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A CLINICAL STUDY TO EVALUATE THE ROLE OF *RASNA-BALA-ASHWAGANDHA KASHAYA* AND *KARMA BASTI* IN THE MANAGEMENT OF *GRIDHRASI* W.S.R. TO LUMBAR DEGENERATIVE DISC DISEASE

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ABSTRACT

Objective: *Gridhrasi* is one of the most obstinate and prominent disorders amongst the 80 types of *Nanatmaja Vatavyadhi*. It is a painful condition, in which the person cannot sit and walk properly. The socio-economical condition allows the majority of population to lead sedentary lifestyle that influences vertebral discs to develop degeneration. In Allopathic science, it is analogous to Sciatica syndrome (LDDD) in which no such medical treatment except surgery is available. **Method:** Total 60 patients of *Gridhrasi* were selected from OPD of I.P.G.A.E & R at S.V.S.P Hospital and J.B.R.S.A.M.C.H by considering inclusion & exclusion criteria. They were divided into two groups. *Rasna-Bala-Ashwagandha* as *Kashaya Pana* was given in group A, where as B was treated with *Basti* and *Pana* by *Same Kashaya*. **Result:** Very significant result was found in Group B in all signs and symptoms**.** Only *Kashaya* in Group A was also found effective.

KEYWORDS: LDDD**,** *Gridhrasi, Basti, Vatavyadhi.*

INTRODUCTION

Fig no- 1: ***Gridhrasi.***

Gridhrasi comes under *Nanatmaja Vatavyadhi*, which is produced due to vitiation of *Vayu*, yet few conditions are there where *Kaphanubandha* is also found. *Gridhrasi* is such type of disease. The nomenclature of this very disease clearly indicates the gait of the patient, patient walks like a bird *Gridhra* (vulture) and his legs become tense and slightly curved. Due to resemblance with the gait of a vulture, term '*Gridhrasi*' might have been given. It is a painful condition, in which the person cannot sit and walk properly; and it hampers his normal activity. *Gridhrasi* is characterised by *Ruk* (Pain), *Toda* (Pricking pain), *Stambha* (Stiffness) and *Muhuspandan* (Twitching pain), which are manifested from the waist, hip, back of the thigh, knee, calf and foot.[1] *Ruksha, Sheeta, Alpa, Laghu* foods and *Vata* aggravating behaviours are responsible to manifest this disease.[2] Increase of *vata* enhances degeneration of disc, bones as well as *Snayu* by diminishing the qualities of *Kapha.* If the pathology of degenerative disc disease is scrutinised properly, it will be seen that the *Snigdha Guna* (i.e. *Jala Bhaga*) is reduced in the nucleus pulposus. In sciatica syndrome other than LDDD or osteological involvement, a major cause is found due to demyelination of the nerve, which is predominant with *Jala* and *Parthiva Guna* and *Meda (Dhatu).* Intake of the afore mentioned factors diminishes *Kapha* as well as *Meda,* producing *Gridhrasi* like symptoms. In this competitive world, people are running beyond success and keep themselves busy with strenuous work and travelling in daily schedule. Moreover, the socio-economical condition allows the majority of population to lead sedentary lifestyle resulting in lack of physical activity. Furthermore, the sedentary lifestyle leads to reduced muscular power and strength and reduced ability of the vertebral disc to maintain a normal concentration of water. The level of hydration of the nucleus pulposus influences development of degeneration and overload lesions result in the development of LBP. It is also found that sedentary lifestyle may be a risk factor for vertebral disc herniation. With the lifestyle changes, low backache is very common complaint nowadays in every age group. In this study, persons having *Gridhrasi* with LDDD origin only are considered. In Allopathic medical science, no such medical treatment is available except surgery for LDDD. Several steroidal and non-steroidal anti inflammatory drugs are used for symptomatic relief only. As a result, several adverse effects are being observed.

Ayurvedic approach towards this disease is holistic. In Ayurveda, body, mind and consciousness work together in maintaining balance and thus encourage in the maintenance of health through the balance in one's life by right thinking, proper diet, good lifestyle and use of herbs. *Kashaya Paana* and *Basti* are two different types of treatment procedures; use

of *Rasna, Bala, Ashwagandha* in these dosage form may be effective in *Gridhrasi*. In this study, these three drugs have been used as oral administration as well as in *Basti* preparation.

