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Case Study

ROLE OF *PANCHAKARMA* IN THE MANAGEMENT OF GB SYNDROME WITH SPECIAL REFERENCE TO *SARVANGAVATA*

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ABSTRACT

Guillain-barre syndrome is a rare disorder in which the body's immune system attacks nerves and causes damage to the peripheral nerves. The nerve injury often causes pain to precede muscle weakness that ascends rapidly from lower to upper limbs, loss of reflexes, Numbness, and Miller-Fisher syndrome presents with areflexia, and ophthalmoplegia, often with pupillary paralysis. The signs and symptoms of GBS can be correlated with *Sarvangavata* in our classics having symptoms like *Chesta nivrutti, Ruja, Vaksthamba*. In other systems of medicine, the line of treatment includes plasma exchange or intravenous immunoglobulin therapy, ventilatory support gives only symptomatic relief and the chance of re-occurrence will be higher, in such cases the *Panchakarma chikitsa,* plays an important role in correcting pathophysiology. **Methodology:** A single case study of male patient aged 16 years presents with bilateral upper limb weakness, Pain over forearm and legs, bilateral lower limb weakness, difficulty in closing the eyes, difficulty in swallowing, 10kg weight loss in a span of 3 months, the symptoms of GB syndrome was co-related with *Sarvanga vata Vyadhi* initially he was treated with *Kosta Shodhana* with *Nimbamrutadi eranda taila* and *Agnilepa chikitsa* for 7 days considering *Kaphavruta vyana* followed by the principles of *Vatavyadhi chikitsa* including *Sarvanga abhyanga* with *Balashwagandha lakshadi taila* followed by *Shashtika shali pinda sweda, Yoga basti, Anuvasana* with *Ashwagandha ghrita, Niruha* with *Mustadi rajayapana* with *mamsa rasa* (meat soup). **Result:** The patient was assessed with Guillain-Barré Syndrome Disability Scale (Hughes), the total score of the scale was 6. The score before treatment was 4 comes to 2 after treatment, thus we can conclude that *Panchakarma* treatment found a significant approach in managing GB syndrome.

INTRODUCTION

Guillain-Barré syndrome (GBS) is an acute, frequently severe, and fulminant polyradiculo-neuropathy that is autoimmune in nature. [1] Clinical Manifestations GBS manifests as a rapidly evolving areflexic motor paralysis with or without sensory disturbance. The usual pattern is an ascending paralysis that may be first noticed as rubbery legs. Weakness typically evolves over hours to a few days and is frequently accompanied by tingling dysesthesias in the extremities. The hallmark is an acute paralysis evolving over days or weeks with loss of tendon reflexes. [2]

Several subtypes of GBS are recognized, the most common variant is acute inflammatory demyelinating polyneuropathy (AIDP). Additionally, two axonal variants are often clinically severe: acute motor axonal neuropathy (AMAN) and acute motor sensory axonal neuropathy (AMSAN) sub-types. In addition, a range of limited or regional GBS syndromes are also encountered. Notable among these is the Miller-Fisher syndrome (MFS), which presents as rapidly evolving ataxia and areflexia of limbs without weakness, and ophthalmoplegia, often with pupillary paralysis.[3] Here we present a case of Miller-Fisher syndrome, considering *Sarvangavata Vyadhi*, having symptoms like *Chesta nivrutti, Ruja, Vaksthamba* as Ayurvedic correlation. *Avastanusara Chikitsa* (stage

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wise treatment) like *Kosta shodhana* followed by *Sarvanga Agnilepa chikitsa*,[4] was done initially considering *Kaphavrutavyana* (obstruction of *Vata* by kapha) followed by general *Vatavyadhi*[5] line of management like *Abhyanga, Sweda, Basti* with oral medications.

