

## A COMPARATIVE STUDY TO EVALUATE THE EFFECTIVENESS OF PATHYADI GUGGULU AND RASNADI GUTIKA IN CASES OF GRADHRASI W.S.R. TO SCIATIC SYNDROME

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### ABSTRACT

**Aim:** To evaluate the effectiveness of Pathyadi guggulu and Rasnadi gutika in cases of Gradhrasi (sciatic syndrome). **Introduction:** Gridhrasi i.e Sciatic syndrome is caused by pinching of sciatic nerve (nerve root is ventral rami of 4,5 lumbar and 1,2,3 sacral spinal nerve) which causing sharp shooting pain in the back of the leg running from the buttocks down the back of thigh into calf and foot. **Settings and Design:** For the present clinical study 68 Patients having Ruk (Pain which radiate to sphik, kati, uru, janu, jangha & pada successively), Sakthi utkshepa nigrahyad (restricted upward lifting of the affected lower limb), Stambha (Stiffness), Toda (Pricking sensation), Spandan (Tingling sensation), Tandra (Drowsiness), Gaurav (Heaviness) and Arochak (Anorexia) with Positive SLR TEST were registered. **Materials and method:** All patients were divided in two groups 34 patients in each. In Group A Pathyadi Guggulu were given orally 2 vati (500 mg each) 3 times daily after meal with Luke warm water for 60 days and in Group B Rasnadi gutika were given orally 2 vati (500 mg each) 3 times daily after meal with Luke warm water for 60 days. **Type of study:** Phase 2 rational, Randomized (Sequential) parallel group study. **Statistical analysis used:** p value, paired 't' test, unpaired 't' test, etc. **Results:** The trial drugs shows a significant results in terms of relieved & improvement in clinical parameters, out of 42 patients 64.28% were relieved, 28.57% patients were improved, 7.14% had no response, and there was no case of worsened had been reported. **Conclusion:** Trial drugs were well accepted and tolerated with good positive response and no any side effect has been observed.

**KEYWORDS:** Gridhrasi, Sciatic syndrome, Pathyadi Guggulu, Rasnadi gutika.

### INTRODUCTION

Like a modern skyscraper, the human spine defines gravity, and defines us as vertical bipeds. The spine acts as a conduit for precious neural structures and possesses the physiological capacity to act as a crane for lifting and a crankshaft for walking. Changing of life style of modern human being has created several disharmonies in his biological system. Advancement of busy professional and social life, improper sitting posture in office or continuous work in one posture and over exertion, lifting heavy weight, jerking movements during travelling— all these factors create undue pressure and stress injury to the spine and play an important role in producing low backache. Gradhrasi is one of the important cause of low backache.

Gridhrasi, mentioned in Ayurvedic text under Vata Vyadhi. The word Gridhrasi is derived from the Sanskrit word Gridhra that means the name of a bird i.e Vulture indicates the typical gait that resembles to a gridhra or vulture due to pain. It is one of such disease which is described under Nanatmaja Vata Vikar as well as Samanyaj Vikar too by Acharya Charak<sup>[1]</sup> It is characterized by Ruk (pain), Toda (pricking sensation), Stambha (stiffness), Spandana (tingling sensation). These symptoms initially affect Sphik (buttock) as well as kati, prishta and then gradually radiates to posterior aspect of Uru (Thigh), Janu (Knee), Jangha (Leg) upto pada (Foot). When Kapha gets involved with Vata, produces symptoms like Tandra, Gaurava, and Arochaka.<sup>[2]</sup> So on the basis of Dosha involvement Gradhrasi can be of two types: 1. Vataja Gradhrasi, 2. Vatakaphaja Gradhrasi.

According to Acharya Sushruta and Vagbhatta, the cardinal feature of Gradhrasi is radiating pain in the affected leg and restricted upward lifting of the affected lower limb i.e. Sakthiutkshepanigraha.<sup>[3]</sup> Acharya Sushruta was particular about the signs of disease like *Saktikshepa Nigraha* and there by completing the total clinical picture of *Gradhrasi*.

