	4+		

Hand grip	5	4+		
Hip				
Adduction			3	2
Abduction			3	2
Flexion			2	2
Extension			2	2
Knee				
Flexion			2	2
Extension			2	2
Ankle				
Plantar flexion			4	1
Dorsiflexion			3	1
Toes				
Flexion			0	0
Extension			0	0
Deep Tendon Reflexes				
Biceps	2+	2+		
Triceps	2+	2+		
Supinator	2+	2+		
Knee jerk			0	0
Ankle jerk			0	0
Abdominal reflex: absent				
Babinski sign: withdrawal bilaterally				

Rogi-Roga Pareeksha

Ashtavidha Pareeksha

The patient's *nadi* (pulse) was of a *vata pitta* nature. On examination, his *mutra* (urine), *jihwa* (tongue), *Sabda* (sound), and *Drik* (eyes) are found to be *Sadharanam* (normal). He had *graditha malam* (hard stools) and *ruksha sparsham* (dry skin). He is *krisha* (lean).

Samprapthi ghatakas

Dosha : *Vata- Prana, Udana, Vyana, Samana, Apana*
Pitta- Pachaka, Ranjaka

Kapha- Kledaka,

Dhatu : *Sleshaka, Avambhaka, Rasa, Raktha, Mamsa, Medas, Majja*
Upadhatu : *Sira, Snayu*
Mala : *Pureesha*
Agni : *Jataragni, Bhutagni, Dhatwagni*
Srotas : *Rasavaha, Raktavaha, Mamsavaha, Medovaha, Majjavaha, Pureeshavaha*
Srotodushti : *Sanga*
Roga Margam : *Madhyama*
Udbhava Stana : *Koshta*
Vyakthi Stana : *Sarva Sa-reeram*
Rogaswabham : *Asukari*

Samprapthi

Nidana sevas like *Rukshana*, *Alpasana*, *Pramithasana*, *Akalabhojana*, *Chinta*, *Soka* etc lead to the increase of *Laghu*, *Ruksha* and *Khara gunas* of *Vata* which causes *Vatakopa*⁹ and *RasaKshaya* which in turn leads to the *kshaya* of *bala*, *ojas* and *dhatu*s especially *Soumya dhatu*s. *Kshaya* of *Soumya dhatu*s like *Rasa*, *Mamsa*, *Medas*, and *Majja*, which perform the functions like *Deha lepana*, *Snehana*, *Gatra snigdhatata*, *Bala*, etc cause their malfunction. One of the major functions of these *Dhatu*s is the production of *Upadhatus*, thus ultimately causing malformation and functioning of *Upadhatus* like *Snayu*, *Vasa*, *Twak*, etc. Excess indulgence in *Katu*, *Amla rasa ahara*, excess use of alcohol

and smoking lead to the *Pitta-Rakta dush-ti*,¹⁰ which impairs *Jeevana*, *Varnaprasadana*, and *Mamsa poshana karmas* of *Rakta dhatu* also causing the malformation of its *Upadhatu-Sira*. This *Nidana sevana* along with *Jwara* leads to the vitiation of *Vata*, *Pitta*, and *Rakta* with apredominance of *Pitta* leading to the *Paka* in *Sira* and *Snayu* causing their *Vishoshanam* in *Sarvanga* thus leading to the disease.

Cikitsa

The condition was diagnosed as *Sarvangavata*. The treatment principle adopted was *Vatavyadhi chikitsa* keeping *Jwara* in consideration, which included *Rukshana*, *Snehana*, *Sodhanam*, *Brimhana*, and *Rasayana*.

Table 2 Treatments Done

CONDITION OF THE PATIENT	INTERNAL MEDICINES	PROCEDURE	REMARKS
B/L LL weakness B/L pedal edema, Bowel Irregular, hard stools <i>Vishamagni</i>	<i>Gandharvahasthadi Ks</i> 90 ml+ <i>Saindavam</i> and <i>guda</i> , bd, before food. T. Liv 52 1-0-1	<i>Dhanyamladhara</i> - 7days <i>Matravasti</i> with <i>Pippalyadi anuvasana thailam</i> – 7days	Stool evacuation – Regular with normal Consistency Appetite - Improved Weakness & edema persisted.
c/o improper evacuation of stool	<i>Gandharva hasthadi Ks</i> 90 ml bd, before food <i>Asta choornam</i> 5 gm + buttermilk bd, before food.	<i>Sankara swedam</i> - 7days	Appetite improved(Amount of food intake increased) Proper evacuation of stool
	<i>Acha Snehapanam</i> with <i>kalyanaka ghritham</i> (25ml-50ml-75 ml continued for 5 days)		
		<i>Abhyanga</i> with <i>Balathailam</i> , <i>Ushma sweda</i> for 3days	
	<i>Virechanam</i> - <i>Gandharveranda</i> 30 ml with hot water		<i>Vegas</i> - 4 Advised <i>peyadikrama</i> for 1 <i>anna-kaala</i> each

