

Exploring Ayurvedic Modalities in a Clinically Diagnosed Guillain-Barré Syndrome Patient: A Case Report

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ABSTRACT

Guillain-Barré Syndrome (GBS) is an acute inflammatory demyelinating polyneuropathy characterised by rapidly progressive weakness, typically beginning in the lower limbs and ascending upwards. GBS can lead to significant motor and sensory deficits, impacting daily functioning and quality of life. Based on Ayurvedic principles, *Kapha-Pitta Avarana* (obstruction) blocking *Sarvangagata Vata* is associated with the clinical presentation of GBS. A 48-year-old male patient came to the Ayurvedic Hospital in a bedridden condition with both lower limbs immobile, an inability to close his eyes, slurred speech, and tingling sensations throughout the body for 15 days. This case report advocates for the application of classical Ayurvedic treatments, including *Shodhan* (biopurification treatment) and *Shaman* (curative treatment) therapies, as an alternative to relying on harmful corticosteroids, potentially lowering the risk of associated complications. This study shows significant improvement in the Barthel Index, Power grading, Hughes Functional Grading Scale, and reflex responses.

Keywords: Acute inflammatory demyelinating polyneuropathy, Barthel index, Hughes functional grading scale, Power grading

CASE REPORT

A 48-year-old male patient presented in a bedridden state with both lower limbs immobile, an inability to close his eyes—though ocular movements were intact and no visual impairment was observed—slurred speech, and tingling sensations throughout the body for 15 days. He was clinically diagnosed with GBS. The patient had no history of hypertension, diabetes mellitus, thyroid dysfunction, tuberculosis, asthma, or other allergic illnesses. There was no significant family or medical history. The patient followed a mixed diet, had a history of alcohol consumption, and experienced difficulty closing his eyes during sleep, although bowel habits were regular.

In the Ayurvedic eightfold examination, the patient exhibited a *Vata-Pitta* dominant *Nadi*, regular bowel and micturition patterns, but showed signs of *Saam Jihva*, slurred speech, altered tactile perception (*Anushnasheet Sparsha*), and an inability to close his eyes, indicating vitiation of *Vata* with *Avarana* by *Kapha* and *Pitta* [Table/Fig-1] [1,2].

S. No.	Examination	Observation
1.	<i>Nadi</i> (Pulse rate)	100 times/minute, <i>Vata pitta</i>
2.	<i>Mutra</i> (Frequency of micturition)	4-5 times per day, <i>samyak</i>
3.	<i>Mala</i> (Bowel)	Regular, <i>Prakrita</i>
4.	<i>Jihva</i> (Tongue)	<i>Saam</i>
5.	<i>Shabda</i> (Sound)	Slurred speech
6.	<i>Sparsha</i> (Touch)	<i>Anushnasheet</i>
7.	<i>Drik</i> (Vision)	Unable to close eyes
8.	<i>Akriti</i> (Body built)	<i>Madhyam</i>

[Table/Fig-1]: Ashtavidha pariksha [1,2].

General examination: The Blood pressure was 160/90mmHg, respiratory Rate was 25/ min, pulse rate was 100/min and temperature was 98.6°F

Cranial nerve examination: The neurological examination revealed multiple cranial nerve involvements, particularly affecting the oculomotor, trigeminal, facial, and hypoglossal nerves, as shown in [Table/Fig-2].

S. No.	Cranial nerves	Functions affected
1.	Oculomotor	The patient was unable to close the eyelids completely.
2.	Trigeminal	The patient was having difficulty with mastication.
3.	Facial	The patient was unable to close the eyelids completely, difficulty in having facial expressions, ballooning of cheeks, and frowning of eyebrows.
4.	Hypoglossal	The patient was unable to protrude and move the tongue.

[Table/Fig-2]: Cranial nerve examination.

Neurological examination: The patient was well-oriented and mentally stable.

Motor examination: On motor examination, the patient exhibited reduced muscle power and showed absent superficial (abdominal and plantar) and deep reflexes (knee jerk and ankle jerk), as shown in [Table/Fig-3] [3,4].