The Samprapti takes place either by Dhatukshaya or Margavarana or due to Agantunja causes like Abhighata.<sup>[4]</sup> In Dhatukshayajanya Samprapti, due to improper nourishment, Rasadi Dhatus are landed into Kshaya Avastha. Dhatukshaya further vitiates Vata which causes Gridhrasi like disease. This type of Samprapti can be correlated to the Sciatica caused by degenerative changes. When Vayu is obstructed by Kapha, Ama etc. It gets vitiated leading to Margavaranajanya Samprapti of Gridhrasi. Agantunja factors are mentioned as an important cause of Gridhrasi in both systems of medicine. All these vitiated Doshas affect the Asthi-Sandhi of Kati Pradesha.

The symptoms of Gridhrasi can be correlated to the disease Sciatic syndrome. The term sciatica is derived from the greek word "ischiadikos" ("ischion" in french, "sciaticus" in latin) which means pain in the hip or pertaining to or located near the ischium.<sup>[5]</sup> The lifetime incidence of sciatica is estimated to be between 13% and 40%. Sciatica is most common in the third to sixth decades of life and occurs about one to three times more frequently in men than in women.<sup>[6]</sup> The prevalence of sciatic symptoms reported in the literature varies considerably ranging from 1.6% in the general population to 43% in a selected working population. The lifetime prevalence of true sciatica has been reported at 5.3% in men and 3.7% in women.<sup>[7]</sup>

Sciatica is a term used to describe the pain of neurologic origin that radiates down the posterior aspect of the leg in the distribution of sciatic nerve.<sup>[8]</sup> Sciatica "A syndrome characterized by pain radiating from the back into the buttock and into the lower extremities along its posterior or lateral aspect and most commonly caused by prolapse of the intervertebral disc, the term is also used to refer the pain anywhere along course of sciatic nerve."<sup>[9]</sup>

Faulty dietetic habits and irregular life style is responsible for early degenerative changes in body tissues and play a vital role in the manifestation of such degenerative disorder. In this way, this disease is now becoming a significant threat to the working population.<sup>[10]</sup> In modern science, treatment of sciatica includes conservative and few surgical procedures. Conservative treatment for sciatica is primarily aimed at pain reduction, either by analgesics, physiotherapy or by reducing pressure on the nerve root. Conservative treatment having significant role in achieving the success in addition to their adverse effect and surgeries are

moreover expensive with chances of recurrence as well.<sup>[11]</sup>

In Ayurveda the line of treatment of Vata vyadhis are snehan (oleation), swedan (sudation), mridu shodhan,<sup>[12]</sup> however in gradhrasi roga along with siravedha, agnikarma, and vastikarma are also mentioned with various shanshman yogas<sup>[13]</sup> Aim of chikitsa in Gradhrasi roga is vata anuloman and vata shaman for pain management. In this clinical study we have selected Pathyadi guggulu which contains Triphala and Guggulu as main ingredient and Vidanag, Danti, Trikatu, Nisoth & Guduchi as prakshep dravya<sup>[14]</sup>. Rasnadi gutika contains Rasna, Guggulu & Gohrit<sup>[15]</sup> Selection of drugs is based on repeated recommendations of different Acharayas on Sciatica and different researches published in different journals on the action of different ingredients of trial drugs.

## MATERIAL AND METHODS

### Aim and objectives

1. To review the literature on Gridhrasi w.s.r. Sciatic syndrome.
2. To compare the effectiveness of Pathyadi Guggulu and Rasnadi Gutika in the management of Gridhrasi and clinical improvement/prognosis/recurrence/of disease during the follow up period.
3. To study any adverse effect of the trial drug.

### Selection of cases

Patients of both sex, and age between 21 to 60 years, irrespective of their religion and occupation having signs and symptoms of Gridhrasi and fulfilling the inclusion criteria were selected and registered for this study. The study was conducted at P.G. department of Kaya Chikitsa State Ayurvedic College and Hospital Lucknow U.P. after getting ethical clearance from Institutional Ethics Committee. Everything regarding the treatment was explained to the patients, and written consent was obtained prior to starting the treatment.

### Inclusion Criteria

The patients having all 3 major symptoms with one or more minor symptoms and positive SLR test were selected for this study.

### Subjective criteria<sup>[2,3]</sup>

#### Major symptoms-

- Ruk (Pain) which radiate to sphik, kati, uru, janu, jangha & pada successively.
- Sakthi utkshepa nigrahyad (restricted upward lifting of the affected lower limb)
- Stambha (Stiffness)

#### Minor symptoms

- Toda (Pricking sensation)
- Spandan (Tingling sensation)
- Tandra (Drowsiness)
- Gaurav (Heaviness)

- Arochak (Anorexia)

**Objective criteria**

- Positive SLR TEST (Active type)
- Walking time

**Radiological criteria**

- X - ray of the lumbo sacral spine in Antero-posterior and lateral positions.