Case Report

Patient Information

A 16-year-old male patient reported to the Out Patient Department on April 29, 2024 with complaints of bilateral upper limb weakness, pain over the forearm and legs, bilateral lower limb weakness, difficulty in closing the eyes, difficulty in swallowing, slurred speech and he also noticed difficulty in writing, mixing food, flexing fingers, shivering while writing or trying to hold any objects [left hand followed by right hand], 10kg weight loss in 3 months, patient is of mixed diet (more of non-vegetarian), having reduced appetite, disturbed sleep, intake of food and physical activity reduced.

Timeline

Table 1: Timeline of the present case

Date	Event	Details
February 10, 2024	The patient developed a cough with fever cough used to aggravate on ingesting food/ liquid articles. He even had episodes of vomiting on vigorous coughing/during swallowing any food articles	For these complaints, he consulted a nearby physician and took medications, and his symptoms got better.
After 15 days on February 26, 2024	He noticed difficulty in writing, mixing food, flexing fingers, shivering while writing, or trying to hold any objects [left hand followed by right hand]	He neglected it
With a gap of 3 days On January 1st,2024	He developed a tingling sensation in his fingers along with pain in his left hand, slurred speech, difficulty in swallowing along with difficulty in completely closing of eyes.	He neglected it
After 20 days On January 21st 2024	He developed weakness and tingling sensation in the b/l upper limb and b/l lower limb associated with pain because of which he used to feel difficult and exhausted on walking even for a little distance.	
March 31, 2024 to April 8, 2024	But when the condition got very severe like being unable to get up from bed or walk without support he informed his parents, they immediately took him to a neurologist in NIMHANS hospital, and was diagnosed with GB Syndrome.	There patient was started on 5 cycles of large-volume plasmapheresis from 31/3/2024 to 8/4/2024. From this, he did not find much improvement in the symptoms.
April 29,2024	The patient was admitted as an in-patient for further management.	The patient was advised to undergo routine laboratory.
From 30/4/2024 to 6/5/2024	*Agnilepa chikitsa*	The patient was assessed before and after the intervention.
On 7/5/2024	*Kosta shodhana with Nimbamrutadi eranda taila.*	
From 8/5/2024 to 15/5/2024	*Sarvanga abhyanga* with *Balashwagandha lakshadi taila* followed by *Shashtikashali pinda sweda, Yoga basti-Anuvasana* with *Ashwagandha ghrita* *Niruha - Mustadi rajayapana Kashaya.*	
On 2/6/2024	Follow-up	The symptoms of the patient were improved.

Clinical Findings

On general examination, the patient was moderately built and poorly nourished, pallor, icterus, cyanosis, clubbing, lymphadenopathy, and edema was absent. On *Ashtasthana pareeksha* (general examination), *Nadi* (pulse) was of *Vata-pitta* predominance, *Mutra* (4-6 t/day) and *Mala* (1-2 t/day) (urine and feaces), *Lipta jihva* (coated tongue), *Deena Swara* (slurred speech) and *Drik vikruta* (difficulty in closing eyes), *Sheeta Sparsha* (cold to touch) and *Madhyama akruti* (medium built). On systemic examination, normal vesicular breath sounds were heard; S1 and S2 heard with no added sounds; per abdominal examination; inspection - scaphoid, umbilicus - centrally placed, auscultation - bowel sounds heard, palpation- soft, no tenderness, percussion - NAD, no organomegaly, normal bowel sounds heard, there was no incontinence of bowel and bladder was observed.

On neurological examination, higher mental function was intact, memory, calculation, abstract thought, spatial perception, visual and body perception were intact, and slurred speech. On cranial examination, all cranial nerves are intact except facial and accessory nerve complaints of incomplete closure of eyes and shrugging of shoulder against gravity with pressure, neck movements with resistance not possible respectively. Visual acuity was normal. Slit-lamp examination of the eye and audiometric results were normal. Table 2 describes the motor examination. Superficial Sensory functions like pain, touch, and temperature sensation were intact, and deep sensory functions with respect to joint and position were within normal limits. Superficial reflexes like abdominal reflex, corneal and conjunctival reflex were normal and Babinski's sign was negative.