Muscle power	Right and left upper limb Right and left lower limb	Grade 3 Grade 1
Reflexes	Superficial Abdominal and Planter	Absent
	Deep Reflexes - Biceps and Triceps	Normal
	Knee Jerk and Ankle Jerk	Absent

[Table/Fig-3]: Motor examination [3,4].

Sensory examination- Normal: Haematological Investigations (Complete blood count, erythrocyte sedimentation rate, blood sugar level) were within normal limits.

Assessment parameters:-

- Barthel Index [1]
- Hughes Functional Grading Scale [2]

Treatment given: The patient was admitted to the hospital to receive Ayurvedic treatments based on *Vata vyadhi* treatment principles.

1. *Shodhan* Treatment (Bio-purification treatment)
2. *Shaman* Treatment (Curative treatment)

Shodhan treatment (bio-purification): The patient underwent a comprehensive Ayurvedic treatment protocol including *Basti* therapy

and supportive therapies such as *Nasya*, *Shirodhara*, and *Akshitarpana*, along with physiotherapy interventions. The duration and specific details of each procedure are summarised in [Table/Fig-4].

S. No.	Procedure	Duration
1.	<i>Purva Karma</i> (preprocedure): Sarwang Snehana with <i>Balashwagandha taila</i> followed by <i>Shashtik shall pinda swedan</i>	15 days
2.	<i>Pradhan Karma</i> : (main procedure) <i>Anuvasan Basti</i> : <i>Balashwagandha taila</i> (60 mL) <i>Niruha Basti</i> : <i>Mustadirajyapan</i> (350 mL) <i>Basti Pratyagaman kala</i> : <i>Anuvasan basti</i> : avg. 8-9 hours (Retention time) <i>Niruh basti</i> : avg. 15-20 mint Local <i>Dhara</i> with <i>Dashmoola kwath</i> <i>Nasya</i> with <i>anu tail</i> 8-8 drops both nostrile <i>Shirodhara</i> with <i>Brahmi taila</i> <i>Akshitarpan</i> with <i>Triphala ghrita</i>	15 days
3.	Physiotherapy: Transcutaneous Electrical Nerve Stimulation (TENS) Proprioceptive Neuromuscular Facilitation (PNF)	30 days

[Table/Fig-4]: *Shodhan Chikitsa*.

Basti Sequence (Enema): The sequence of the basti (enema) procedure is shown in [Table/Fig-5] [3].

A	N	N	A	N	N	A	N	N	A	N	N	A	N	A
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[Table/Fig-5]: Enema sequence given for 15 days.
N= Niruh basti (Medicated enema)
A= Anuvasan basti (oil enema)

[Table/Fig-6] shows the ingredients and quantities for *Anuvasan* and *Niruh Basti* (medicated enema).

S. No.	Basti	Ingredients	Dose	Days
1	<i>Anuvasna basti</i> (oil enema)	<i>Balashwagandha taila</i>	60 mL	6 days
2	<i>Niruha basti</i> (medicated enema)	<i>Madhu</i> (Honey)- 40 mL <i>Saindhav lavan</i> (Rock salt) -10 gm <i>Balashwagandha taila</i> -50 mL <i>Shatpushpa churna</i> , <i>ashwagandha churna</i> <i>kalka</i> (paste)-10 gm <i>Cap shilajeet</i> -4 cap <i>Mustadi bharad kwath</i> (decoction)-100 mL Milk-100 mL Total quantity =320 mL	320 mL	9 days

[Table/Fig-6]: *Basti* Ingredients (Medicated enema).

Shaman treatment (curative treatment): The patient was administered oral medications to enhance neuromuscular recovery and improve systemic function. The details of the oral medications used, including dosage, Anupan, frequency, and duration, are provided in [Table/Fig-7].

