

Sciatic Neuralgia, an Agonising Encumbrance and Its Modern Approach

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Abstract

Sciatica not a medical diagnosis but is a symptom of an underlying vertebral condition i.e. lumbar herniation. dislocated disc, Spondylolisthesis and spinal stenosis where usually practiced medicine .physical therapy, surgery and even alternative therapy fails to ensure cure but present regime a composite of intravenous Calcium supplementation, cholecalciferol and bio neurogen composite (constituting equal parts of active ingredient of *Acorus calamus*, *Herpestis monnieri*, *Nardostachys jatamansi* and *Convolvulus pluricaulis*) achieved grade I clinical response in 93% cases without any withdrawal. Drug adversivity, hepato renal alteration and recurrence in 5 years of post-therapy follow up with excellent quality of life.

Keywords: Sciatic neuralgia; Radiculitis; Spondylolisthesis; Spinal stenosis; Lumbar disc herniation; Bio neuragen

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Introduction

Sciatica, a clinical condition presenting with leg pain, tingling and numbness, weakness in the lower back radiating down wards up to legs both front and outside which is usually due to either lumbar herniated disc, degenerative disc disease, Spondylolisthesis or spondylolithiasis Or spinal stenosis [1]. This affect 2%-40% of population presenting with encumbrance at same point of life in the age group of 40-50 years and men outnumber women [2].

The literature reveals use of analgesics, steroids to relieve pain ,may relieve pain but fails to alleviate presentation, though use of Gabapentine for acute is quite in vogue but non ensure satisfactory clinical relief or improved quality of life. In addition alternative therapy like Spinal manipulation and surgery are also in vogue with an intent to alleviate agonising state [3-6]. Thus in this agonising disease having no secured curative therapeutic modality a clinical evaluation program is conducted at RA. Hospital & Research Centre ,Warisaliganj (Nawada) Bihar in association with Aarogyam punarjeevan Ara Garden Road ,Jagdeopath ,Baily Road Patna 14 .

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Aims and Objectives

Asses the clinical efficacy of a combo therapeutic modality in cases non responsive to Sciatica of varied origin and etio pathogenesis.

Materials and Methods

Patients of sciatica of various etiopathogenesis attending medical OPD of RA. Hospital & Research Centre, Warrisaliganj (Nawada) Bihar been selected as per following index –

Patients with-

- Constant pain in only one side of the leg or buttock
- Pain originates in low back or buttock and continues along the path of sciatic nerve down the back of the thigh, lower leg and foot.
- Pain becomes worse on sitting or standing, exacerbate on sneezing Or coughing
- Pins and needle sensation, numbness , weakness Or pricking sensation
- Weakness Or numbness on moving the leg or foot
- Severe Or shooting pain in the leg
- Pain and other symptoms in toes.

All the selected patients were thoroughly interrogated, examined and assessed for straight leg raising test (Positive Lasegue’s Sign) i.e. Pain in the distribution of Sciatic nerve , blood sugar, hepato renal status to ascertain post therapy drug related adversity.

Straight leg raising test (Lasegue’s sign): Presence of pain in the distribution of sciatic nerve on passive flexion of straight leg between 30-70 degree elevations

Based on clinical presentation and its severity patients were classified as –

Grade I (Mild): Pain on sneezing, coughing, walking
 Grade II (Moderate): Sneezing and coughing causes intractable agonising pain in leg needs medication
 Grade III (Severe): Agonising pain on standing, waking and make crippled.

Patients having associated hypertension, myxoedema (hypothyroidism) and diabetes mellitus are duly controlled with dietary restriction and drug therapy. In diabetes mellitus and hypertension carbohydrate and high fat diet are duly restricted, in addition all the cases with hyper lipid emic state baked seed of Linseed (*Linum usitatissimum*) in dose of 5 gm morning and evening to be chewed daily. Prior to advocation of trial drug patients were re assured for bio regulated blood sugar, serum cholesterol and blood pressure. In addition persons with body weight >IBW been suggested for dietary control to ensure IBW to alleviate pressure over the vertebral column due to overweight.