AIM AND OBJECTIVES

- To find out a safe, effective, easily available, curative regimen against the *Gridhrasi* or LDDD.
- To evaluate & correlate *Gridhrasi* with the Lumbar Degenerative Disc Disease by using subjective and objective parameters.
- To compare the effectiveness of *Shamana* therapy with *Rasna-Bala-Ashwagandha Kwatha* & *Karma basti* with *Rasna-Bala-Ashwagandha Niruha* & *Rasna-Bala-Ashwagandha sadhita Tila Taila Anuvasana* in the treatment of *Gridhrasi.*

MATERIALS AND METHODS

The study was carried out in two parts –

1. Literal part and
2. Clinical part.

1. Literal part

For literal part, Ayurveda samhita, Samgraha grantha, authentic texts, Allopathic texts, Physiology, Pathology, and Radiology were consulted. Some journals and papers from internet were also studied.

2. Clinical part

Patients were selected from OPD of Institute of Post Graduate Ayurvedic Education and Research at Shyamadas Vaidya Sastra Pith Hospital and J. B. Roy State Ayurvedic Medical College and Hospital by considering inclusion & exclusion criteria. Based on proper history taking, clinical examination, judicious use of laboratory investigations, clinical examination and case history taking, the participants were subjected to study protocol.

Study design

The Patients were selected from the OPD of two afore mentioned Hospitals. The Study area was surrounding areas of Rajabazar and Shyambazar.

- **Trial period:** 1 month for each patient.
- **Study design:** 18 months.
- **Sample size:** 60 patients.

- **Sample design:** All selected patients were divided into two groups (Group-A and B), each containing 30 patients.
  - **A** group was treated by *Rasna-Bala-Ashwagandha Kashaya.*
  - **B** group was treated with *Rasna-Bala-Ashwagandha kashaya and Basti.*

➢ **Inclusion criteria**

- Age group - (18-60) yrs.
- Patients having *Ruk* (Pain), *Toda* (Pricking sensation), *Stambha* (Stiffness), *Spandana* (Twitching), *Aruchi* (Aversion of food), *Tandra* (sleepiness), *Gaurava* (Heavyness) etc.
- SLR test where found <40 degree
- Knee jerk, Ankle jerk, where exaggerated, diminished or absent.
- Those who are willing to undergo the therapy.

➢ **Exclusion criteria**

- Age below 18 yrs & above 60 yrs.
- Low back pain with the evidence of medical & surgical emergencies like Malignancy, CKD, Cardio-vascular disease, Malignant hypertension, Insulin dependent DM, Tuberculosis, Rheumatoid arthritis
- LDDD complicated with DM, Essential HTN with IHD, Post CVA, Pregnancy, Cauda Equina Syndrome, CRF.

Diagnosis of the patients

- On the basis of Scoring method as per PARGOTRA et al.2011
- Clinical symptoms like *Ruk* (Pain), *Toda* (Pricking sensation), *Stambha* (Stiffness), *Spandana* (Twitching), Duration of LBP, Radiation of pain, Numbness in lower extremities.
- Routine hematological investigations along with radiological investigations (X-ray L/S spine-AP/LAT or MRI of L/S spine) were carried out whenever found necessary.
- The effectiveness of the therapy assessed before and after treatment and analyzed by using appropriate statistical methods and conclusion drawn.

PREPARATION OF MEDICINE

- ***Kashaya* Preparation**[3]

One *pala* of coarsely powdered drug was boiled with 16 parts of water in an earthen pot, over a mild fire untill the liquid is reduced to 1/8 of the original quantity. In this study, patients

were advised to boil 15 gm *Yavakut* of *Rasna-Bala-Aswagandha* (equal amount) with 240 ml of water and to reduce upto 30ml. This is for oral intake.

Fig no 2: Preparation of *Kashaya.*

- ***Taila* Preparation: (For *Anuvasana*)**

The oil was prepared as per *Sneha Paka Vidhi*. According to *Charaka*[4] and *Sharangadhara*[5], the *Sneha* (*Taila*) was taken four times of *Rasna-Bala-Ashwagandha kalka*, then it was boiled with 16 times of *Kwatha* made of *Rasna-Bala-Ashwagandha*. For *Kwatha* preparation, the drugs and water were taken as per rule as mentioned in *Kwatha* preparation.[5]