S. No.	Medications (Orally)	Dose	Anupan and Frequency	Duration
1.	<i>Cap Palsineuron</i>	1 cap thrice a day after food	With water	2 months
2.	<i>Maharasnadi kwath</i>	20 mL	Twice a day before food with equal amount of water	2 months
3.	<i>Ajamansa Rasayan</i>	2 tsp	Twice a day after food with milk	2 months
4.	<i>Guduchi ghan vati</i>	500 mg	2 tabs twice a day after food with water	2 months

[Table/Fig-7]: Shaman treatment (curative treatment).

Significant clinical improvement was observed after the Ayurvedic and physiotherapy interventions. Parameters such as blood pressure, pulse rate, respiratory rate, Barthel Index, and Hughes Functional Grading Scale all showed marked improvement [Table/Fig-8] [5].

S. No.	Observations	Before treatment	After treatment
1	Blood pressure (mm of Hg)	160/90	128/80
2	Pulse rate /minutes	100	84
3	Respiration rate /minutes	25	18
4	Barthel Index [1]	06	18
5	Hughes Functional Grading Scale [2]	05	01
6	Power grading [3,4] Right upper limb	03	05
	Left upper limb	03	05
	Right lower limb	01	04
	Left lower limb	01	04
7	Reflexes [5] Deep Tendon Reflexes Biceps reflex	normal	normal
	Triceps reflex	normal	normal
	Knee jerk reflex	absent	2+
	Ankle jerk reflex	absent	2+
	Superficial Tendon Reflexes Abdominal reflex	absent	2+
	Plantar reflex	absent	2+

[Table/Fig-8]: Pre and post-treatment assessment of the patient.

DISCUSSION

GBS is an autoimmune disease, and conduction block is the pathophysiological basis for flaccid paralysis and sensory disruption in the demyelinating variants of GBS. This indicates that the axonal connections are still intact, as demonstrated electrophysiologically [6]. Healing can occur rapidly when remyelination takes place. Secondary axonal degeneration typically occurs in severe cases of demyelinating GBS; its extent can be determined electrophysiologically.

Although GBS is not specifically mentioned in the classics of Ayurveda, it can be associated with *Sarvanga Vata Vyadhi* (disease) based on its clinical characteristics and the involvement of the *doshas* and *dushyas*. This study aims to evaluate the effectiveness of various rehabilitation strategies in improving functional outcomes in GBS patients. In the present case, *Mustadi Rajayapana Basti* was administered following the *Kala Basti* pattern, with the sequence tailored based on the patient's daily clinical progress. Additionally, *Dhara* with *Dashamoola Kwatha* was incorporated.

The oral medications used in this case study were also unique, further distinguishing this approach from previous studies. Significant improvements were observed within 60 days of treatment. The course of treatment included frequent physiotherapy sessions in addition to internal and local treatments known as *Bahya Chikitsa* (external treatment) and *Abhyantar* (internal treatment). *Bahya Snehana* (external massage), *Swedana* (sudation), *Basti* (enema), and *Vatahar Chikitsa* employ the principles of *Vatavyadhi's* main treatment [7].

Balashwagandha taila was used for *Abhyanga* (external massage). It reduces *Vata dosha* and promotes strength, addressing *dhatukshaya* (degeneration of bony elements) and *vata dosha*. By selecting *Vatahara* (*Vata*-pacifying) and *Balya Taila* (strength-promoting oil), the massage was performed in *anuloma gati* (downward direction), which helps reduce *chala guna* (the property of movement) and subsequently diminishes the overactivity of nerve impulses [8].

Shashtik Shali Swedana: *Swedana* (sudation) increases skin permeability by dilating blood vessels and opening skin appendages through sweating, all of which enhance the absorption of medications. This intensifies the therapeutic impact on soft tissues, joints, and muscles [9].

Medicated enema: *Mustayadi Rajayapana Basti* was administered to nourish the nerves and muscles. The enema, prepared from

rock salt, honey, medicated oil, and herbal decoctions, reduces Vata bio-entities and supports the nervous system. Honey acts as an excellent drug carrier, while rock salt facilitates the movement of pharmaceutical molecules and helps dissolve viscous substances [10].