Regime prescribed

Injection Calcium Gluconate 1 ampoule intravenous very slow with 24 numbered scalp vein set (Measure blood pressure, in hypertensive Calcium should be avoided) Inj Methyl cobalamin 1500 mcg + Nicotinamide + Pyridoxin 1 ampoule every 4th day very slow, add Inj Betamethasone in non-diabetic cases or controlled diabetics. Cap Bio neuragen 1 cap daily Or Syrup 10ml 12 hr. for adult [Bio neuragen constitutes natural resource i.e.- equal part of powder of *Acorus calamus* (rhizome), *Herpestis monnieri* (leaf), *Nardostachys jatamansi* (flower), *Convolvulus pluricaulis* (Flower) either in capsule form or syrup constituting 500 mg each capsule or 500mg each 10 ml] Proton pump inhibitor and analgesic anti arthritic (Aceclofenac sustained release with rabiprazol (Cap Dolostat +R or Raceclo 1 cap daily) Active and passive exercise Cap Cholecalciferol D3 60K every week,

Each patient been given a follow up card with facility to enter -

Particulars	Date of achievement	Any unusual
Leg pain		
Backache		
Agony on sneezing /coughing		
SLR		

On every 3 months patient’s blood analysis for blood sugar, hepatic, haematological and renal function were assessed to ascertain any drug adversity and safety profile of the advocated regime.

Based on therapeutic response, clinical achievement been graded as -

Grade I (Excellent): Improvement in pain and agony within a week of therapy with complete normalcy in gait in 3 months therapy without any adversity or adjuvant.
 Grade II (Good) : Relief in agonizing pain and improvement in other presenting features
 Grade III(Poor) : Symptomatic relief with recurrence

Observations

Selected patients were of age group above 20 years and among them majority (20.5%)were of age group 30-35 years while 18% patients were of age >50 years. (T-1) Out of all 65.7% were male and 34.25% were female (Pie diagram) Out of all 47% patients were suffering since > 5 years and 4.5% were from >10 years while majority (21.25%) patients since last 3-4 years (T-2) As per occupation majority (127) were house hold worker while 85 were labourer, 116 were motor cyclist and 29 were cyclist, and 55 were leading sedentary life style (T-3) Among them 210 (52.5%) were of severe degree of clinical presentation while 180 (35%) moderate and 10(2.5%) mild (bar diagram) As per clinical diagnosis majority (71.5%) were of radiculitis while 12.5% were of spinal disc herniation (T-4) 2.75% patients were with low body weight while 40% were obese and overweight, 62.25% were normotensive while 0.5% were hypertensive (T-5) 64.2% male and 74.5% female were with fasting blood sugar <100mg% while 2.6% male and 4.3% female with blood sugar > 150 mg. 35.7% male and 25.5% female were with haemoglobin concentration <10gm %,2.3% male and 3.6% female were with SGOT and SGPT >35 IU ,22.4% male and 5.1% female were with blood urea >30mg % and Serum creatinine >1.5 mg% 93% patients had grade I clinical response while 6.5% shows grade II with relapse in 0.5% cases. None shows any drug adversity or needed any adjuvant or had acute surge of presenting agony.

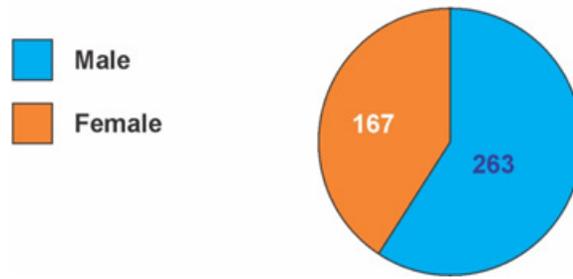
Result

Patients of sciatic neuralgia or Sciatica of varying stage and etiopathogenesis of age group 20-50 years non responsive to various conventional and recommended therapeutics, had grade I clinical response in 93% patients with present therapeutic modality.

Age group (in years)	Number of Patients		Total
	Male	Female	
20-25	35	20	55
25-30	38	12	50
30-35	58	24	82
35-40	31	19	50
40-45	27	16	43
45-50	29	19	48
>50	45	27	72
Total	263	137	400

Table 1: Age and sex wise distribution of patients of sciatic neuralgia.

Pie diagram as per sex composition



Duration in years	Number of patients		Total
	Male	Female	
< 1yr	07	10	17
1-2	17	06	23
2-3	29	15	44
3-4	56	29	85
4-5	28	15	43
5-6	20	08	28
6-7	19	11	30
7-8	31	17	48
8-9	28	12	40
9-10	16	08	24
>10	12	06	18

Table 2: Distribution of Patients as Per Duration of Illness.

Occupation	Number of patients		Total
	Male	Female	
Labourer	76	09	85
Motor cyclist	107	09	116
Cyclist	29	00	29
House hold worker	23	104	127
Sedentary life style	40	15	55

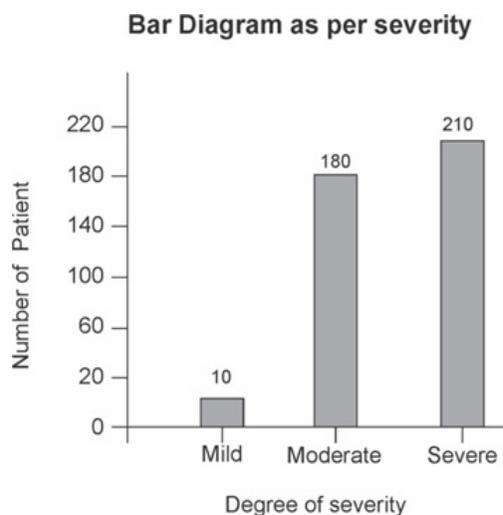
Table 3: Distribution of patients as per occupation.