Appetite – moderate Bowel - notpassed	<i>Gandharva hasthādi Ks + Saindava, guda 90ml bdB/F</i>	<i>Abhyanga+ Ushmasweda with bala thailam for 7 days Matravasti-Pippalyadi anuvasana thaila + saindhava</i>	Appetite - good Bowel passed Advised physiotherapy
	<i>Sahacharadi ks 90 ml bd, B/F Sahacharadi thailam 2.5 ml with Ks</i>	<i>Jambeera pinda sweda for 7 days Matravasti continued</i>	Pedal edema reduced. The patient was able to move their legs on the bed
	<i>Sahacharadi Ks 90 ml OD</i>	<i>Yogavasti started Snehavasthi-Pippalyadi anuvasana thailam- 120 ml Kashayavasthi-Saindhava Sathapushpa kalkam Makshikam Pippalyadi anuvasana taila Sahacharadi kashayam</i>	Pedal edema reduced considerably. The patient became able to flex at the knee and hip
	<i>Maharasnadi Ks 90 ml bd B/F Sahacharadi taila 2.5 ml with Kashaya</i>	<i>Kayasekam – Bala taila for 7 days Thalam – Ksheerabala thaila+ Kachooradi choornam</i>	Rolling over in bed improved The patient was able to stand with support
	<i>Maharasnadi ks 90 ml OD</i>	<i>Mustadi rajayapana vasti for 7 days</i>	Patient able to stand and walk > 5 steps with walking aid
	<i>Maharasnadi Ks 90 ml bd B/F Ksheerabala thaila- 7A, 5ml with Ks</i>	<i>Shashtika pinda sweda for 7 days</i>	Patient able to walk > 10 steps with walking aid

Discharge medicines: *Maharasnadi kashayam* - 90ml bd before food, *Ksheerabala thailam 7Avarthi* - 5ml with *Kashaya*, *Suvarnamukthadi gulika* -1bd, *Mahanarayana thailam* for external application.

Results and Discussion: After 75 days of treatment the patient was able to get up from bed, sit and walk for more than 10 steps by using a walking aid. He was able to stand without support for about 10 minutes. The Hughes GBS disability scale score be-

came 3 from 4 after treatment. In the demyelinating forms of GBS, the basis for flaccid paralysis and sensory disturbance is conduction block. If the axonal connections remain intact the recovery will be faster as rapidly as remyelination occurs. In severe cases, axonal degeneration correlates with a slower recovery rate.¹¹ When the Ayurveda perspective is seen, *Nidanas* like *Rukshanna*, *Pramithasana*, *Alpahara*, etc can be considered as *Viprakrishta nidanas* (Distant causes) for the premorbid condition of the patient. *Jwara* which is the *Sannikrishta nidana* (Intimate causes) initiates the *Dosha dushya sammoorchana* for the manifestation of the disease. In the *Samprapthi*, there is *Upasoshana* of *Upadhatus Snayu* and *Sira*. Here *Snayu* can be considered as nerves or myelin sheath around the neurons as they are formed by the *Khara paka* (Solidification) of *Medo dhatu* with *Snigdha bhava*.¹² *Sira* which is the *Upadhatu* of *Raktha* had undergone *Soshanam* here. This *Sira* can be taken as *Vatavahi sira* that carries out the functions of *Vata* which is again considered as the nerves, thus explaining the *Samprapthi*. Here the treatment to pacify vitiated *Vata* for preventing further *Soshanam* followed by *Brimhanam* should be done. *Brimhana* (Nourishment) therapies help in the nourishment of wasted muscles and also the regeneration of damaged nerves.

