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MANAGEMENT OF GUILLAIN BARRE SYNDROME THROUGH AYURVEDA – A CASE STUDY.

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ABSTRACT:

Guillain Barre Syndrome is acute paralysis neuropathy. It is evolving reflexes motor paralysis with or without sensory disturbances. Characterised by rapidly developing motor weakness. It is autoimmune in nature and trigger by preceding infections. A 47year female patient was came in OPD of kayachikitsa in our institute with complaining of generalised body weakness, tingling sensation in both hands and legs with bilateral exaggerated reflexes and decrease muscle tone and power. Patient had history of Guillain Barre Syndrome 4 years ago. For this she had taken allopathic medicine like Intra Venous Immunoglobulin in government hospital. Patient started complaint about same symptoms, for this she started Ayurvedic treatment. In Ayurveda Guillain Barre Syndrome is not explain by name hence it is taken under the name of vata vyadhi like sarvangagat vata. While thoroughly understanding Guillain Barre Syndrome through modern as well as Ayurvedic aspect Guillain Barre Syndrome considered as sarvangagata vata vyadhi and managed by Ayurvedic treatment on the basis of basic principles, and found better improvement in this case. Due to Ayurvedic treatment and internal medicine with 15 days with follows up treatment for 1 months gives significant relief in all motor and sensory reflex with increase muscle tone and power.

KEYWORDS: *Guillain Barre Syndrome, Sarvangata vata.*

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INTRODUCTION:

Guillain Barre Syndrome is one of the most common severe acute paralytic neuropathies. It is heterogeneous rapidly progressive disease. Around 20-30% of patient may be associated with life threatening respiratory failures. Prevalence of Guillain Barre Syndrome is 2.7 per 1,00,000 per year. Prevalence is more in men than women and has seasonal fluctuations.[1] It is rapidly evolving reflexes motor paralysis with or without sensory disturbance. The usual patterns are 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 diathesis in the extremities. The legs are usually more affected than the arm and facial diaparesis is present 50% of affected individuals.[2] Rapidly progressive ascending muscle weakness, poorly delimited distal sensory disorder in the limbs, Absent or reduced deep tendon reflexes.[3] The disease is usually triggered by an infection. In modern science Intubation, plasmapheresis, intravenous immunoglobulin & Glucocorticoid are line of treatment for Guillain Barre Syndrome.[4] The treatment is expensive and effective only when given within 4 weeks. Administration of IVIG had adverse effect like liver inflammation and kidney failure may occure.[5] Many diseases in this era not clearly mentioned in *Ayurveda Samhitas* but managed by *Ayurveda* through basic principles given in our classical text. *Acharya Charak* stated that nomenclature is not necessary to treat the disease. Disease can be managed by its *dosha*, *dushya*, *samprapti vighatana*, *vyadhi awastha*, etc.[6] Guillain Barre Syndrome is one of them. Guillain Barre Syndrome not clearly stated in classical text but symptoms of *sarvangagata vata.*[7] *vyadhi* closely co related with Guillain Barre Syndrome. *Cheshta nivruti* (Absent or reduced deep tendon reflexes.) *Ruja* (Rapidally progressive ascending muscle weakness) *Vakasthambha* So, all above fact of Guillain Barre Syndrome consider as *sarvangagata vata vyadhi* and managed with the help of its *chikitsa sutra* and *samanya chikitsa siddhanta* of *vata vyadhi chikitsa* and found better result.

Case Report

A 47year old female patient (OPD no. 21172) 8/3/23 presented with complete generalized weaknesses, tingling sensation in both hands and legs, backache for 4 years. She was admitted in hospital for 1 months. Nerve conduction study was done in which e/o generalized symmetrical pure motor, axonal lower limb + upper limb peripheral neuropathy. Diagnosed with Axonal variant of Guillain Barre Syndrome.

Treatment taken: Inj. IVIG 5 ml QID for 4 days. Tab. Neurobian forte 1-1 and Tab. Pan 40 1 OD. For 1 month.