Fig no 3: Preparation of *Taila.*

Assessment of overall response

Overall responses has been observed on the basis of clinical improvement has been marked as follows: **(0-25)% = Poor response; (25-50)% = Moderate response; (50-75)% = Good response; Above 75% Excellent response.**

RESULT

The result of the therapies are assessed as per PARGOTRA et al. 2011, an imaginary scoring system has been followed in the clinical study. Scoring by 0, 1, 2, 3 (like No – 0, Mild – 1, Moderate – 2, and Severe –3), have been followed over the subjective parameters like *Ruk, Toda, Stambhana* etc. Some objective parameters like Ankle jerk and Knee jerk have also been employed through this scoring like Normal – 0, Diminished – 1, Markedly diminished – 2, Absent– 3; and in case of SLR test scoring method, 91 degree and above – 0, (71– 90) degree – 1, (51– 70) degree – 2 and (31 – 50) degree – 3, was employed. The total data of before treatment as well as after treatment has been preserved. The scoring of afore mentioned parameters have been performed before treatment, during treatment and after treatment. In present work, the scoring of before treatment and after treatment was calculated mathematically and finally statistical analysis was done to evaluate the significance the efficacy.

The effects of therapies are tabulated in table no 1 & 2 as follows:

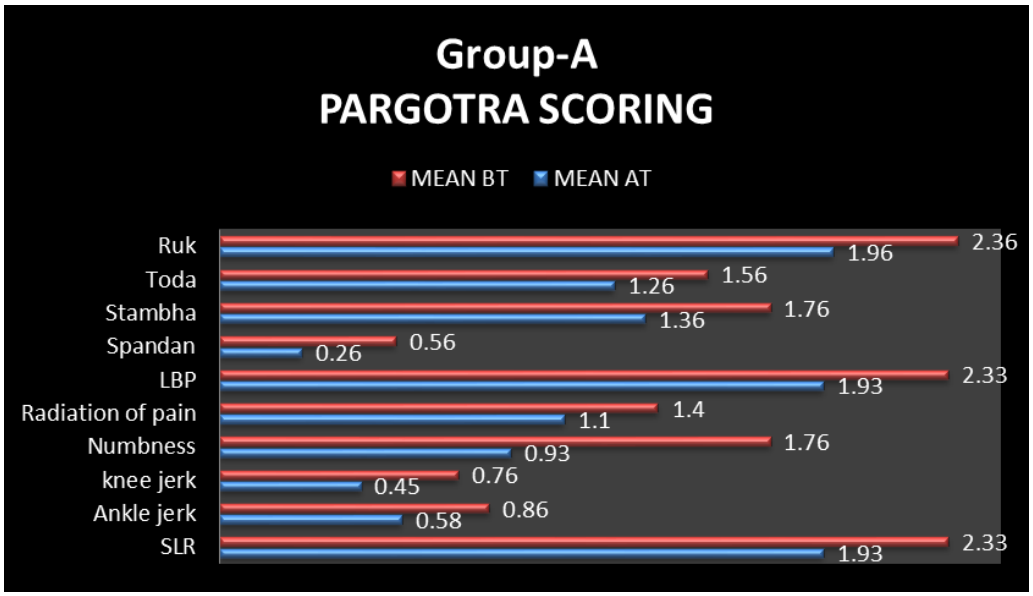
Table no 1: Effect of Therapy in Group A(n=30).

	GROUP – A								
	MEAN BT	**MEAN AT**	**MEAN**	**S.D**	**S.E**	**'t'**	**% of relief**	**Df**	**Significance ('p')**
Ruk (n=30)	2.36±0.49	1.96±0.61	0.40	0.56	0.10	3.89	17%	29	< 0.01
Toda (n=30)	1.56±0.58	1.26±0.40	0.17	0.60	0.10	2.38	19%	29	< 0.01
Stambha (n=30)	1.76±0.52	1.36±0.46	0.37	0.48	0.08	4.38	22.7%	29	< 0.01
Spandana (n=30)	0.56±0.41	0.26±0.28	0.10	0.24	0.04	1.23	53.6%	29	< 0.01
LBP (n=30)	2.33±0.37	1.93±0.30	0.40	0.56	0.10	3.89	17.2%	29	< 0.05
Radiation of pain (n=30)	1.40±0.54	1.10±0.90	0.17	0.60	0.10	2.38	21.4%	29	< 0.05
Numbness (n=30)	1.76±0.52	0.93±0.40	0.37	0.48	0.08	4.38	47.2%	29	< 0.01
Knee jerk (n=30)	0.76±0.70	0.45±0.52	0.07	0.21	0.03	4.87	40.8%	29	< 0.01

Ankle jerk (n=30)	0.86±0.64	0.58±0.34	0.10	0.24	0.04	1.23	32.6%	29	< 0.01
SLR (n=30)	2.33±0.37	1.93±0.40	0.67	0.68	0.02	2.66	17.2%	29	< 0.02

Table no 2: Effect of Therapy in Group B (n=30).