**Exclusion Criteria**

- Age group less than 21 and greater than 60 years was excluded.
- Patient with history of trauma causing fractures.
- Infective conditions and tuberculosis of the spine.
- Neoplastic & Metastatic conditions of the spine
- Patients with other systemic disorders and serious illness
- Pregnancy and lactating mother
- Patients of uncontrolled DM and Hypertension.
- Patients with congenital anomalies.
- Pain associated with paraplegia and hemiplegia.
- Cock's spine and Space occupying lesion in the spinal cord.

**Investigation: Routine**

- Hematological investigation -T.L.C, D.L.C, E.S.R., Hb %, G.B.P
- Urine: Routine & microscopic
- Stool: Ova & cyst
- Blood sugar: Fasting & P.P
- R.F.T. & L.F.T
- Serum Calcium

**Specific Investigation: (if required)**

- X-ray of the lumbar sacral spine in Antero-posterior and Lateral positions
- MRI/ CT scan of L.S spine

**Other Specific Investigation: (if required)**

- CRP, ASO Titre, RA factor, Anti ccp
- ANA, HLA-B 27
- S. Uric acid

**Type of study:** Phase-2, rational, Randomized (Sequential) parallel group study

**Period of Study:** 60 days

**Follow up period:** 1 month after trial without Drug.

**Sample size:** 68 patients, 34 patients in each group were registered with 8 dropout.

**Grouping, Drug schedule with dose and duration**

To carry out this trial, the selected patients will be divided into two groups and they have to follow diet related instruction.

**In group A-** Pathyadi guggulu 2 vati (500 mg each) 3 times daily after meal with Luke warm water

**In group B-** Rasnadi gutika 2 vati (500 mg each) 3 times daily after meal with Luke warm water.

**DIET & ADVICE: DO'S**

- Firm mattress should be used.
- Take bath in warm water.
- A regular gentle exercise of the leg, e.g hamstring stretching & Bird dog move etc.
- Swimming is extremely beneficial exercise in sciatica.

**DON'T**

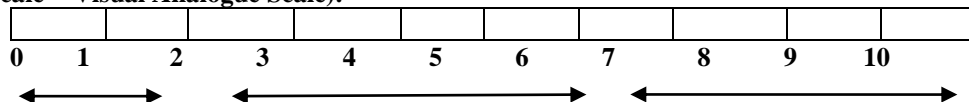
- ❖ Food item which aggravates constipation should be strictly prohibited.
- ❖ Try to avoid sour food and excessive intake of pulses.
- ❖ Try to avoid those factors which cause mental stress.
- ❖ Smoking should be avoided.
- ❖ Don't do strenuous exercise like running and jumping.

**Criteria for Assessment**

**Subjective parameters**

All the signs & symptoms were graded 0, 1, 2, 3 or 0, +, ++, +++ (nil, mild, moderate & severe) on the basis of its intensity & severity given by patients on complained & confirmed by clinical examination before the trial drugs. The clinical improvement during & after trial drugs were also correlated with previous intensity of the signs & symptoms.

**1. RUK (Pain): (Numeric rating scale) (adopted from (Mc Chaffey, Beebe et al. 1989) : Pain Assessment Scale: (VAS Scale = Visual Analogue Scale).**



GRADE	SCORE	FEATURE
0	0	No pain
+	1	1-3 mild pain
++	2	4-6 moderate pain
+++	3	7-10 severe pain

## 2. Sakthi utkshepa nigrahyad (Restricted upward lifting of affected lower limb).

GRADE	SCORE	FEATURE
0	0	No restricted upward lifting
+	1	Slight tolerable pain on upward lifting
++	2	Bearable pain but restricted movement
+++	3	Unbearable pain on movement

## 3. Stambha (Stiffness).

GRADE	SCORE	FEATURE
0	0	Nil
+	1	Slight stiffness, resolves after few minutes
++	2	Difficult to perform routine work, may or may not disappear.
+++	3	Unable to do routine work, bedridden patients.

## 4. Toda (Pricking sensation).

GRADE	SCORE	FEATURE
0	0	Nil
+	1	Short duration, tolerable, can perform daily routine work
++	2	Long duration, difficult to perform routine work
+++	3	Continuous unbearable, unable to do routine work.