She has no previous history of Diabetes, Hypertension, Asthma, Tuberculosis, any major surgical procedure.

Past History:

Tubal ligation 25 years ago

Pelvic inflammatory disease 6 year ago

Deviated Nasal Septum (left) 5 year ago for this homeopathic treatment taken.

Patience had tingling sensation and muscle weakness in both hands for which she had treatment in private hospital Nanded. In civil hospital after nerve conduction study the Guillain Barre Syndrome was diagnosed for which she taken treatment for 12 days. And an internal medication for 1 month. For reoccurring problems, the patient visited our facility.

Examination on Admissions:

GENERAL EXAMINATION

The patient was afebrile

Pulse -76/ min

BP -130/90 mm of hg

Weight- 55 kg

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General condition –moderate

PHYSICAL EXAMINATION

There was diffuse weakness of all four extremities distal greater than proximal and involving lower limb more than upper limb. Muscle tone was normal and vibration sensation was normal, muscle reflexes (biceps and triceps was exaggerated in B/L) other was normal.

SYSTEMIC EXAMINATION

In s/e findings of respiratory and cardiovascular system were within normal limits. abdomen was mildly distended; non-tender and bowel sounds were present. Patient was concious and well oriented and pupillary reaction to light was normal.

TABLE NO. 1 ON EXAMINATION DURING ADMISSION:

Sr no.	**Muscle power**	**Rt U/L**	**Lt U/L**
1	Elbow	4 +/5	4+/5
2	Wrist	4+/5	4+/5
	Palmer grip	Moderate	Moderate
	Pincer grip	Moderate	Moderate
	Hip	Adduction – 4/5	Adduction -4/5
		Abduction -4/5	Adduction -4/5
		Flexion -4/5	Flexion -4/5
		Extension -4/5	Extension -4/5
	Knee	Flexion -5/5	Flexion -5/5
		Extention-5/5	Extention-5/5
	Ankle	Plantar flexion-5/5	Plantar flexion-5/5
		Dorsiflexion -5/5	Dorsiflexion -5/5
	Deep reflexes	Rt U/L	Lt U/L
	Biceps	Exaggerated	Exaggerated
	Triceps	Exaggerated	Exaggerated
	Supinator	Normal	Normal
		Rt L/L	Lt L/L
	Knee jerk	Exaggerated	Exaggerated
	Ankle jerk	Exaggerated	Exaggerated
	Babinski sign	Positive	positive
Sr no.	**Muscle tone**	**Rt**	**Lt**
1	Hand	Normal	Normal
2	Leg	Normal	Normal
	Muscle wasting	Absent	Absent
	Gait and co-ordination	-	-

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TABLE NO. 2 HUGES GBS DISABILITY SCALE [8]

Sr No.	Index
0	Healthy
1	Minor symptoms or signs of neuropathy but capable of manual work /capable of running
2	Able to walk without support of sick (5 cm across an open space) but incapable to manual work / running
3	Able to walk with a stick: appliance or support (5 cm across an open space)
4	Confined to bed or chair bound
5	Requiring assisted ventilation (for any part of the day or night)
6	Death

Score: 2

TABLE NO. 3 *ROGI ROGAPARIKSHA*:

ASTAVIDHA PARIKSHA:

1	*Nadi*	*78/min*
2	*Mala*	*Asamyak*
3	*Mutra*	*Samyak*
4	*Jivha*	*Sama*
5	*Shabda*	*Spashta*
6	*Sparsh*	*Anushnasheeth*
7	*Druk*	*Spashta*
8	*Akruti*	*Madhyam*

TABLE NO. 4 *DASHAVIDHA PAREKSHA:*

Sr. no.	*Prakiti*	*Vata kapha*
1	*Sara*	*Madhyam*
2	*Samhanana*	*Madhyam*
3	*Pramana*	*Madhyam*
4	*Saatmya*	*Pravara*
5	*Satva*	*Pravara*
6	*Ahar Shakti*	*Madhyam*
7	*Abhyavaharana Shakti*	*Madhyam*
8	*Jarana Shakti*	*Madhyam*
9	*Vyayama Shakti*	*Madhyam*
10	Vaya	Tarun

VIKRATASROTAS *PARIKSHA*:

Mamsavahasrotovikriti was presented as *ubhayahastapada daubalya* (weakness over all four limbs) *Rasavahasrotovikriti* was presented as *panduta*, *Gaurav*,*tandra*,*aruchi*, *tama*.