Akshi Tarpana: Significant improvement in eyelid closure was observed following *Akshi Tarpana* with *Triphala Ghritam*. In this therapy, medicated ghee or oil is retained over the eyes. *Triphala Ghritam* nourishes and strengthens ocular structures, promotes relaxation, improves eye function, and facilitates complete opening and closing of the eyelids [11].

Shirodhara: *Shirodhara* calms the nervous system and pacifies vitiated Vata in the head region. It is effective in reducing insomnia [12].

Nasya: *Nasya* is considered the best treatment for disorders above the clavicle, particularly those involving the brain, as it delivers medication directly to the cranial region while bypassing the blood-brain barrier [13]. *Anu Taila* is used for *Nasya* because of its ability to penetrate through minute channels, improve blood circulation, strengthen nerves, and support their overall health.

Following medicinal preparations were used considering their various properties.

Cap. Palsineuron: The herbal-mineral components of *Palsineuron* capsules enhance metabolic efficiency and improve the functioning of the peripheral and central nervous systems. This accelerates neuromuscular coordination, enhances tissue oxygenation, regulates regional blood flow, promotes healing of damaged blood vessels and neurons, offers nutritional support for faster tissue recovery, repairs neural tissues, and reduces neuro-irritability [14].

Ajamansa Rasayan: Mentioned in *Sahasrayoga* under *Parishishta Prakarana Taila-Ghruta*, it contains *Dashamoola*, *Rasna*, and *Jeevaniya Gana* drugs. Owing to its *Vatahara*, *Balya*, and *Brimhana* properties derived from its *Sneha Guna* (unctuous quality), it provides nourishment and strength [15].

Maharasnadi Kwath: In this formulation, *Rasna* is the primary ingredient, acting on the musculoskeletal and neurological systems. *Maharasnadi* helps eliminate toxins, reduces nerve irritability and inflammation, and alleviates inflammation in the musculoskeletal system and associated organs [16].

Guduchi Ghan Vati: *Guduchi Ghan Vati* acts as an immunity booster and supports recovery. It provides anti-inflammatory and antibacterial effects [17].

Physiotherapy: To maintain joint mobility, passive movements were given throughout the initial phase of treatment. As the patient was immobile for the first few days, their position was changed every two hours—from supine to side-lying—to prevent the formation of pressure sores. The patient also experienced intense pain radiating from the lumbar region down both lower limbs. Transcutaneous Electrical Nerve Stimulation (TENS) was administered to treat this pain [18]. TENS works by stimulating sensory nerves, which activates the opioid system and/or the pain gate mechanism to reduce discomfort. To prevent muscle tightness, regular stretching exercises were performed, focusing on the hamstrings, piriformis, and Achilles tendon.

Proprioceptive Neuromuscular Facilitation (PNF): PNF was used to improve motor performance and control [19]. This technique helped facilitate weaker muscle groups through reciprocal inhibition by opposing stronger muscles. Enhancing motor function and nerve stimulation was crucial, as reduced nerve transmission often leads to weakness in both the upper and lower limbs. Electrical stimulation was also applied to improve muscle function.

Energy conservation and compensatory strategies were implemented to reduce early fatigue and optimise muscle performance. The patient was taught how to perform daily activities using both upper and lower limbs. Once full range of motion was achieved, muscle-strengthening exercises were introduced using weight cuffs, dumbbells, and TheraBands to target specific muscle groups in both limbs.

Because the patient also had weakened abdominal muscles, exercises such as static curl-ups and bridging were incorporated. As progress continued, endurance training included gradually increasing the duration and intensity of activities like walking and stair climbing. Isometric and isotonic exercises were added to further strengthen the patient's muscles. Later, training on parallel bars was provided, including movements such as hip hiking, leg swinging, and single-leg standing to strengthen the hip flexors, extensors, and lateral rotators.

Previous studies have shown comparable results and improvements, as presented in [Table/Fig-9] [20-24].