## 5. Spandan (Tingling sensation).

GRADE	SCORE	FEATURE
0	0	Nil
+	1	Sometimes for 5-10 min
++	2	Daily for 10-30 min
+++	3	Daily for more than 1hr

## 6. Tandra (Drowsiness).

GRADE	SCORE	FEATURE
0	0	Nil
+	1	Occasional feeling, can perform daily routine work
++	2	Long duration feeling, daily routine performance becomes slight difficult.
+++	3	All time feeling of drowsiness cannot perform daily routine work.

## 7. Arochaka (Anorexia).

GRADE	SCORE	FEATURE
0	0	Good appetite
+	1	Eat food only two times without snacks in between
++	2	Eat only once
+++	3	Have no feeling of appetite

## 8. Gaurav (Heaviness in the body).

GRADE	SCORE	FEATURE
0	0	No feeling of heaviness in the body
+	1	Slight feeling of heaviness in the body
++	2	When the routine work and activity hampered
+++	3	Sluggish movement

**Objective parameter****1. SLR TEST (Active type).**

GRADE	SCORE	FEATURE
0	0	> 90 <sup>0</sup>
+	1	75 <sup>0</sup> – 90 <sup>0</sup>
++	2	50 <sup>0</sup> – 74 <sup>0</sup>
+++	3	49 <sup>0</sup> – 30 <sup>0</sup>

**2. Walking time (Time taken to cover 20 meters).**

GRADE	SCORE	FEATURE
0	0	Up to 20 seconds
+	1	21 – 40 seconds
++	2	41 – 60 seconds
+++	3	More than 60 seconds

**Criteria for assesment of results**

Result of the treatment will be assessed on the basis of Improvement in terms of Subjective and Objective criteria and Recurrence of disease

**RESULT**

The total effect of therapy of this trial will be grouped as follows

- Relieved- Patients have >75% relief in terms of Subjective and Objective criteria.
- Moderate Improved- Patients having improvement between 51-74% in terms of Subjective and Objective criteria.
- Mild improved- Patients having improvement between 25-50% in terms of Subjective and Objective criteria.
- Unchanged - Patients having < 25% relief in terms of Subjective and Objective criteria.

**Statistical analysis** – The obtained results were analysed and calculated with the help of Wilcoxon's signed rank test, Mann Whitney test for subjective parameters and Paired t-test for objective Parameters. For the calculation "Graph Pad IN Stat 3.1 software (Trial version)" was used.

**OBSERVATIONS AND RESULT****Demographic Observations**

Maximum 29 (42.6%) patients were from the age group of 41-50 years, 49 (72%) patients were female, and 50 (73.5%) patients were of Hindu religion, 62 (91.2%) patients were married. Out of 68 patients 43(63.2%) patients were from middle class, 32 (47.05%) patients were Housewives, 57 (83.8%) patients were from urban area, and 38 (55.9%) patients were of vegetarian, 25 patients were Non-Addicted.

On enquiry 56(82.4%) patients were having Normal sleep, 41(60.30%) patients were having Krura Koshtha, 40 (58.8%) patients were having Vibandh, 18 (48.52%) patients belonged to Vataja-Pittaja Prakriti. Considering nature of work 23 (33.8%) patients performing standing

type of work, 34 (50%) patients were from no physical exercise group, 39 patients (57.4%) were having no associated illness. 29 female patients (59.2%) had Menopause.

58 (85.3%) patients had gradual onset of disease, 50 (73.5%) patients were having continuous course of pain, 42 (61.5%) patients were having throbbing type of pain, 30 (44.1%) patients were having right leg affected, 37 (54.4%) Patients were having walking as aggravating factor, 56 (82.3%) Patients having lying supine as relieving factor, 52 (76.5%) patients having disturbed gait.

**Clinical Observations**

Out of 68 patients selected according to predetermined "Criteria of Selection" and patients who completed the trial, 100% patients showed Ruka, Sakthana utkshep nigrahyad and Stambha, 55 (81%) patients were having Spandana, 50 (74%) patients were having Tandra, 46 (68%) patients were having Toda, 45 (66%) patients were having Arochak and 42 (65%) patients were having Gaurav.

