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A COMPARATIVE CLINICAL STUDY ON ROOKSHA POORVAKA SNIGDHA SWEDA WITH AND WITHOUT TRACTION IN GRIDHRASI (LUMBAR DISC PROLAPSE)

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Abstract: Vatavyadhi is one of the most common and uprising health problems in our daily lives, and Gridhrasi is one among them. Gridhrasi as mentioned in ayurvedic classics, is disorder wherein pain starts from sphik pradesha and radiates downwards to kati, prusta, uru, janu, Jangha, and Pada. The presentation of Gridhrasi is similar in signs and symptoms to that of Sciatica. Estimation have been made that 80% of population suffer from low backache at some points of their life among whom 40% of people suffer from Sciatica. It is observed to be very prevalent throughout the world ranging from 1.2% to 43%. In the contemporary system of medicine, administration of muscle relaxants, NSAID corticosteroids etc. give temporary relief from pain. The last option left is surgery, which may result in several complications and may even cause permanent loss of working capabilities. Lumbar traction has been found to be the most effective and non-invasive procedure to support permanent relief in sciatica. So, this clinical study was conducted to evaluate the efficacy of Rooksha Poorvaka Snigdha Sweda (modified method of katipichu) with or without lumbar traction and neural mobilization. Comparative effect of treatment on all the parameters in both the groups showed significant result. But group A showed highly significant results compared to group B.

Index Terms: Ayurveda, Sciatica, Gridhrasi, Lumbar Traction, Katipichu.

I.INTRODUCTION

At present, the lifestyle is gradually shifting away from healthy living, and therefore people fall victim to various diseases. Sedentary lifestyle, stress, improper posture, continuous jerky movements, long travelling, etc, put maximum pressure on the spine and lower portion of the pelvis. About 80–90% of people get affected by low back pain and 5% of those become victims of sciatica (Frymoyer, 1988).

Gridhrasi is a Vatavyadhi characterised by vitiation of Vata afflicting the Kandara / Snayu of lower limbs. It is characterized by severe radiating pain starting from the low back through gluteal region, posterior aspect of thigh, knee, calf and dorsum of the foot of either one or both sides of lower limbs (Agnivesh, 2013a). The condition makes raising of the leg difficult. All types of lumbar radicuolpathy also can be interpreted in terms of Gridhrasi.

In majority of cases, prolapse of intervertebral disc in the lumbar region may be responsible for Sciatica (Tyndall, 2019). It disturbs the daily routine and overall life of the patients because of continuous and stretching type of pain. In reference to sciatica treatment, contemporary medical science has only symptomatic management with analgesic like non-steroidal anti-inflammatory drugs. In some

cases, if nerve compression is more, surgical procedures like laminectomy, discectomy are indicated but these surgical procedures are expensive, and have some limitations. Repeated and continuous use of analgesic may cause many side effects.

Hence, there is need of research for some cost-effective non-invasive procedures having better efficacy. Lumbar traction is one of the most effective and non-invasive procedures to support permanent relief in sciatica. It is used to treat the conditions affected by herniated discs, sciatica and degenerative disc diseases. Ayurveda offers ample better options in the management of this painful disorder. In this clinical study evaluation of the efficacy of Rooksha Poorvaka Snigdha Sweda (modified method of katipichu) with and without lumbar traction is done.

In the classics it is mentioned that while treating anya-sthanagata dosha, first preference is given for the sthanika dosha rather than agantuja dosha. In Sweda Adhyaya, Acharya Charaka mentioned that in case of amashayagata vata and pakvashayagata kapha, rooksha sweda should be done prior to snigdha sweda. In addition to this, Trika i.e. lumbo-sacral is the adhishtana of Gridhrasi vyadhi which is a Kaphasthana. The treatment carried out in this study trial is based on the above concept.

Vata avarana by kapha in Gridhrasi may cause ruk, stambhadi laxanas in Trika pradesha. So sthanika dosha kapha is treated with rooksha sweda followed by agantuja dosha vata with snigdha sweda. By this we can conclude that rooksha poorvaka snigdha sweda is indicated in Gridhrasi. Swedana is one among the shadupkramas, mainly classified as Rooksha and Snigdha sweda for kaphaja and vataja disorders respectively (Agnivesh, 2013b). Rooksha sweda which has kapha hara, stambhaghna, shothahara, shoolahara properties may pacify the kapha dosha and clearing the srotavarodha has special importance in the management of Gridhrasi.