HETU: atiasana (continuos setting position), parushit ahara katurasaadhikya, ratri jagrana,atichinta,ativichar

DOSHA: vata,kapha Pradhan tridosha

DUSHYA: Rasa,rakta ,mamnsa,meda

DESHA: sadharana

BALA: madhyam

KAALA: Vasant

PRAKRITI: vatakapha

NIDANA PANCHAKA:

Nidana: atiasana (continuos setting position), parushit ahara, katurasaadhikya, ratri jagrana,atichinta,ativichar

Purvroopa: generalised weakness, muscle weakness

Roopa: tingling sensation in both hands and legs,backache

Samprapti: On considering above references we plan this case as a sarvangagata vata through Ayurveda.

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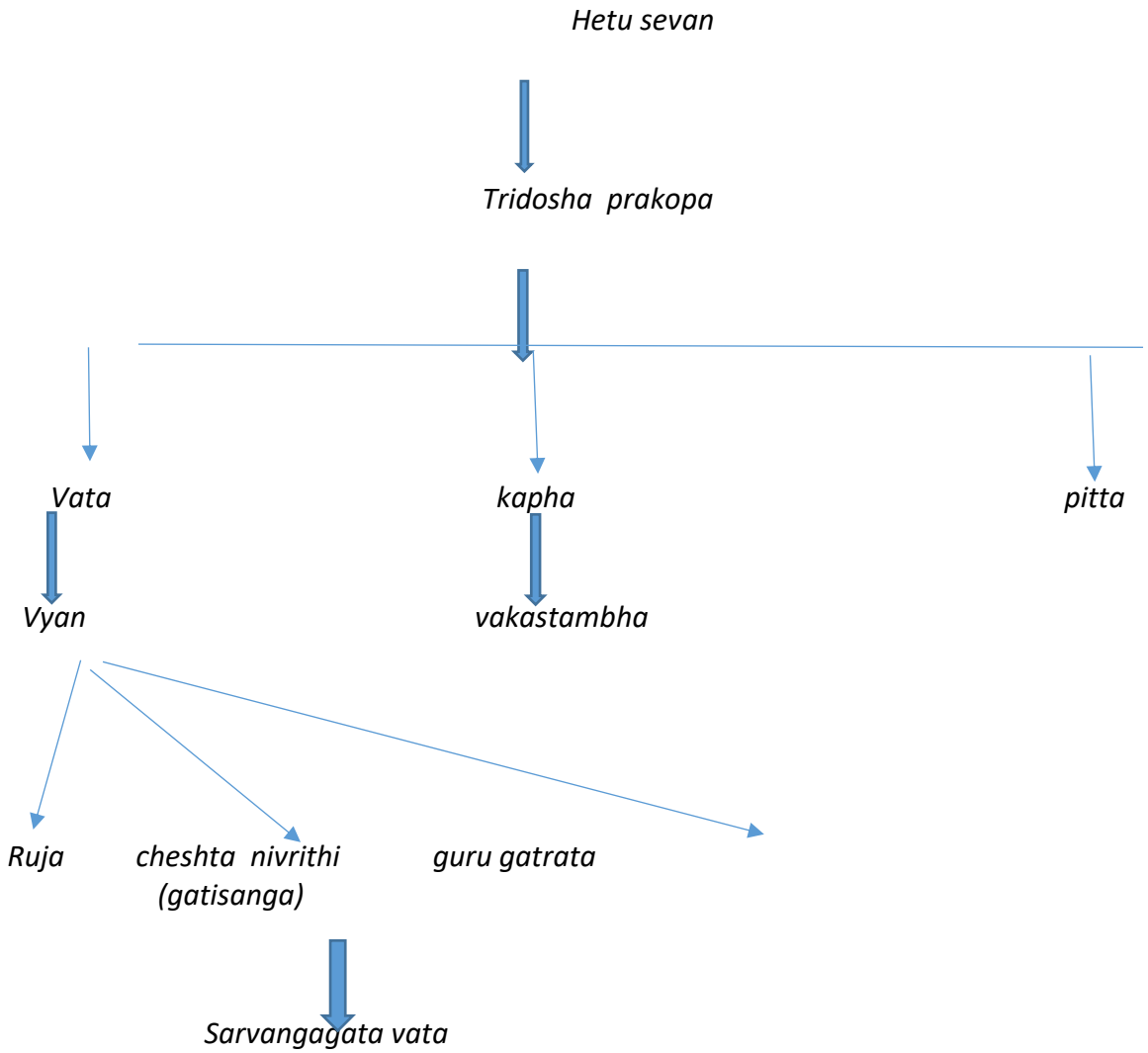