Author's name and year of article	Case presentation	Treatment	Outcomes
Tubaki BR and Tarapore S, 2020 [20]	A 60-year-old female patient came with loss of power in both upper and lower limbs, pricking and tingling sensation all over the body	<i>Sarvanga abhyanga</i> , <i>Shirotalam Basti Chikitsa</i> and oral ayurvedic medications for 151 days	Ayurveda management of GBS showed amelioration of motor, sensory, and sphincter deficits and oral medications for the next 151 days showed complete recovery on all deficits.
Chattar VB and Ghungalkar VR, 2020 [21]	A 54 year male came with weakness of lower limb, unable to walk, stand, sit	Massage, shastikasali pinda swedan <i>Baladi kshir</i> , <i>ghrita</i> , <i>majja basti</i> And orally <i>rasakalpa</i>	The muscle power from zero to two in the lower and walking limbs. There is also improvement in sitting, and standing.
Saini S et al., 2022 [22]	A 40-year-old male patient came with immobility of all four limbs (Quadriplegia) without cranial nerve, bowel, bladder, or sensory deficits.	Oleation, <i>Swedan</i> with <i>Parisheka</i> (Douching with medicated decoction), <i>Pindaswedana</i> Poulitice over the body), <i>Matrabasti</i> (medicated oil enema), two courses of Panchakarma at intervals of a 1-year gap for 18 days and 15 days respectively, and medicines for 90 days	improvement in muscle power for all four limbs from 2 to 5 and Hughes Disability scale for GBS from 4 to 0 .
Hiremath M and Dharmannavar GS 2022 [23]	A 62-year-old male patient had complete paralysis of all four limbs	<i>Snehan</i> (oleation) and <i>Shastik Shali Pinda Swedan Kalabasti</i> (medicated enema), <i>Shirodhara</i> (medicated liquid over the forehead) and using various Ayurvedic medications	Improvement in the muscle power from 0 to 5. There was no difficulty post-treatment in deglutition, sitting, standing and walking.
Aswathy YS et al., 2024 [24]	A 46-year-old male patient with complete paralysis of all four limbs (quadriplegia) for 1 month.	<i>Snehana</i> (using <i>candanabalalaksadi tailam</i>), <i>svedana</i> Initially for three days, enema, <i>shirodhara</i> , and administration of a formulation containing <i>svarna</i> (Gold) <i>bhasma</i> , <i>sutshekhara rasa</i>	Remarkable results in the improvement in the muscle power from zero to five of all four limbs
Sharma M et al., 2026	A 48-year-old male patient visited in bedridden condition with both lower limbs immobile, an inability to close his eyes, slurred speech, and tingling sensation throughout the body for 15 days.	<i>Sarvang Snehan</i> with <i>Balashwagandha taila</i> Followed by <i>Shastik shali pinda swedan</i> , <i>Anuvasan Basti: Balashwagandha taila</i> (60 mL), <i>Niruha Basti: Mustadirajyapan</i> (350 mL), <i>Local Dhara</i> with <i>Dashmoola kwath</i> , <i>Nasya</i> with <i>anu tail</i> 8-8 drops both nostril, <i>Shirodhara</i> with <i>Brahmi taila</i> , <i>Akshitarpan</i> with <i>Triphala ghrita</i> for 15 days and Transcutaneous Electrical Nerve Stimulation (TENS), Proprioceptive Neuromuscular Facilitation (PNF) Physiotherapy for 30 days and oral medications for 60 days	The case study demonstrated notable clinical improvement in Barthel Index, Power grading Hughes Functional Grading Scale and reflexes responses after two months of treatment.

[Table/Fig-9]: Comparison between the previous study and present study [20-24].

CONCLUSION(S)

This case study demonstrated notable clinical improvement in the Barthel Index, muscle power grading, Hughes Functional Grading Scale scores, and reflex responses after two months of treatment. Diagnostic assessments and tests also reflected positive changes. Therefore, this case report suggests that Guillain-Barré Syndrome can be effectively managed with Ayurvedic treatment.

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