**Therapeutic Observations**

The assessment was done to find out the effectiveness of Pathyadi guggulu and Rasnadi gutika in Gridhrasi on the basis of relief from Ruka, Sakthana utkshep nigrahyad, Stambha, Spandana, Toda, Tandra, Gourava, Arochak, improvement in angle of SLR and walking time. The observed findings were discussed in detail and shown in table no.-1:

- In group A, extremely significant results were seen in Ruka (66.5%), Sakthana utkshep nigrahyad (70.28%), Stambha (68%), Spandana (79%) Toda (64.4%), Arochak (86.2%) & Gaurav (74%), followed by significant result seen in Tandra (77.08%).
- In group B, extremely significant results were seen in Ruka (64.7%), Sakthana utkshep nigrahyad (67.08%), Stambha (51.35%) Spandana (67%) & Toda (64%) followed by significant result was seen in Arochak (63.2%), Tandra (69.35%) & Gaurav (69%).

Extremely significant result was seen in SLR and walking time in group A, (72.5%) (64%) and in group B, (69.6%), (60%) respectively. Table no.-1

**Table 1: “Trial Drugs shows significant improvement in clinical parameters.”.**

S. No.	Symptoms	Statistical Assessment				comparison of significant difference between 'A' and 'B'
		Group 'A'		Group 'B'		
		% of relief	P value	% of relief	P value	
1.	<i>Ruka</i>	66.5%	p < 0.0001 Significant	64.7%	p < 0.0001 Significant	Z = 0.1849 P = 0.8571 NS
2.	<i>Sakthana utkshep nigrahyad</i>	74.28%	p < 0.0001 Significant	67.08%	p < 0.0001 Significant	Z = 1.2499 P = 0.2113 NS
3.	<i>Stambha</i>	68%	P < 0.0001 Significant	51.4 %	P < 0.0001 Significant	Z = 1.0133 P = 0.3125 NS
4.	<i>Spandana</i>	79%	P < 0.0001 Significant	67%	P < 0.0001 Significant	Z = 0.9837 P = 0.3270 NS
5.	<i>Toda</i>	64.4 %	P < 0.0001 Significant	64%	P < 0.0001 Significant	Z = 0.9689 P = 0.3320 NS
6.	<i>Tandra</i>	77.08 %	P < 0.05 Significant	69.35%	P < 0.05 Significant	Z = 0.8357 P = 0.4009 NS
7.	<i>Arochak</i>	86.2%	P < 0.0001 Significant	63.2%	P < 0.05 Significant	Z = 1.0280 P = 0.3030 NS
8.	<i>Gaurav</i>	74%	P < 0.0001 Significant	69%	P < 0.05 Significant	Z = 0.0070 P = 0.9920 NS
9.	<i>SLR Test</i>	72.5%	P < 0.0001 Significant	69.6%	P < 0.0001 Significant	Z = 0.05 P = 0.96 NS
10.	<i>Walking time</i>	64%	P < 0.0001 Significant	60%	P < 0.0001 Significant	Z = 0.04 P = 0.97 NS

## RESULT

The selected patients were examined before, during and after the trial. Total 68 patients were registered and divided randomly in group 'A' & group 'B' with 8

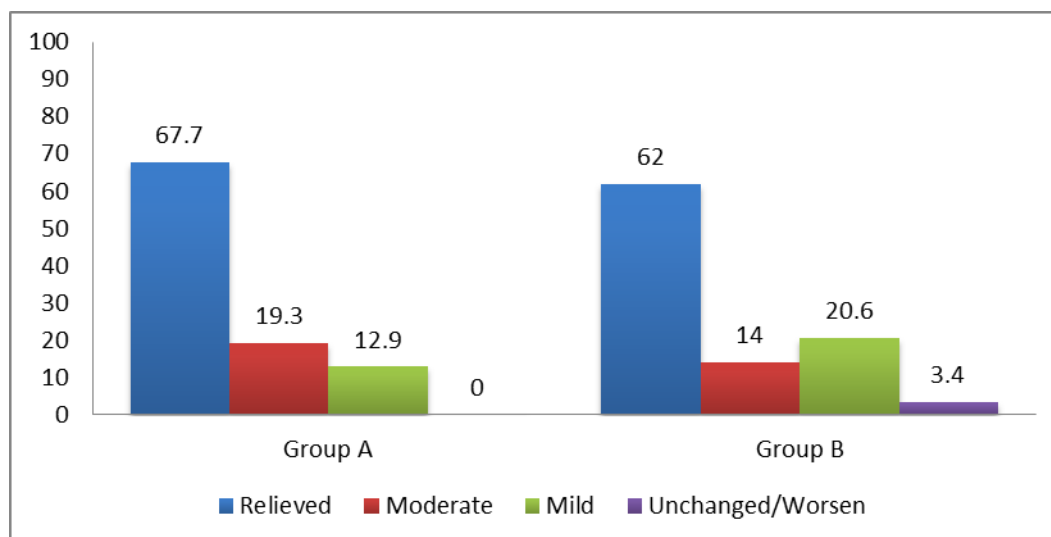
dropouts. In group 'A' 31 and in group 'B' 29 patients were completed this trial. The result shown in table no.-2 and Graph -1.