Hence in this study attempt is made to compare the effect of Rooksha sweda that is with Tusha which has kapha-vatahara properties followed with snigdha sweda by Katipichu with Dhanwantara taila which has vatahara, bhrimhana and sandhi prasadaka (tarpana) properties with and without Lumbar traction in Gridhrasi. By Vedanastapana, Vatakaphahara properties and also showed significant improvement in stiffness and radiating pain which are the cardinal symptoms of Gridhrasi.

II. OBJECTIVES OF THE STUDY

- To study the efficacy of Tusha pinda sweda followed by katipichu with Dhanwantara taila with Lumbar traction.
- To study the efficacy of Tusha pinda sweda followed by katipichu with Dhanwantara taila without Lumbar traction.
- To compare the efficacy of Tusha pinda sweda followed by katipichu with Dhanwantara taila with and without Lumbar traction in Gridhrasi.

III. MATERIALS USED FOR THE STUDY: -

3.1 Sources of Data:

Subjects were selected from the OPD and IPD, Shri Jayachamarajendra Institute of Indian Medicine Hospital, Bengaluru.

3.2 Method of Collection of Data:

40 Subjects who fulfill the inclusion criteria irrespective of gender, religion and economical status were randomly selected.

3.3 Diagnostic Criteria:

• Subjects with signs and symptoms of Gridhrasi.

SYMPTOMS:

- Ruk in the sphik, Kati,Prista,Uru,Janu,Jangha and Pada.
- Toda in the sphik, Kati,Prisat,Uru,Janu,Jangha and Pada.
- Stambha in the sphik, Kati,Prista,Uru,Janu,Jangha and Pada.
- Spandana in the sphik, Kati,Prista,Uru,Janu,Jangha and Pada

SIGNS:

- Straight Leg Raising Test in affected limb.
- Bowstring's sign

3.4 Inclusion Criteria

- Sign - Sakti utkshepa Nigrahana.
- Subjects with signs and symptoms of Gridhrasi.
- Subjects fit for bahya snehana and swedana karma.
- Subjects aged between 20-60 years who fulfill the diagnostic criteria.

3.5 Exclusion criteria:

- Subjects with congenital anomalies of the spine, spinal tuberculosis, neoplasm's traumatic fractures, epidermal abscess and others after proper clinical examinations and investigations.
- Subjects where surgical intervention is needed.
- Pregnant and lactating women.
- Subjects with systemic disorders which interfere with the line of treatment.

IV. STUDY DESIGN (INTERVENTION).

- 40 Subjects were divided into two groups, each group consisting of 20 subjects, selected randomly based on inclusion and exclusion criteria

Table 1: Treatment Schedule:

GROUP A		**GROUP B**	
For first 5 days	For following 10 days	For first 5 days	For following 10 days
Tusha panda sweda along with lumbar traction and neural mobilization.	Kati pichu with Dhanvantara taila along with Lumbar traction & neural mobilization.	Tusha pinda sweda	Kati pichu with Dhanvantara taila.

Assessment of subjective & objective parameters were done before treatment, after treatment (on 15th day of completion of the treatment).

Follow up on 30th day.

Total study duration -30 days

V. MATERIALS & DRUGS:

The present clinical study was carried out by utilizing following materials & drugs.

Tusha choorna, a steel vessel of the size two litres, a vessel having small holes for steam, khora cloth for preparing pottali (18×18 cms), a tying thread, a water bath to heat, a small towel, cotton roll, gauze roll, kindy, glass bottle (square shaped), dhanwantara taila, and lumbar traction machine.

5.1 Collection of Drugs:

1. Tusha purchased from the Rice mill, Kampli.

2. Dhanwantara taila purchased from SDM Pharmacy, Udupi.

VI. METHODOLOGY:

Group A

Procedure of Rooksha Pinda Sweda (Agnivesh, 2013c)Tusha pinda sweda

Poorva karma:

Preparation of the Pottali**:**

- The cotton cloth was spread on the working table, Tusha (Agnivesh, 2013c) was placed in the centre of the cloth, tied completely covering the Tusha to form a pottali. It should be neither tight nor loose, rather it should be stiff.
- The free end of the cloth was then folded and tied to form a handle. In this way two pottalis were prepared.

