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An Integrated Approach To Guillain-Barre-Syndrome With Special Reference To *Sarvangavata*: A Case Study

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Abstract:

Guillain-barre-syndrome is the most common type of acute polyneuropathy. It is a rare disorder and it is an acute diffuse post infective disease involving spinal roots, peripheral nerves and occasionally cranial nerves causing generalized paralysis. The nerve injury causes pain to precede muscle weakness that ascends rapidly from lower to upper limbs, areflexia, numbness, ophthalmoplegia, often with pupillary paralysis. This present case is the effectiveness of *Ayurvedic Panchakarma* Treatment along with the intravenous immunoglobulins in the management of Guillain-barre-syndrome. The signs and symptoms of GBS can be correlated with *Sarvangavata* in our *Ayurveda* classics having the symptoms like *Ruja, Cheshta Nivrutti, Vaksthambha*. The line of treatment in the other medicinal systems includes Plasmapharesis or intravenous immunoglobulin therapy or ventilatory support gives only symptomatic relief and the chances of re-occurrence are more, so in such cases the *Ayurvedic Panchakarma* plyas an important role. A 17 year old male patient visited to Sane Guruji Aarogya Kendra OPD with complaining of severe dysphagia, dysarthria, bilateral upper limbs weakness, bilateral leg pain since 3 days. He was diagnosed with Guillain-barre syndrome. GBS can be correlated with *Sarvangavata* by various symptoms. The patient was admitted in Sane Guruji Aarogya Kendra ICU and managed with *Sarvanga Abhyanga* (oleation therapy), *Sarvanga Swedana* (Steam therapy), *Basti* (Enema), *Nasya* (Nasal administrations of *Ayurvedic* drugs) along with Intravenous immunoglobulins. He got relief in all clinical features in 10 days. The collected data emphasize the potential of *Ayurveda* interventions in GBS. Remarkable results were observed in the form of improvement in muscle power with speech improvement. There was no difficulty in deglutition, upper limb movements, standing, walking after treatment. And now patient is almost near to normal.

Key words: *Santarpana chikitsa, Abhyanga, Swedana, Basti, Mustadi Yapana, Nasya.*

Introduction:

Guillain-barre syndrome (GBS) is an acute, frequently severe, and fulminant polyradiculoneuropathy that is autoimmune in nature [1]. Males are at slightly higher risk for GBS than females. GBS manifests as a rapidly evolving areflexic motor paralysis with or without sensory disturbance. The hallmark is an acute paralysis evolving over days or weeks with loss of tendon reflexes [2]. The usual pattern is an ascending paralysis that may be first noticed as rubbery legs. Weakness typically evolves over hours to few days. The legs are usually more affected than the arms, and facial diapareis is present in 50% of cases. The lower cranial nerves are also frequently involved causing bulbar weakness. Mostly sensory abnormalities are not seen. Bladder dysfunction may occur in severe cases but it is usually transient. Autonomic involvement is common and may occur in the patients whose GBS is mild. In CSF study CSF protein is raised. Diagnosis is done by EMG-NCV. Supportive treatment is given with IV immunoglobulin[3].

As per Ayurveda, GBS can be correlated with *Sarvangavat Vyadhi* (Vata disorder affecting all parts of the body)[4]. *Sarvangavata*, a condition also marked by motor deficits, speech disturbances, and pricking pain that can extend from a single limb to the entire body. The treatment of *Sarvangavata* is contingent upon the state of *Vatadosha*. The vitiation of *Vata*, termed *Vatadushti*, can occur primarily from an increase in *Vatadosha* alone or conjunction with other *Doshas* or *Dhatus*. This vitiation is classified into two states: *Sama*, where *Vata* is associated with *Ama* (toxins), and *Nirama*, where it is not associated with *Ama*. Based on these assessments, the therapeutic approach is tailored accordingly. Treatments may involve *Santarpana*, a nourishing strategy aimed at strengthening the body and restoring balance, or *Apatarpana*, which focuses on depleting excess *Doshas* through purification and elimination processes. This differentiation in treatment modalities underscores the personalized nature of *Ayurvedic* medicine, aiming to address the specific pathophysiological conditions present in each individual. GBS is considered as *Apatarpanjanya Vatvyadhi* , therefore the choice of treatment is *Santarpana* (The nourishing treatment). *Santarpana* did in the form of *Balya* and *Brimhana Chikitsa.* Patient is treated with *Sarvanga Abhyanga, Sarvanga Swedana, Basti, and Nasya Karma.*