Table 2: Motor Examination in the present case

Muscle Bulk		
Upper limb	Right	Left
Biceps	12 cm	13 cm
Lower limb	36 cm	36cm
Mid-thigh		
Muscle Tone		
Upper limb	Right hand	Left hand
	Hypotonia	Hypotonia
Lower limb	Right leg	Left leg
	Hypotonia	Hypotonia
Muscle Power		
Upper limb	Right hand	Left hand
	2/5	2/5
Lower limb	Right leg	Left leg
	2/5	2/5
Deep Tendon Reflex		
	Right	Left
Biceps	Hyporeflexia	Hyporeflexia
Triceps	Hyporeflexia	Hyporeflexia
Supinator	Hyporeflexia	Hyporeflexia
Knee jerk	Hyporeflexia	Hyporeflexia
Ankle jerk	Hyporeflexia	Hyporeflexia

Diagnostic Assessment

The patient was assessed with Guillain-Barré Syndrome Disability Scale (Hughes)

Table 3: Guillain-Barré Syndrome Disability Scale (Hughes)

Healthy	0
Minor symptoms or signs of neuropathy but capable of manual work/capable of running	1
Able to walk without support of a stick (5m across an open space) but incapable of manual work/running	2
Able to walk with a stick, appliance or support (5m across an open space)	3
Confined to bed or chair bound	4
Requiring assisted ventilation (for any part of the day or night)	5
Death	6

Therapeutic Intervention

The clinical presentations diagnosed the case as *Sarvanga vata* and proceeded with the appropriate *Vatavyadhi* management protocol. Table 4 details the complete treatment protocol followed in the present case. Table 5 details *Shamanaushadhis* (Palliative medicine) followed in the present case.

Table 4: Treatment modalities followed in the present case

SN	Treatment	Date	Duration
1	*Agni Lepa Chikitsa*	From 30/4/2024 to 6/4/24	7 days
2	*Kosta shodhana* with *Nimbamrutadi eranda taila*	On 7/5/2024	1 day
3	*Sarvanga Abhyanga* with *Balaashwagandhabalalakshadi taila* followed by *Shashtikashali Pinda sweda*	From 8/5/2024 to 14/5/2024	7 days
4	*Mustadirajayapana Yoga basti* *Anuvasana basti- Ashwagandha ghrita* *Niruha bsasti- Mustadi rajayapana Kashaya*	From 8/5/2024 to 15/5/2024	8 days

Table 5: Details of *Shamanaushadi* prescribed in the present case

Shamanaushadi		
Rasa Rajeshwari Rasa	Dose	1 tablet BD
	Aushadha Sevana Kala	*Adhobhakta* (after food)
Syp *Navashvagandha*	Dose	10ml TID
	Aushadha Sevana Kala	*Adhobhakta* (after food)
	Anupana	*Koshna jala* (warm water)
Neurocare drops	Dose	10 drops Bd
	Aushadha Sevana Kala	*Adhobhakta* (after food)
	Anupana	*Koshna Ksheera* (lukewarm milk)

Follow-up and Outcome

Observations were noted during and after the treatment modalities as shown in Table 6. Before treatment the score on the Guillain-Barré Syndrome Disability Scale (Hughes) was 4 comes to 2 after treatment, along with an increase in muscle bulk, power, and able to walk without support around 400 meters, difficulty in swallowing and closing eyes improved.