Preparation of Patient:

The procedure was explained in brief to the patient. The patient selected for Tusha choorna pinda sweda was made to lie on the table and kati pradesha and lower limbs exposed.

Pradhana karma:

The pottali was heated with the vapours of water bath and the temperature of the pottali was confirmed by touching it on the dorsum of the hand. It should be gently applied over lumbar region and on the lower limbs. This procedure is done by pressing and keeping over the said body parts. Temperature of the pottali should be maintained by heating with the vapours of water bath again and again throughout the procedure. Duration of procedure was 30-40 min. The same pottali was used for 3 days.

Paschat Karma:

- Patient was advised to cover the treated area with the towel immediately, so as to retain the temperature for 10 minutes. Then the area was wiped off with a dry towel.
- Advised to take hot water bath after 30 mins.
- Patient was advised to take warm and fresh food throughout the course of the treatment.
- Patient was also advised not to take abhishyandi ahara like dadhi etc and to avoid divaswapna.

Procedure of snigdha sweda: **Katipichu**

Preparation of the Pichu:

The Pichu (cotton pad) was prepared with the help of cotton and gauze roll having 20cm length and 10cm breadth, so that it was thick enough (Bread slice thickness i.e.,10mm) to hold 150ml oil.

Preparation of Patient:

The procedure was briefly explained to the patient and he was made to lie down in prone position. The patient was asked to drape the clothes so, that lumbosacral area could be exposed properly.

Pradhana karma:

The lumbosacral area was applied with Dhanwantara taila (Hari Sadashiv, 2017), by fingers in a very gentle way without giving much pressure. Dhanwantara taila (about 150ml) was taken in a small vessel and kept in hot water bath for indirect heat. The Pichu was then kept over lumbosacral region where pain and tenderness is present. Heated oil was slowly poured over pichu with kindy after checking the heat of the oil. Its temperature should be maintained around 40-420c. The glass bottle (square shaped) was taken, filled with hot water of tolerable temperature and kept over the pichu. By this way the constant temperature was maintained for a long time. The water in the glass bottle was changed two times in the interval of 15mins as water lost its heat. The procedure was continued for 30 to 40 minutes.

Paschaat Karma:

- After the prescribed time Pichu was removed and then the lumbosacral region was massaged gently with little oil which was left in that area.
- The patient was advised to take hot water bath after 30mins and avoid cold exposure.
- The patient was advised to take warm and fresh food throughout the course of the treatment.
- The patient was also advised not to take abhishyandi ahara like dadhi etc and to avoid divaswapna.

Every day after Kati Pichu all individuals of group A were subjected to Lumbar traction for 20 minutes.

Lumbar traction (Erhard, 1977):

Mechanical Lumbar traction set up:

- split table used to eliminate friction between body segments.
- Non-slip traction harness was used to stabilize trunk.
- Calculation of body weight was done first.
- Traction and stabilization harness were applied.
- On: Off ratio time setting was done.
- Tension Setting was done.
- Duration Setting was done.
- Alarm / safety switch was given to patient.
- Everything about procedure was explained to the patient.

Body positioning

- Supine position
- Produce posterior vertebral separation
- Optimal at 90^0 hip flexion.

Individuals in group A were given intermittent lumbar traction. The subjects were positioned in fowler's position. The thoracic segments were stabilized using the thoracic belt. The traction forces were applied to the lumbar region via the lumbar belt. The amount of weight applied to the traction was 1/3rd of the subject's body weight. Traction was applied for 10 days with one treatment session per day. Traction fore was applied with 20 seconds of hold time and 5 seconds of rest time for 20 minutes.

Neural mobilization.

PSLR Testing: For the patient's left symptomatic leg the investigating therapist stood next to patient's left limb in a stride standing position. The leg to be examined was fixed into knee extension by examiner's hand right hand placed on thigh proximal to knee joint. The leg was lifted (with hip flexed and knee extended) in neutral rotation and hip flexion was progressed until the range at which the patient first reports his/her symptoms (P1 response). An independent observer took a note of this angle. At this P1 range of motion, the examiner passively dorsiflexed the ankle to determine any aggravation in patient's symptoms. This was the baseline hip flexion ROM during neuro dynamic testing and was recorded before and after each treatment session for ten sessions.