Case Report:

A 17 year old male patient reported to Sane Guruji Aarogya Kendra's OPD 1, in conscious and oriented state with complaining of severe dysphagia, dysarthria, bilateral upper limb weakness, bilateral lower limb pain, nasal twang, slurred speech, difficulty in writing and mixing food since 3 days. Patient has reduced sleep, decreased appetite and disturbed sleep. Patient was having these symptoms since 3 days, on 3rd day of illness he came to our hospital for admitted in Sane Guruji Aarogya Kendra's ICU for further management and investigations.

Past History:

No H/O DM / HTN/ Asthma /Tuberculosis

No H/O alcohol consumption or drug abuse

No any known food or drug allergy

Clinical Findings:

Ashtavidha Pariksha

Nadi – Vata-Pittaj	*Shabda -Aspastha*
Mala –Samyak Malpravrutti	*Sparsha -Samshitoshna*
Mutra –Samyak Mutrapravrutti	*Drika –Prakrut, Upnetram nasti*
Jivha -Niraam	*Akruti –Madhyama*

Neurological Examination:

On neurological examination higher mental function was normal, memory, visual and body perception, calculations, spatial perceptions were intact. He had slurred speech. He had severe dysphagia, dysarthria. On cranial nerve examination, all cranial nerves are intact except facial nerve c/o incomplete closure of eyes. Visual aucity was normal. Slit lamp examination & audiometric results were normal. 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. The table below describes Motor examination of present case.

Motor Examination:

	Muscle Tone	
Upper limb	Right hand	Left Hand
	Hypotonia	Hypotonia
Lower limb	Right leg	Left leg
	Tonus	Tonus
	Muscle Power	
Upper limb	Right hand	Left hand
	3/5	3/5
Lower limb	5/5	5/5
	Deep Tendon Reflexes	
	Right	Left
Biceps	Hyporeflexia	Hyporeflexia
Triceps	Hyporeflexia	Hyporeflexia
Supinator	Hyporeflexia	Hyporeflexia
Knee jerk	Normal	Normal
Ankle jerk	Normal	Normal

Investigations and Diagnosis:

Hb -12

RBC - 4.7

WBC - 11.7

PLT - 246

MCV -75.8

Urine R - N

BUL - 50

Sr. Creat - 0.6

CRP - 16

HIV I II – Negative

Sr. Na -141

Sr. K - 4.07

Calcium – 1.16

Total bili.- 1

Direct bili. – 0.4

Indirect bili. – 1.02

SGOT – 51

SGPT – 31

Alkaline phosphatase – 47.8

Nerve conduction Study - Normal

CSF Study

Microscopic examination

Total cell count – 1

RBC count – 4

Differential count – All lymphocytes

Gram Stain – No organism seen

ZN Stain – No AFB seen

Chemical examination

Protein – **59 mg/dl (Raised)** (Normal range - 15-45)

Sugar – 54 (Normal range – 40-70)

MRI Brain – NAD

2D- echo – Normal

USG A+P – Normal

Neurologist's opinion taken – Final Diagnosis GBS

Treatment: Therapeutic Intervention & Assessment

***Ayurvedic* Management:**

Patient is treated with *Sarvanga Abhyanga* with *Bala Tailam* followed by *Sarvanga Swedana* with *Bashpa Sweda*, *Mustadi Yapana Basti* (*Ksheerpaka* 250ml, *Madhu* 40ml, *Mansarasa*- 70ml, *Mustadi Yapana Kalka* 10gm, *Saindhava*- 5gm), *Nasya* with *Vacha Tailam* 4 drops in each nostrils, for 10 days.

Also,

Inj Immunoglobulin 20gm /Day for 5 Days

Inj MPS 1gm IV OD in 100 ml NS over 1 hr for 5 Days

Tab Gravitor 60mg ½ TDS

Syp Vibraset 10ml BD

Nebulization with Glycohale 6 hrly.