Table 6: Observations noted during the treatment modalities

SN	Treatment	Before	After
1	*Agni Lepa*	• Weakness and pain in the B/L lower and upper limbs • Heaviness all over the body, inability to stand and walk without support with • Reduced appetite • Difficulty in closing eyes and swallowing are associated with weight loss.	• Weakness in upper and lower limbs reduced. • Heaviness all over the body reduced. • Able to stand and walk with support. • Appetite slightly improved. • Improved muscle power
2	*Kostashodhana* with *Nimbamrutadi eranda taila*	• Pain in the B/L lower limb and upper limb	• Reduced
3	*Sarvanga abhyanga* with *Balashwagandha lakshadi taila* followed by *Shashtikashali pinda sweda, Yoga basti-Anuvasana* with *Ashwagandha ghrita*- 60ml. *Niruha - Mustadi rajayapana* *Ksheerapaka*- 250ml *Madhu*- 40 ml *Saindhava*- 5 gram *Mustadi yapana kalka*- 10 gram *Mamsarasa*- 70ml	• A patient unable to stand and walk without support • Difficulty in swallowing and closing eyes.	• Able to walk 400 meters without support • Difficulty in swallowing and closing eyes improved.

4	Follow up		
	Power	• B/L UL = 2/5 • B/L LL = 2/5	• B/L – UL = 4/5 B/L – LL = 4/5
	Bulk	• RT – LL = 36 cm • LT – LL = 36 cm • RT – UL = 12 cm • LT-- UL =13 cm	• RT-LL=38cm • LT-LL= 38cm • RT-UL=14cm • LT-UL= 15cm

DISCUSSION

The rationality behind each treatment protocol is depicted below.

i. *Agnilepa Chikitsa*

In certain regions of Karnataka, a traditional remedy called *Agnilepa* is used to treat ailments like neuromuscular disorders one among them is GBS. *Agnilepa* can be considered as *Alepa*.[6] The use of a thick medicated paste made from medicinal drugs, possesses the qualities of *Suptihara karma*, *Vedanasthapaka, Shothahara,* and *Stambhahara* (Reduces numbness, discomfort, stiffness, and edema). *Agnilepa* is classified as an *Upanaha sweda* in its *Niragni* form (heat-free steam without direct touch), as we know in the pathology of GBS the nerve damage is mainly because of free radicles, these are highly reactive, unstable molecules causing oxidative stress, which compromise the blood-nerve barrier, allowing toxins to enter in-turn leading to demyelination of nerve. So these free radicals can be compared to *Ama* in our classics so we adopt *Agnilepa Chikitsa* in this case, it functions as *Vatakaphahara* and *Aamapachaka* by its *Rooksha*, *Teekshna*, and *Ushna guna*, eliminating *Avarana* and *Stabdata.* The main ingredients like turmeric, garlic, cinamon, mustard etc will have chief constituents like curcuminoids, allicin, cinnamaldehyde and allyl isothiocynate etc respectively these phytoconstituents work synergistically to reduce free radicals in-turn decreases oxidative stress and promote nerve regeneration and protection. It can be understood as *Amapachana* effect in our classics, resulting in alleviation of heaviness, numbness and weakness in the present case.

ii. *Sarvanga abhyanga* with *Bala Ashwagandhadi taila*

One of *Sarvanga Vata Chikitsa sutras* is *Abhyanga*. *Abhyanga* described by S*ushruta* as *Dhatupushtijanana,* emphasizing its *Brumhana* activity which is mainly needed in *Vatavyadhi.* It also balances the *Doshas* like *Vata* and *Kapha*.[7] In *Dhatu kshayajanya Vata vikaras*, the *Bala Ashwagandhadi taila* mentioned by *Sahasrayoga* is very effective because it acts as *Pushtikaram param*,[8] which denotes the *Brumhana* activity, along with *Tridhoshahara*, *Asthiposhaka, Balya, Kshatahara*. and also by doing *Abhyanga* it acts *Vatahara, Shramahara, Twakprasadana, Twakdrudeekarana* which is much needed in *Vatavyadhi*.[9] the ingredients like *Ashwagandha, Bala, Laksha* etc will have phytoconstituents like withanoids, alkaloids, saponins, flavonoids, resin glycosides these collectively contribute to modulate immune response, anti-inflammatory and enhances muscle function and strength, so with the help of both procedure and drug effect the power was increased in this case.