INVESTIGATION:

TABLE NO. 5 All routine investigation were done

HB	10.7	T. BILI	0.40
WBC	7.04	A/P	59
PLT	278	A/B	3.55
ESR	60	TP	5.60
BSL ®	93	SR.CHL	131
BLOOD UREA	16	HDL	36
SR CREATININE	0.60	LDL	88
URINE	N	TG	57

NERVE CONDUCTION STUDY:

There is e/o generalised symmetrical pure motor, axonal lower limb, upper limb peripheral neuropathy. (Axonal variant of GBS)

HbA1C 4.9 (abnormal hb variant)

ANA /DNA negative

HIV / HBsAg negative

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TABLE NO. 6 TREATMENT PROTOCOL:

Sr no.	*Shodhana*	Region	Duration
1	*Shalishaskti pindasweda*	Both hands, legs	15 days
2	*Yogabasti Niruha with dashmool kwath 760 ml., Anuvasana with tila taila 120 ml*		15 days
3	*Nasya with anutaila 2 – 2 drops* *Panchendriya 2-2 drops*		7 days 7 days

TABLE NO. 7 INTERNAL MEDICINE:

1	*Bruhatvatchintamani 10 gm +ashwagandha churna 50 gm + guduchi satva 10 gm*	Bid	14 days
2	*Agastiprash 5 gm*	Bid	15 days
3	*Haritaki churna 5 gm*	HS	15 days

TABLE NO. 8 EXAMINATION AFTER TREATMENT:

Sr no.	**Muscle power**	**Rt U/L**	**Lt U/L**
1	Elbow	5/5	5/5
2	Wrist	5/5	5/5
	Palmer grip	Moderate	Moderate
	Pincer grip	Moderate	Moderate
	Hip	Adduction – 5/5	Adduction -5/5
		Abduction -5/5	Abduction -5/5
		Flexion -5/5	Flexion -5/5
		Extension -5/5	Extension -5/5
	Knee	Flexion -5/5	Flexion -5/5
		Extention-5/5	Extention-5/5
	Ankle	Plantar flexion-5/5	Plantar flexion-5/5
		Dorsiflexion -5/5	Dorsiflexion -5/5
	Deep reflexes	Rt U/L	Lt U/L
	Biceps	Mild Exaggerated	Mild Exaggerated
	Triceps	Mild Exaggerated	Mild Exaggerated
	Supinator	Normal	Normal
		Rt L/L	Lt L/L
	Knee jerk	Mild Exaggerated	Mild Exaggerated
	Ankle jerk	Mild Exaggerated	Mild Exaggerated
	Babinski sign	Positive	Positive
Sr no.	**Muscle tone**	**Rt**	**Lt**
1	Hand	Normal	Normal
2	Leg	Normal	Normal
	Muscle wasting	Absent	Absent
	Gait and co-ordination	-	-