PSLR Mobilization: For mobilization of the sciatic nerve, the examiner lowered the hip flexion angle, below the P1 range for 5-10 degrees till the symptoms disappeared, which was noted by an independent observer. The ankle joint was then taken passively into dorsiflexion and plantar flexion alternately within the available as the manoeuvre to mobilize the sciatic nerve tract. This oscillatory technique of nerve mobilization was done in 3 sets of 10 repetitions each with a gap of 10 seconds between each set. At the end of session, the examiner again performed the PSLR test after a gap of 5 minutes, to ascertain any change in the range at which P1 was reported. This hip flexion ROM was used to identify and calculate the difference in pre-test and post-test values at the end of each treatment session for this group.

Group B

Procedure of Rooksha Sweda:Tusha pinda sweda

Preparation of the Pottali**:**

- The cotton cloth was spread on the working table, Tusha was placed in the centre of the cloth, tied completely covering the Tusha to form a pottali. It should be neither tight nor loose, rather it should be stiff.
- The free end of the cloth was then folded and tied to form a handle. In this way two pottalis were prepared.

Preparation of Patient:

The procedure was explained in brief to the patient. The patient selected for Tusha choorna pinda sweda was made to lie on the table and kati pradesha and lower limbs exposed.

Pradhana karma:

The pottali was heated with the vapours of water bath and the temperature of the pottali was confirmed by touching it on the dorsum of the hand. It was gently applied over lumbar region and on the lower limbs. This procedure was done by pressing and keeping over the said body parts. Temperature of the pottali should be maintained by heating with the vapours of water bath again and again throughout the procedure. Duration of the procedure was 30-40 min. The same pottali was used for 3 days.

Paschat Karma:

- The patient was advised to cover the treated area with the towel immediately, so as to retain the temperature for 10 minutes. Then the area was wiped off with a dry towel.
- Advised to take hot water bath after 30mins.
- The patient was advised to take warm and fresh food throughout the course of the treatment.
- The patient was also advised not to take abhishyandi ahara like dadhi etc and to avoid divaswapna.

Procedure of Snigdha Sweda:Katipichu

Preparation of the Pichu:

The Pichu (cotton pad) was prepared with the help of cotton and gauze roll having 20cm length and 10cm breadth, so that it is thick enough (Bread slice thickness i.e.,10mm) to hold 150ml oil.

Preparation of Patient:

The procedure was briefly explained to the patient and he was made to lie down in prone position. The patient was asked to drape the clothes so, that lumbosacral area could be exposed properly.

Pradhana karma:

The lumbosacral area was applied with Dhanwantara taila by applying fingers in a very gentle way without giving much pressure. Dhanwantara taila (about 150ml) was taken in a small vessel and kept in hot water bath for indirect heat. The Pichu was then kept over the lumbosacral region where pain and tenderness is present. Heated oil was slowly poured over pichu with kindy after checking the heat of the oil. Its temperature was maintained around 40-420c. The glass bottle (square shaped) was taken, filled with hot water of tolerable temperature and kept over the pichu. By this way the constant temperature was maintained for a long time. The water in the glass bottle was changed two times in the interval of 15mins as water lost its heat. The procedure was continued for 30 to 40 minutes.

Paschaat Karma:

- After the prescribed time Pichu was removed and then the lumbosacral region was massaged gently with little oil which was left in that area.
- Patient was advised to take hot water bath after 30mins and avoid cold exposure.
- Patient was advised to take warm and fresh food throughout the course of the treatment.
- Patient was also advised not to take abhishyandi ahara like dadhi etc and to avoid divaswapna.