iii. *Shashtikshali pinda sweda*

In the case of *Vatavyadhi* the main line of treatment is *Snehana, Swedana, Basti* and *Acharya Chakradatta* gives special importance to the *Bruhmana* line of management in all *Vatavyadhi*,[10] which is achieved here by *Shashtikshali pinda sweda*, is a form of *Snigdha Sankara sweda.* It is mainly indicated in *Ghora anila vyadhi, Sthambha,* and *Shoola pradhana vyadhi*.[11] Due to its *Madhura, Snigdha guna* it acts as *balya* and *Bruhmana, Vatahara, Mamsa-asthi pushtikara.* With the help *Swedana* along with *Bruhmana*, we can achieve *Agnideepana*, *Mardavata, Twakprasadana, Bhakta Shraddha, Srotonirmalatva*[12]. In modern point of view the ingredients like milk, *Shashtikashali* contains vitamins like Vit D, B12, B6, B9, B2 all these vitamins plays a important role in nerve health, among them Vit B12 is crucial for repairing the nerve damage, in-turn supporting neurotransmitter synthesis aiding in myelin synthesis and repair. And the *Balamoola* contains the phytoconstituents like flavonoids, saponins, steroids reduces inflammation and enhances muscle tone by reducing weakness. when we come to a procedural effect by giving steam there will be localized increase in heat responsible for vasodialation in-turn increases blood flow promoting nutrient delivery to affected nerves by removing toxins in turn reduces muscle spasms, pain and stiffness in this case.

IV. *Mustadi yapana basti*

As we know *Basti* as *Ardha chikitsa*, the main treatment protocol to treat *Vata* is *Basti* which does *Vatanulomana* gives strength and in the benefits of *Mustadi yapana basti Acharya Sushrutha* mentions that it act as *Balya, Shoolanashana* etc,[13] it gives effect of both *Niruha* and *Anuvasana* and also the ingredients like honey and rock salt by its *Yogavahi* and *Sukshma* property it carries the drug at the molecular level

through the micro channels and breaks the bond between morbid materials and helps in easy expulsion of morbid materials. In modern point of view rock salt contains magnesium, potassium, calcium and trace amount of minerals like iron, zinc, copper responsible for muscle relaxation, muscle strength and muscle function and immune modulation respectively and honey contains naringenin, gallic acid, caffeic acid acts anti-inflammatory and it also contains proline helps in collagen synthesis helps to repair nerve tissue damage and *Ksheera, Mamsarasa* rich in amino acids which are building blocks for muscle protein synthesis in turn support muscle hypertrophy and also contains collagen and gelatin enhances muscle strength and flexibility. *Musta* and *Shatapushpa* has alkaloids and volatile oils acts as anti-inflammatory and anti-oxidant and *Sneha* used here is *Ashwagandha ghritha,*[14] in the *Phalashruti* they have mentioned it act as *Vataghna, Vrushya, Mamsavivardhana* which is main concern here, in modern view it has phytoconstituents like withanoids, alkaloids, saponins, flavonoids, resin glycosides these collectively contribute to modulate immune response, anti-inflammatory and enhances muscle function and strength, so with the help of both procedure and drug effect the muscle bulk was increased in this case.

CONCLUSION

In Ayurveda, Guillain-Barré syndrome is considered a disorder of the nervous system, related to an imbalance of *Vata dosha*. The condition is "*Avrita Vata*" or "*Vata Vyadhi*". The mortality rate of the disease is higher when respiratory failure and pulmonary infection are associated. The treatment is only symptomatic In GBS where there is no cure as per modern science, can be treated according to the symptoms. In Ayurveda, especially with the *Panchakarma chikitsa*, Ayurveda aims to manage GBS holistically, promoting overall health and well-being, rather than treating symptoms. By addressing the underlying imbalances, Ayurveda seeks to support the body's natural healing processes and improve the quality of life for individuals with GBS.

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