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TABLE NO. 9 HUGES GBS DISABILITY SCALE:

Sr No.	Index
0	Healthy
1	Minor symptoms or signs of neuropathy but capable of manual work /capable of running
2	Able to walk without support of sick (5 cm across an open space) but incapable to manual work / running
3	Able to walk with a stick: appliance or support (5 cm across an open space)
4	Confined to bed or chair bound
5	Requiring assisted ventilation (for any part of the day or night)
6	Death

Score: 0

TABLE NO. 10 RESULT:

Sr. No.	Examination	BT	AT
1	Muscle power	4/5	5/5
2	Muscle tone	Normal	Normal
3	Reflexes	Exaggerated	Normal
4	Bp cuff measurements	80 mmof hg	200 mm of hg
5	Huges score	2	0

TABLE NO. 11 INVESTIGATION:

SR no	Investigation	BT	AT
1	HB	10.7	10
2	WBC	7.04	8.33
3	PLT	278	278
4	ESR	60	50
5	BSL (r)	93	99
6	T Bili	0.40	0.50
7	A/P	59	55
8	A/B	3.55	3.00
9	Tp	5.60	5.50
10	HDL	36	55
11	LDL	88	70
12	Sr. Chl	131	130
13	Sr. Creatinine	0.60	0.40
14	Blood urea	16	14
15	TG	57	55
16	Urine	N	N

DISCUSSION:

In the demyelinating forms of GBS, the basis for flaccid paralysis and sensory disturbance is conduction block. First attack on Schwann cell surface, widespread myelin damage, macrophage activation, and lymphocytic infiltration. If the axonal connections remain intact the recovery will be faster as rapidly as

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remyelination occurs.[9] Circumstantial evidences suggests that all GBS results from immune responses to nonself antigens (infectious agents /vaccines). By analysing the vyadhivrutanta (history of illness), *nidana* (etiology), *lakshana* (symptoms) presented here we have taken in consideration of *Avaranajanya vatavyadhisamprapti* and finally arrived a final diagnosis as *sarvangavata* and started treating this particular condition. GB syndrome done at Government Ayurvedic Hospital, Nanded where managed with *vatahara* as well as *sarvangata vata* for which medicine selected was *shashtikashalipindasweda* with *balamula*,*ashwagandha churna* and *shatavarichurna*. *Yogabasti krama* along with *niruha* with *dashmool kwath*, *anuvasana* with *tilataila*. *Nasya* with *anutaila* also with *panchendriya vardhana tail*. *Manyabasti* along with *tilataila*.

Bruhatvatchintamani 10 gm with *Ashwagandha churna* 50 gm with *Guduchi satva* 10 gm combination given for 14 days in BID.

Agastiprash 5 gm in bid for 15 days

Haritaki churna 5 gm hs for 15 days given

DISCUSSION ON TREATMENT:

SHODHANA

Considering the *vata vyadhi* and *balakshyaya shastiksshalipindasweda* with all the ingredients of the *shashtikashalipindasweda* such as *kshira* (milk), *shashtikashali (*type of red rice with 60 days old), and *bala moola* possess *santarpana* (nourishing) qualities with *pritwi* and *apamahabhuta* and is indicated for *balya, bruhmna,* and strengthening *dhatus* and *vata* pacification *Vata* disease is cause due to the reduction in its *chalaguna* causing inability to transmit nerve impulses, this helps in opening up of blocks in nerve conduction and facilitates remyelinating of nerves; thereby helps to transmit nerve impulses. Taking *pakwashya* as *moola sthana* [10] for the *vatavyadhi* we have selected *yogabasti* along with *niruha basti* contents *dashmool kwath* and *anuvasna* content *tilataila* for 8 days, which played a major role in improving the condition. The active principals of drugs used in *basti* gets absorbed in systemic circulation by passing hepatic circulation. The organ is inter connected at molecular level, each molecule of the body is connected with another molecule of the body by direct or indirect way. "*Nasa hi shirsodwara* "[11]*Shodhna Nasya* along with *anutaila* for 7 days, followed by *bruhana nasya* with *panchendriya vardhana taila* for 7 days. shows marked improvement in disease condition.