VII. ASSESSMENT CRITERIA:

The improvement in the patient was assessed mainly on the basis of relief in the cardinal signs & symptoms of the disease. To assess the effect of therapy, all the signs and symptoms were given scoring depending upon their severity as below:

7.1 Subjective Parameters: -The scores thus obtained were given grading as follows.

Table 2: Subjective Gradings of the Present Study:

RUK		TODA	
No Pain	Grade 0	No pricking sensation	Grade 0
Occasional pain	Grade 1	Occasional Pricking Sensation	Grade 1
Mild pain no difficulty in walking	Grade 2	Mild pricking sensation	Grade 2
Moderate Pain and slight Difficulty in Walking	Grade 3	Moderate Pricking Sensation	Grade 3
Severe pain and severe difficulty in walking	Grade 4	Severe Pricking Sensation	Grade 4
STHAMBA		SPANDANA	
No stambha	Grade 0	No spandana	Grade 0
Sometime for 5-10min	Grade 1	Sometime for 5-10min	Grade 1
Daily 10-30min	Grade 2	Daily 10-30min	Grade 2
Daily 30-60min	Grade 3	Daily 30-60min	Grade 3
Daily more than 1 hour	Grade 4	Daily more than 1 hour	Grade 4

7.2 Objective Parameters:

Table 3: Objective Gradings of the Present Study

SLR IN DEGREE	
>90	Grade 0
61-90	Grade 1
31-60	Grade 2
Upto 30	Grade 3

BOWSTRING SIGN	
Positive	Grade 1
Negative	Grade 0

VIII. OBSERVATION

AGE: Out of 40 subjects, 40%, maximum were in the age group of 31-40 years, 32.5% were in 51-60 years, 20% were in 41-50 years and 7.5% were in 20-30 years of age.
SEX: Among 40 subjects 22.5% were females and 77.5% were males.
RELIGION: In this study most of the subjects were Hindus (85%), 15% were Muslims. **OCCUPATION:** Maximum numbers of subjects i.e., 47.5% were Active, 25% were sedentary, 15% were Labor, 12.5% others.
SOCIO-ECONOMIC STATUS: Majority of the subjects belonged to middle class (60%). 27.5% to upper middle and 12.5% to poor class.
MARITAL STATUS: Among the 40 subjects, minimum of 12.5% were unmarried, **DOMICLE:** Among 40 subjects, maximum 57.5% were from urban while 42.5% were rural.
DIET: In this study, 75% subjects were of mixed diet and remaining 25% were of vegetarian diet.
KOSHTA: In this study, 67.5% subjects were of Madhyama Koshta, 22.5% were of Mridu Koshta and 20% were of Krura Koshta.
AGNI: In the present study, maximum number of subjects, 62.5% were having Samagni, 17.5% were of Mandagni and 15% were of Vishama agni and 5% were of Teekshna agni.
NIDRA: Maximum number of subjects (65%) belonged to Sama Nidra, followed by Alpa Nidra (30%) and Ati Nidra (5%) each.
SATVA: Maximum 70% subjects belonged to Madhyama Satva, 17.5% had Pravara Satva, while 12.5% had Avara Satva.
CHRONICITY OF THE DISEASE
Among 40 subjects maximum 13 (32.5%) had chronicity of >12months, 10 (25%) had chronicity of 3- 6 months, 09 (22.5%) had between 6-12 months and only 8 (15%) had between 0-3 months. **AHARAJA NIDANAS:** - 77.5% of the subjects consumed Sheeta Ahara, 72.5% consumed Rooksha Ahara, 70% were habituated to Katu, Tikta, Kashaya Rasa Ahara, 55% were habituated to Laghu Ahara, 10% were habituated to Upavasa.
VIHARAJA NIDANA: -Majority of the subjects indulged in Vata Prakopakara Viharas like, Bharavahana (37.5%), Yanam (30%), Vyayam (17.5) and Dhatuksayakaraka nidana (15%), Walking (10%), Ratrijagarana and walking each (7.5%).

MANASIKA NIDANA: -In (45%) of the subjects Chinta was observed, while (10%) had Bhaya, and (7.5%) had Krodha and (5%) had Shoka Nidana
MODE OF ONSET OF GRIDHRASI: -Majority i.e. (70%) of subjects were having mode of gradual onset and (30%) had sudden onset.
LIMB AFFECTED: Maximum (35%) of subjects had Right limb involvement, (32.5%) had Left limb involvement and (32.5%) had Bilateral limb involvement.
RUK (PAIN):-In this clinical study, 19 subjects (47.5%) were having pain of grade 3 and 17 (42.5%) pain of grade 4 and 4 (10%) had grade 1.
TODA: In this clinical study, 16 subjects (40%) were having grade 4 toda, 10 (25%) of grade 3 toda and 4 (10%) of grade 0 toda.
STAMBHA (stiffness): In this clinical study, 31 subjects (77.5%) were having grade 0 Stambha, 07 (17.5 %) of grade 2 and 2 (5%) having grade 1 i.e stiffness in various parts of low back.
SPANDANA: In this clinical study, 13 subjects (32.5%) were having grade 2 Spandana, 12 (30 %) of grade 3 and 5 (12.5%) having grade 1, 3 (7.5) of grade 4.
SLR: In this present study Maximum 47.5% Right SLR was between31-60 and 47.5% Left SLR was between 31-60. Details shown in Table No. 38 and Graph No. 24 and 25.
BOWSTRING SIGN: Maximum 65% of the subjects had positive sign in right leg and 55% positive sign in left leg.