Observations noted during the treatment modalities:

Before	After
• Bilateral upper limb weakness • Bilateral lower limb pain • Severe Dysphagia • Dysarthria • Slurred speech • Nasal twang • Difficulty in writing • Difficulty in mixing food • Muscle power RT LT UL 3/5 3/5 LL 5/5 5/5	• Bilateral upper limb weakness reduced ,improved muscle power • Pain reduced • Dysphagia improved • Dysarthria improved • Improvement in slurred speech • Reduced • Improved • Improved • Muscle power RT LT UL 5/5 5/5 LL 5/5 5/5

Discussion:

Sarvanga Abhyanga* with *Bala Tailam

Abhyanga is described as one of the *chikitsa* of *Sarvangavata*. *Aacharya Sushruta* describes *Abhyanga* as *Dhatupushtijanana*, which emphasizes its *Bruhana* activity viz., core treatment in *Vatavyadhi*. It also balances *Kapha* and *Vata*[5]. It is mentioned in *Sahasrayoga* that *Bala Tailam* is very effective in *Dhatukshayajanya Vata Vikaras* because it is act as *Pushtikaram Param*[6], which denotes *Brihana* activity along with *Tridoshahara*, *Asthiposhaka, Balya, Kshatahara*. *Abhyanga* acts as *Vatahara, Shramahara, Twakaprasadana*, viz., much needed in *Vatavyadhi*[7]. The ingredients in *Bala Tailam* acts as anti-inflammatory and enhances muscle function and strength, so with the help of this proceure and drug effect the power was increased in this case.

Sarvanga Swedana* with *Bashpa Swed

Bashpa swedana using *Vatahara kashaya* helps in *Vatahara* action and also helps in reducing the stiffness of the body[8]. When we come to the procedural effect by giving steam there will be localized increase in heat responsible for vasodilation in turn increasing blood flow which promotes nutrient delivery to the affected nerves in turn reduces muscle spasm, stiffness & pain in this case.

Mustadi Yapana Basti

In *Ayurveda Basti* is termed as the *Ardha Chikitsa*[9], the very main treatment to treat *Vata Dosha* is *Basti*. *Basti* causes *Vatanulomana*. In *Sushruta Samhita Aacharya Sushruta* has mentioned that *Mustadi yapana basti* act as *Balya, Shoolanashana* etc[10], 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*[11], 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.

Nasya* with *Vacha Tailam

Nasya helps in elimination of vitiated *Doshas* and improving circulation. *Nasya Karma* done with *Vacha Tailam*, 4 drops in each nostrils. *Nasya*, medicated oil or powder is administered through the nostrils. In *Ashtng Hridaya* it is mentioned that "*Nasa Hi Shirasodwaram*"[12]. Hence the drug which is administered through the nostrils goes to *Shringataka Marma* and spread throughout the *Murdha* (head), *Shrotra* (ear), *Netra* (eyes) via their *Siras* and eliminates the vitiated *Doshas* from the *Urdhwajatrugat Pradesh* and nourishes *Shira*[13]. In this case we used *Nasya* with *Vacha Tailam*.

Vacha:(Acorus calamus Linn.)[14]
Family:(Acoraceae)
Rasa: Katu,Tikta
Guna: Laghu, Tikshna
Virya: Ushna
Vipaka: Katu
Karma:Vataghna, Kaphahara

Vacha Tailam having the properties of *Vataghna* and *Kaphaghna* properties[15].

Conclusion

GBS is a severe acute paralytic polyneuropathy with rapid progression ususally occurring post infections which can be correlated to *Vatavyadhi* of Ayurveda. The condition of *Avrutta Vata*. In this case GBS is correlated to *Apatarpanjanya Vatavyadhi* hence*, Vatahara Chikitsa* and *Santarpanajanya Chikitsa* were given to the patient for 10 days and patient is significantly improved. The mortality rate of the disease is higher when 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 of the patient , *Ayurveda* seeks to support the body's natural healing processes and improve the quality of life for individuals with GBS.

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