Probable mode of action:

1	*Pindasweda*	Hot fomentation causes dilatation of the vessels and induce hyperaemia. Due to fomentation capillary pressure increases and decreases the congestion of internal organs, sweating, eliminate the toxins and tissue relaxes, this results in decrease spasm and pain. Warming of the body has been shown to exhibit sedative effect via sensory nerve endings .it also promotes vasodilation and relieves muscular spasm related to tonic muscle contraction and pain.[12]
2	*Yogabasti*	The rectum has rich blood supply and *basti* drugs can easily cross the rectal mucosa. Short chain fatty acids can be absorbed into the blood they are more water soluble and allow direct diffusion from epithelial cells into capillary blood of villi. *Basti dravya* may break into small chain fatty acid which can easily absorbed. *Niruha basti* is hyperosmotic which causes movement from cells of colon to lumen and facilitates the absorption endotoxin into the solution and produce detoxification by elimination. *Anuvasna basti* is hypo osmotic which may be absorbed into the blood. *Sneha*

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		basti are responsible to regulate sympathetic activity it decreases adrenaline and non-adrenaline to balance ANS.[13]
3	*nasya*	The olfactory nerve differs from other cranial nerves in its close relation with the brain. The olfactory nerves are connected with the higher centres of brain i.e., limbic system, consisting mainly of amygdaloidal complex, hypothalamus, epithelium, anterior thalamic nuclei parts of basal ganglia etc.so the drugs administered through nose stimulate the higher centre of brain which shows action on regulation of the endocrine and nervous system function. So, hypothalamus regulate the sub thalamus its helps body to control movements.[14]

SHAMANA:

Bruhatvatchintamani [15] which balances *vata dosha*, it has excellent rejuvenating properties used with *ashwagandha* which is *balya* ,*bruhana* and it normalise the cortisol level help to reduce the stress and anxiety .with *guduchi satva*[16] having *agnideepana* (improves digestion),*dahahara*(relieve burning sensation),*rasayani*(rejunivate the whole body), *balya* (improve the muscle strength), *amahara* (treate digestion). properties give significant result in generalised weakness and improves muscle power, tone. *Agastipras* [17] is *laghu* (light to digest), *ruksha*(dry), *tikta* rasa (bitter taste) it balances *kapha* and *pitta dosha*, it is antitoxic and used to trate fatigness. *Haritaki* [18] is having properties of *virechnanopaga* (reduce purgation), *grahi* (treats diarrhoea), shulahara (reduce pain), deepana (enhance stomach fire), Pachanga (helps in digestion), *rochana* (stimulates appetite). It is *tridoshaj* and hence balances body. By taking *shodhana karma*, there were marked improvement in muscle power up to 5/5. Muscle tone was improved, associated symptoms like generalised weakness and loss of appetite was improved with the help of *agstiprash* and *bruhatvatchintamani* yoga. Hughes score were improved from 2 to 0. After complete 1 month of treatment patient was able to perform all daily activities normally.

CONCLUSION:

The analysis of GBS in terms of *Ayurveda* concludes that the GBS is a symptom complex where we can't correlate particular *ayurvedic* term, but based on the symptoms here we have taken as *sarvangavata*. In this patient recovery was seen in one months, which is suggestive of quicker beneficial effects of *ayurvedic* treatments. along with this *ayurvedic panchkarma chikitsa* as well as *shamana chikitsa* plays major role in improving muscle tone, muscle strength and reflexes. Following *Ayurveda* model of treatment step wise and customized approach have beneficial effect.Outcome showed significant role of *Ayurveda* in GBS.Ayurveda management can decrease the disability and improve quality of life. It is concluded that Guillain Barre Syndrome with special reference to *sarvangagata vata* treated through *Ayurveda* found better results in this case.Further reasearch should be done with large sample size for results.

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