**Table 2: Overall assessment of patients after treatment.**

Group	Relieved (>75% relief)		Improved				Unchanged (< 25% relief)	
			Moderate (74-51% relief)		Mild (50-25% relief)			
	No. of pts.	%	No. of pts.	%	No. of pts.	%	No. of pts.	%
<b>Group A</b> (n=31)	21	67.7%	6	19.3%	4	12.9%	0	0%
<b>Group B</b> (n=29)	18	62%	4	14%	6	20.6%	01	3.4%

In group 'A' 21 (67.7%) patients were relieved, 6 (19.3%) patients were moderately improved, 4 (12.9%) patient were mild improved and no patients show worsen response by administration of drug therapy so there was no case recorded in unchanged group.

In group 'B' 18 (62.0%) patients were relieved, 4(14%) patients were moderately improved, 6 (20.6%) patients were mild improved by administration of drug therapy. There was only 1 (3.4%) case recorded in unchanged group. (Graph no. 1).



Graph 1:

## DISCUSSION

Discussion is the most important step towards the establishment of any principle and helps in reaching to a definite conclusion. In human body, the spine is one of the most important part of body and lumbar spine is the site of most conserving orthopedic problem for the world's industrialized countries.

Gridhrasi is such a disease having its origin in Pakvashaya and seat in Sphika and Kati i.e. lumbar spine. This disorder as such is not life threatening or dreadful, but the excruciating pain that the patient goes through is very agonizing. This can be correlated with the disease sciatica in modern medicine which is a neuromuscular disorder and posing a serious threat to the quality of life of most productive group of population.

It may be worth mentioning here that Acharya Charaka listed the symptoms of the Gridhrasi like Ruka, Toda, Stambha, Suptata and Acharya Sushruta was particular about the signs of disease like Saktikshepa Nigraha and there by completing the total clinical picture of Gridhrasi. Vitiated Vata especially Apana and Vyana are involved in the Samprapti of Gridhrasi. Kapha may be the Anubandhi Dosh in Vata Kaphaja variety of Gridhrasi.<sup>[2,3]</sup>

According to Ayurveda, treatment of Gradhrasi is divided into two major types Shaman and Shodhan chikitsa. In Shaman chikitsa, vitiated doshas are suppressed with in the body. In this reference during this trial, Pathyadi guggulu and Rasnadi gutika used as shaman chikitsa for suppression and maintenance of vitiated doshas.

### Mode of Action of Trial Drugs

Pathyadi Guggulu have Triphala, Guggulu, Trikatu, Vidang, Nisoth, Guduchi and Danti.<sup>[14]</sup> Triphala contains the fruits of Amalaki, Vibhitaki and Haritaki. Triphala which is rasayan, kapha-pitta shamak, vataanulomak,

Agnideepak and mridu virechak.<sup>[16]</sup> so act on tridosha.

In addition to laxative action, *Triphala* has found to be potentially effective for several clinical uses such as appetite stimulation, reduction of hyperacidity, antioxidant, anti-inflammatory, immunomodulating, antibacterial, hypoglycemic, chemoprotective, and radioprotective effects. Polyphenols in *Triphala* modulate the human gut microbiome and thereby promote the growth of beneficial *Bifidobacteria* and *Lactobacillus* while inhibiting the growth of undesirable gut microbes. The bioactivity of *Triphala* is elicited by gut microbiota to generate a variety of anti-inflammatory compounds.<sup>[17]</sup>