Time of Rooksha Pinda Sweda (AVG): Among 40 subjects 21 underwent Rooksha pinda Sweda for about 35-40 mins, 13 for about 30-35mins, 6 for about 40-45mins and 1 for about 25-30mins.

Time of Katipichu(AVG): Among 40 subjects 18 underwent Katipichu for about 35-40 mins, 15 for about 30-35mins and 7 for about 40-45mins.

Weight for Lumbar traction: Among 20 Subjects 9 underwent Lumbar traction with weight of 20-25Kg, 8 with 25-30Kg, 2 with 15-20Kg and 1with 30-35Kg

IX. Results

Group A:

1. Statistically Highly Significant results were observed at the level of p value <0.001 in Subjective parameters Ruk, Toda, Stambha, Spandana.

2. Statistically Highly significant results were observed at the level of p value <0.001 in Objective parameters of SLRT Lt, SLR

Group B:

1. Statistically Highly Significant results were observed at the level of p value <0.001 in Subjective parameters Ruk, Toda, stambha, Spandana.

2. Statistically Highly significant results were observed at the level of p value <0.001 in Objective parameters SLRT Rt, SLRT Lt, Bowstring Rt.

3. Statistically Significant result was observed at the level of p value <0.05 in objective parameter of Bowstring Lt.

Comparative Effect of Treatments:

1. Comparative analysis of effect of treatment on Ruk between Group A and B, with t-value .817, the result is statistically Not Significant (P>0.05). There was 81.48% improvement in Group A and 70.37% improvement in Group B treatment individually.

2. Comparative analysis of effect of treatment on Toda between Group A and B, with t-value 1.267, the result is statistically Not Significant (P>0.05). There was 81.63% improvement in Group A and 72.916% improvement in Group B treatment individually.

3. Comparative analysis of effect of treatment on Stambha between Group A and B, with t-value 0.7766, the result is statistically Not Significant (P>0.05). There was 90.32% improvement in Group A and 83.87% improvement in Group B treatment individually.

4. Comparative analysis of effect of treatment on SPANDANA between Group A and B, with t- value 1.83, the result is statistically Not significant (P>0.05). There was 100 % improvement in Group A and 86.36% improvement in the Group B treatment individually.

5. Comparative analysis of effect of treatment on SLR RT between Group A and B, with T-value 0.5878, the result is statistically Not Significant (P>0.05). There was 51.16% improvement in Group A and 38.88% improvement in Group B treatment individually.

6. Comparative analysis of effect of treatment on SLR LT between Group A and B, with t-value 0.5878, the result is statistically Not Significant (P>0.05). There was 41.66% improvement in Group A and 40.54% improvement in Group B treatment individually.

7. Comparative analysis of effect of treatment on BOWSTRING RT Between Group A and B, with t-value 0, the result is statistically Not Significant (P>0.05). There was 92.30% improvement in Group A and 91.66% improvement in Group B treatment individually.

8. Comparative analysis of effect of treatment on BOWSTRING LT between Group A and B, with t-value 1, the result is statistically Not Significant (P>0.05). There was 100% improvement in Group A and 88.88% improvement in Group B treatment individually.

Overall Results:

In Group A, total 20 subjects were treated out of which, 10 subjects were markedly improved, 10 subjects were moderately improved.