The patient was having hard stools and an altered appetite hence the treatment started with *Gandarvahasthadi kashayam* along with *Prakshepas Guda* and *Saindavam*, which is *Deepana* and *Anulomana*.¹³ Externally *Dhanyamla dhara*, a *Drava swedam* was selected considering the predominance of *Pitta* in the *Samprapthi*. Later *Ashta choornam*¹⁴ was added to the internal medications which are *Deepana* and enhanced *agni*. Externally *Sankara sweda* was done with *Kolakulathadi churna*¹⁵ and *Dhanyamlam*¹⁶ again considering *Vata*, *Pitta Doshas*. After correcting the *Agni* and *Koshta*, *Snehapanam* was started with *Kalyanaka ghritham*.¹⁷ The drug choice was done considering the *Jwara* that preceded the

condition, also this *yogam* is useful in various conditions like *Sosha*, *Yakrit vikaras* (liver disorders), etc. For *Abhyanga*, *Bala thailam*¹⁸ was taken as it is *Vata Pitta samana* and is indicated in *Vatavyadhi*. *Virechanam* was done with *Gandarvahastherandam*¹⁹ considering *Vata dosha*. Only 4 *Vegas* were reported which was *Avara* (minimum), hence *Peyadi* was given for one *Annakala* each. Along with *Abhyanga* and *Ushma sweda*, physiotherapy was also advised, which helps in improving muscle tone, muscle strength, and range of movements of the joints. For *Matravasthi*, *Pippalyadi anuvasana thaila*²⁰ with *Saindavam* was used as it is *Anulomana* and also useful in *Udavartha*. In the next stage, *Sahacharadi Kashaya*²¹ with *Sahacharadi thailam*²² as *Anupanam* was given internally as its action is improving circulation in *Adhakaya*. Externally *Jambeera pinda swedam* and *Kayasekam* were done, which are *snigdha sweda kriyas* that help to pacify *vata*. These *sweda* procedures help to enhance blood circulation, rejuvenate the body, and are helpful in nervous disorders. For *Thalam*, *Kachooradi choornam*²³ and *Ksheerabala thailam*²⁴ were taken as they are *VP samanam*. *Yogavasthi* was given in order to pacify *Vata*, also the *vyakti sthana* (manifestation) of the disease is in *Adhakaya* which is the seat of *Vata*. In the final stage, *Maharasnadi kashayam*²⁵ was given along with *Ksheerabala 7 avarthi* which is *VP samana*, *Brimhanam*, and acts as a neuroprotector. *Musthadi rajayapana vasthi*²⁶ was selected as it is *Brimhana*, and can be used in *sosham* without any complication. *Shashtika pinda swedam* was done as it is *brimhana* and pacifies *vata*. As discharge medicine *Maharasnadi kashayam* was given which is indicated in *Vatavyadhis* like *Pakshaghata*, it is *Brimhana*, and *Rasayana*. *Suvarnamukthadi gulika*²⁷ is given in various paralytic conditions. *Mahanarayana thailam*²⁸ is given externally, which is also a great choice for improving the strength of muscles and joints.

Table 3- After treatment

Motor system	Left UL	Right UL	Left LL	Right LL
Muscle wasting	Upper arm- 27cms Forearm- 23cms	Upper arm 25cms Forearm- 23 cms	Thigh- 39.5cms Leg- 29cms	Thigh- 38 cms Leg- 28.5 cms
Muscle tone	Improved	Improved	Improved	Improved
Muscle power				
Shoulder				
Flexion	5	4+		
Extension	5	4+		
Adduction	5	5		
Abduction	5	4+		
Elbow				
Flexion	5	4+		
Extension	5	4-		
Wrist				
Dorsiflexion	5	4+		
Palmar flexion	5	5		
Hand grip	5	5		
Hip				
Adduction			4-	3
Abduction			4-	3
Flexion			4-	4-
Extension			4-	4-
Knee				
Flexion			4+	3
Extension			4+	3
Ankle				
Plantar flexion			3	2
Dorsiflexion			4-	3
Toes				
Flexion			4	3
Extension			3	3
Deep Tendon Reflexes				
Biceps	2+	2+		
Triceps	2+	2+		
Supinator	2+	2+		
Knee jerk			1+	1+
Ankle jerk			0	0
Abdominal: absent				
Babinski sign: extensors bilaterally				

Hughes GBS disability scale

- 0 - A healthy state
- 1 - Minor symptom and capable of running
- 2 - Able to walk 10 m or more without assistance but unable to run
- 3 - Able to walk

- 4 - Bedridden or chair bound
- 5 - Requiring assisted ventilation for at least part of the day
- 6 - Dead

Table 4 - Hughes GBS Disability Scale Assessment

Before treatment	After treatment
4	3

CONCLUSION

This case study aimed at the analysis of GBS in terms of Ayurveda, which is taken as *Sarvangavata*. According to biomedicine, approximately 85% of patients with GBS achieve full functional recovery within several months to a year. In this patient, improvement was seen in two and half months, which is suggestive of quicker beneficial effects of Ayurvedic treatment. Along with the *Ayurvedic Panchakarma chikitsa* as well as *Shamanoushadhis*, physiotherapy also contributed to improving muscle tone, muscle strength, and reflexes. This case study gives us confidence and a better understanding of the disease. It also helps to prove the effectiveness of Ayurvedic medicine. As immunoglobulin treatment is a costly alternative, the cost-effectiveness of the Ayurvedic treatment seems promising.