Body weight	Number of patients				
Blood pressure	Average blood pressure (mmHg)				
	< 100	100-110	110-120	120-130	>130
IBW	99	24	-	-	-
IBW+ 1SD	120	04	-	-	1
IBW+ 2SD	17	03	02	01	-

IBW+3SD	10	02	-	-	-
IBW+4SD	04	02	-	-	-
IBW-1SD	04	07	-	-	-

(Key word: IBW: Ideal body weight as per age, 1SD = 5kg)

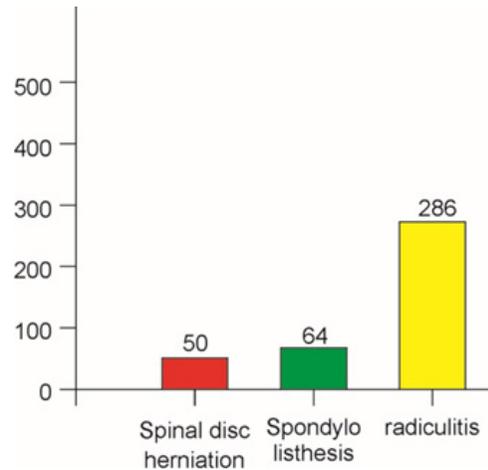
Table 4: Distribution of patients as per their body weight and blood pressure.



Particulars	Number of patients		
	Male	Female	Total
Blood sugar:			
Fasting:			
>100 mg%	169	102	271
100-150 mg%	87	29	116
150-200 mg%	07	06	13
Haematological:			
Haemoglobin (gm %)			
<10gm	94	35	129
>10gm	169	102	271
Hepatic profile:			
SGOT	(in IU):		
< 35	257	132	389
>35	06	05	11
SGPT (in IU)			
< 35	257	132	389
>36	06	05	11
Renal profile:			

Blood urea (in mg %)			
< 30	204	130	334
>30	59	07	66
Serum creatinine (in mg %)			
<1.5	204	130	334
>1.5	59	07	66

Table 5: Distribution of patient as per haematological, hepatic and blood sugar status.



Bar diagram showing radiological diagnosis

Particulars	Number of patients
Any drug adversity Any adjuvant required Status on treatment withdrawal	None
Relapse	02
Rebound	None
Unaltered	398
Grades of clinical response:	
Grade I	372
Grade II	26
Grade III	02

Table 6: Outcome of therapy.

Discussion and Conclusion

Sciatica, an agonising presentation in area supplied by sciatic nerve i.e.- back to posterior part of lower extremity up to heel, though conventional management i.e.- drugs, physiotherapy and surgical intervention [7] fails to achieve cure ,the present study comprising use of therapeutic modality achieve grade I clinical response in 93% patients while 0.5% cases had grade III response as etio pathogenesis of sciatic pain is usually due to decline neuro conduction, glial damage and neuronal oedema ,in addition increasing incidence is solely due to changed life style , presence of dietary non nutrients which causes toxic glial necrosis or degeneration.

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Intravenous Calcium supplementation provide ionic calcium to boost neuro transmission and conduction, Betamethasone acting as an anti-inflammatory agent relieves neural oedema ,Chole calciferol helps in fatty acid bio regulation and ionic calcium concentration, biogenic neurogenic constituents, i.e.- active ingredients of *Acorus calamus*, *Herpestis monnieri*, *Nardostachys jatamansi*, *Convolvulus pluricaulis* and *Cassia angustifolia* helps in neuroglial regeneration, disc repair ,limit inflammation. Analgesic antarthritic Aceclofenac sodium 200mg (SR) helps in acute pain relief while Proton pump inhibitor safe guard gastric mucosa. Bio regulative effect of biogenic neuragen check recurrence or withdrawal due to its neuro generative effect.

Considering the nursing staff a primary impicator of the clinician advice , administration of injectable need prime care so to monitor the rate of administration of drug ,as fast administration of Calcium may pose cardiac problem , must be administered with 24 number scalp vein set. Secondly simultaneous administration of injectable through scalp vein by separate syringes i.e. first Calcium Gluconate followed with Methyl cobalamin +Nicotinamide +Pyridoxin and lastly betamethasone.

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