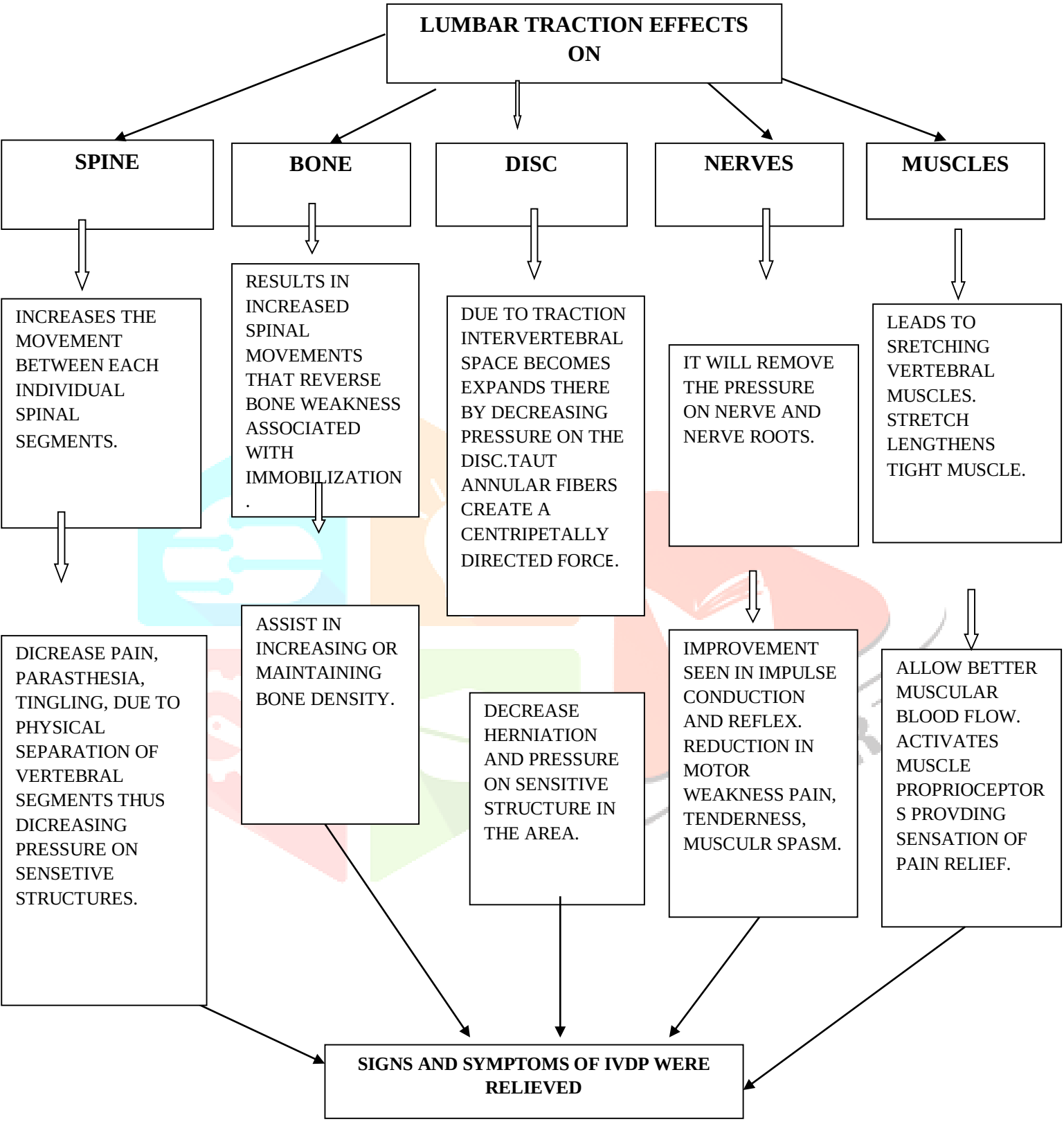
In Group B total 20 subjects were treated out of them, 14 subjects were markedly improved, 06 subjects showed moderate improvement.

X. DISCUSSION

In this era of modernization and fast life, changing of life style of human beings has created several disharmonies in the biological system. Advancement of busy professional and social life, improper sitting posture in office, continuous work in one posture and over exertion, lifting heavy weight, and jerking movements during travelling cause many disorders even among young and productive age groups. One among them is Gridhrasi.