REFERENCES

1. Fauci A, Kasper D, Longo D, et al. *Harrison's Principles of Internal Medicine*. 17th ed. United States of America: McGraw-Hill Companies; 2008:2667-70.
2. Das K. *Textbook of Medicine*. 5th ed. New Delhi: Jaypee Brothers Medical Publishers(P); 2008:1323.
3. Parry G, Steinberg J. *Guillain Barre Syndrome, From Diagnosis to Recovery*. Fauci A, Kasper D, Longo D, et al. *Harrison's Principles of Internal Medicine*. 17th ed. United States of America: McGraw-Hill Companies; 2008:2667-70.
4. Parry G, Steinberg J. *Guillain Barre Syndrome, From Diagnosis to Recovery*. New York: Demos Medical Publishing; 2007:20.
5. Parry G, Steinberg J. *Guillain Barre Syndrome, From Diagnosis to Recovery*. New York: Demos Medical Publishing; 2007:27.

6. Fauci A, Kasper D, Longo D, et al. *Harrison's Principles of Internal Medicine*. 17th ed. United States of America: McGraw-Hill Companies; 2008:2667-70.
7. Murthy K. *Vagbhata's Astanga Hridayam. Nidana Sthana*. Varanasi: ChaukhambaOrientalia; 2018.
8. Murthy K. *Vagbhata's Astanga Hridayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:497
9. Murthy K. *Vagbhata's Astanga Hridayam. Nidana Sthana*. Varanasi: ChaukhambaOrientalia; 2018:7
10. Murthy K. *Vagbhata's Astanga Hridayam. Nidana Sthana*. Varanasi: ChaukhambaOrientalia; 2018:8
11. Fauci A, Kasper D, Longo D, et al. *Harrison's Principles of Internal Medicine*. 17th ed. United States of America: McGraw-Hill Companies; 2008:2667-70.
12. Murthy, K. *Illustrated Susruta Samhitha Sareera Sthana*, varanasi: chaukhambhaOrientalia;2010:60
13. Nishteswar K, Vidyanath R. *Sahasrayogam*. 3rd ed. Varanasi: Choukhamba Sanskrit Series Office; 2011:46.
14. Murthy K. *Vagbhata's Astanga Hridayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:406.
15. Sharma R, Dash V. *Agnivesa's Caraka Samhita Vol I*. 6th ed. Varanasi: ChaukhambaSanskrit Series Office; 1999:78.
16. Nishteswar K, Vidyanath R. *Sahasrayogam*. 3rd ed. Varanasi: Choukhamba Sanskrit Series Office; 2011:52.
17. Murthy K. *Vagbhata's Astanga Hridayam*. 5th ed. Varanasi: Chowkhamba Krishnadas Academy; 2009:61.
18. Murthy K. *Vagbhata's Astanga Hridayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:510.
19. Nishteswar K, Vidyanath R. *Sahasrayogam*. 3rd ed. Varanasi: Choukhamba SanskritSeries Office; 2011.
20. Murthy K. *Vagbhata's Astanga Hridayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:320.
21. Murthy K. *Vagbhata's Astanga Hridayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:507.

22. Murthy K. *Vagbhata's Astanga Hrdayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:510.
23. Nishteswar K, Vidyanath R. *Sahasrayogam*. 3rd ed. Varanasi: Choukhamba Sanskrit Series Office; 2011:203.
24. Murthy K. *Vagbhata's Astanga Hrdayam. Chikitsa Sthana*. Varanasi: ChaukhambaOrientalia; 2018:521.
25. Nishteswar K, Vidyanath R. *Sahasrayogam*. 3rd ed. Varanasi: Choukhamba Sanskrit Series Office; 2011:48.

26. Murthy, K. *Illustrated Susruta Samhitha Cikitsa Sthana*, varanasi: chaukhambhaOrientalia;2010:380
27. S.Gopala Pillai A. *Sarvaroga Chikitsa Ratnam*. 7 th ed. Kodungallur: Devi Book Stall;2014:127.
28. Prabhakara Rao G. *Bhaishajya Ratnavali II*. Varanasi: Chaukhamba Orientalia;2014:188.

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Mini V.G et al: Ayurvedic Management of Guillain Barre Syndrome- A Case Study. International Ayurvedic Medical Journal {online} 2022 {cited December 2022} Available from: http://www.iamj.in/posts/images/upload/3460_3469.pdf