Guduchi is vatashleshmahar due to its ushna veerya.<sup>[18]</sup> Its reported medicinal properties like anti-diabetic, anti-spasmodic, anti-inflammatory, anti-arthritis, antioxidant, anti-allergic, anti-stress, hepatoprotective and immunomodulatory activities. Alcoholic extract of *Tinospora cordifolia* have been shown to stimulate the growth of osteoblasts, increasing the differentiation of cells into osteoblastic lineage and also increasing the mineralization of bone like matrix.<sup>[19]</sup> Trikatu contains Shunthi, Pippali and Maricha. All three drugs have Ushna, Teekshna Guna and Kapha-Vata Shamaka property. Ushna veerya helps in decreasing Sheeta Guna of Vata, teekshna guna increases bio-availability of drugs and balances vata and kapha dosha. It also works as an anti-inflammatory drug.<sup>[20]</sup>

Trivrat is adhobhaghar, sothhar, shleshma and medohar in nature. It has anti-inflammatory property due to scopoletin and laxative in nature due to presence of Turpethin in it.<sup>[21]</sup> The Laxative nature of Trivrat leads to Vatanuloman and pacify the Vata dosha. Danti is bhedniya, adhobhaghar and kaphahar properties with purgative effect due to Prabhav. It contains Axillarenic acid, due to this acid have purgative effect and balances vata dosha.<sup>[22]</sup> Vidang is ushna veerya and tikshna in nature, so due to its hot potency it balances vata and kapha dosha.<sup>[23]</sup>

The drug contains Guggulu which is best for vatavyadhi, raktprasadak, shothahara, vednasthapak.<sup>[24]</sup> Their oleoresins have high anti-inflammatory, analgesic and anti-arthritis activity. It increases leukocytes in the blood and stimulates phagocytosis. It reduces pain and stiffness because of suppression of the inflammatory cytokine NF-k B and its target molecules and reduces inflammation, also suppresses the activation of interleukins and prostaglandins so act as pain killer.<sup>[25]</sup> It also plays good role in managing condition like nerve damage due to its anti-oxidant effect i.e. it inhibits the production of oxygen free radicals and thus protects damage of tissues and nerves, in this way improves degeneration of disc.<sup>[26]</sup>

The ingredients of Rasnadi Gutika are Rasna and Guggulu. Rasna is best among the vatashamak dravya. It is kaphavatashamak due to its ushna veerya and also have sothhar, vednasthapan, amapachan properties, so it acts as a good pain killer.<sup>[27]</sup>

Ruk, Toda, Spandan are the vataj symptoms, thus the vata is suppressed by the Ushna veerya of Rasna and guggulu and Guru guna of Rasna. In this way it help in relieving Ruka, Toda and spandan. Stambha, Gaurav and Aruchi is the symptoms due to kapha dosha. The laghu guna, katu rasa and Ushna veerya of guggulu and tikta rasa of Rasna helps in suppressing kapha and due to Vishad guna of Guggulu clears srotoavarodh thus relief Stambha and Gaurav.

## CONCLUSION

Gridhrasi is the Vata Nanatmaja Vyadhi. It has two types i.e. Vataja Gridhrasi and Vata - Kaphaja Gridhrasi. In Vataja Gridhrasi, only Vata Dosha is viatiated while in Vataja-Kaphaja Gridhrasi, Vata Dosha is vitiated having Kapha Anubandhi Dosha. On the basis of their clinical manifestations, it can be correlated with Sciatic syndrome in modern medical science.

The trial drugs were given in 68 selected patients. Most of the ingredients of Pathyadi Guggulu are Ushna Veerya, Possessing Katu-tikta rasa, its Madhur vipak so they act as Vatahara & Agni –Deepak, Vatanulomak doing Brahan and Poshan of Gridhrasi nadi as a result of which the symptoms like vedana(pain),stambha(stiffness), Arochak (Anorexia) etc subside. The Overall action of all ingredients of Rasnadi Gutika is Vata-Kaphshamak, sothhar, Vednasthapan, Vatahara, Deepana, Pachan and Vatanulomak.

It was observed that the effect of drugs was high on the symptoms of Pain (Ruk), Sakthana utkshep nigrahyad, Stambha (Stiffness), Toda (Pricking sensation), Spandan (Tingling Sensation), Tandra (Drowsiness), Arochak (Anorexia), Gaurava (Heaviness). Grade of all these symptoms shows statistically decrease in both the groups but improvement was more in group A than group B. There were no statistically significant changes in biochemical parameters and X-ray findings before to after trial.

Trial drugs were well accepted & tolerated with good positive response. The trial drugs did not show any side effect in present series of cases. So Pathyadi Guggulu & Rasnadi Gutika can be safely used to treat the patients of Gridhrasi (Sciatic syndrome).

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