Due to various nidanas when Vata is obstructed (Avruta) by Kapha, it gets vitiated leading to Margavaranajanya Samprapti of Gridhrasi and manifest the ruk, stambhadi laxanas in Trika pradesha. So Chikitsa should be based on Avarana concept and the Adhishtana, Avastha and Doshapradhanyata of Vyadhi. In the initial stages, more importance is given to Kapha as it is dominantly Sama Vata Lakshanas and in later stages to the vitiated Vata. Classically Rooksha poorvaka snigdha sweda is indicated in Gridhrasi. So sthanika dosha kapha is treated with rooksha sweda followed by agantuja dosha vata with snigdha sweda. Swedana comes under shadupkramas and classified as Rooksha and Snigdha sweda for kaphaja and vataja disorders respectively. Rooksha sweda which has kapha hara, stambhaghna, shothahara, shoolahara properties may pacify the kapha dosha and clears the srotavarodha which has special importance in the management of Gridhrasi. In this study Rooksha pinda sweda was administered with Tusha churna which have kapha-vatahara properties followed with snigdha sweda by Katipichu with Danwantaram taila which has vatahara,

Lumbar traction: Flow chart showing mode of action of Lumbar traction.



Mode of Action of Drugs:

Tusha is having qualities like Kaphahara, Shothahara, Stambhagna, Shoolahara. By Kaphahara property and also by increased temperature of Tusha it does the srotavaroda and clears the srotas and removes Gratitha Kapha and clears the way for Vata. By Shothahara and stambhagna properties it removes the shotha of paraspinal muscles and reduces the compression over the nerves, leads for reduction of pain. By stambhagna property it removes the stiffness in muscles leads for lightness in body parts.

Dhanwanrara Taila contains mainly Tila Taila, Dugda, Dasamula, Gokshura, Amalaki etc. drugs which possess Vata-Kaphahara property. Dhanwantara taila is based in Sesame oil, whch has Vata balancing properties, by these qualities it does the Vata shamana and reduces the shula.

Haritaki (Chebula Myrobalam) in Dhanwantara taila provides healing from exhaustion, amaciation, uterine, weakened pelvic muscles and ligaments, because of this here it helps in repair of paraspinal muscles, and ligaments affected discs.

Dhanwantar taila has **Tagar** (Indian Valerian) as one the ingredients.Tagara balances Apana Vayu and acts as a 'nerve tonic' Gentle and gentle massages with Dhanwantara Taila ensure that Apana Vayu balancing properties of Tagar are absorbed profoundly. Tagar's role as an effective nerve tonic, is enhanced by Bala (Indian Country Mallow).

Dhanwantara Taila has **Manjishtha(Indian Madder) and Ashwagandha(Winter Cherry)** which have anti-inflammatory and pain relieving properties. Because of these qualities it helps in relieving the stress on the muscle, can alleviate the pressure on the nerves and thus have a significant reduction in sciatica pain

XI. CONCLUSION:

Based on the overall conceptual analysis and observations made in this clinical study, the following conclusions can be drawn.

Gridhrasi cannot be correlated to a single condition but to a Spectrum of conditions of Sciatica, Improper care of spine and micro trauma to spine are the major causes observed in this study

1. Gridhrasi is a disease commonly seen in society as a prominent problem.

2. Tusha used for Rooksha Pinda Sweda is more Rooksha than other Dravya's, and was more beneficial in relieving signs & symptoms as most of the patients were having Kaphavataja Gridhrasi.

3. In this study modified method of Katipichu was adopted by using glass bottle, which was more effective than normal method of practicing Katipichu, as it maintains constant temperature, and covers more area of tenderness.

4. No complication of Rooksha Purvaka Snigdha Sweda was observed during the study

5. By this study it can be concluded that Rooksha Purva Snigdha Sweda releases the spasm of the muscles and tendons caused by prolapsed disc and thus relieves from localized pain, stiffness and radiating pain which are the cardinal symptoms of sciatica with IVDP.

6. Lumbar Traction does the distraction or separation of the vertebral bodies, a combination of distraction and gliding of the facet joints, tensing of the ligamentous structures of the spinal segment, widening of the inter vertebral foramen, straightening of spinal curves, and stretching of the spinal musculature which results in reduction of the symptoms of sciatica (IVDP).

7. Neural mobilization technique is an effective intervention for reduction of pain, functional disability and enhancing physiological function of the nerve root in low back pain with lumbosacral radiculopathy.

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