	GROUP – B								
	Mean BT	**Mean AT**	**Mean**	**S.D**	**S.E**	**'t'**	**% of relief**	**Df**	**Significance ('p')**
Ruk (n=30)	2.83 ±0.37	1.43 ±0.77	1.40	0.96	0.17	7.91	49.5%	29	< 0.001
Toda (n=30)	2.06 ±0.58	1.13 ±1.40	0.93	1.04	0.19	4.87	45%	29	< 0.001
Stambha (n=30)	2.26 ±0.52	1.33 ±1.06	0.93	1.14	0.20	4.47	41.15%	29	< 0.001
Spandana (n=30)	0.86 ±0.81	0.26 ±0.58	0.60	0.77	0.14	4.26	70%	29	< 0.001
LBP (n=30)	2.83 ±0.37	1.43 ±0.77	1.40	0.96	0.17	7.91	49.5%	29	< 0.001
Radiation of pain (n=30)	2.10 ±0.54	1.13 ±1.04	0.96	1.06	0.19	4.96	46.2%	29	< 0.001
Numbness (n=30)	2.26 ±0.52	1.33 ±1.06	0.93	1.14	0.20	4.47	41.2%	29	< 0.001
Knee jerk (n=30)	0.86 ±0.89	0.40 ±0.67	0.46	0.62	0.11	4.06	53.5%	29	< 0.001
Ankle jerk (n=30)	1.16 ±0.74	0.33 ±0.54	0.83	0.59	0.10	7.70	71.5%	29	< 0.001
SLR (n=30)	2.83 ±0.37	1.43 ±0.77	1.40	0.96	0.17	7.91	49.5%	29	< 0.001



DISCUSSION

In present observation, 100% patients had the complaint of *Ruk* (pricking pain), *Toda* (piercing pain), *Stambha* (stiffness), *Sanchari Vedana* (radiation of pain), *Supti* (numbness) and *Sthanik Vedana* (LBP). 55.88% of patients experienced *Spandana.* So, in this finding, it is clear that *Ruk* (pricking pain), *Toda* (piercing pain), *Stambha* (stiffness), *Sanchari vedana* (radiation of pain), *Supti* (numbness) and LBP are the commonest feature of *Gridhrasi*. *Spandana* is less commonly found symptom than other features.

Total patients were divided into two groups. In group - A, 30 patients have completed their clinical trial and was treated with only oral medicine *Rasna- Bala-Ashwagandha kwath* – 30 ml twice daily before food for 1 month. They showed reliving percentage of their subjective parameters like *Ruk, Toda, Stambha, Spandan,* LBP, Radiation of Pain, Numbness, as 17%, 19%, 22.7%, 53.6% 17.2%, 21.4%, 47.2% respectively and statistically 'P' value was found significant, i.e <0.01, <0.01, <0.01, <0.01, <0.05, <0.05, <0.01 respectively. In case of objective parameter of group – A, patients showed relief over Knee Jerk, Ankle Jerk and SLR test as – 40.8%, 32.6%, and 17.2% respectively and statistically 'P' value was found significant, i.e. <0.01, <0.01, <0.02 respectively.

In case of group - B, the total number of 30 patients have completed the trial with the oral medicine *Rasna-Bala-Ashwagandha kashaya* - 30 ml twice daily before food and *Karma Basti* (*Niruha* -12, *Anuvasana* -18) for one month. They showed reliving percentage of their subjective parameters like *Ruk, Toda, Stambha, Spandan,* LBP, Radiation of pain, Numbness- as 49.5%, 45%, 41.15%, 70%, 49.5%, 46.2%, 41.2% respectively and statistically 'P' value was found highly significant i.e. <0.001, <0.001, <0.001, <0.001, <0.001, <0.001, <0.001 respectively. In case of objective parameter of group – B, patients showed relief on Knee Jerk, Ankle Jerk and SLR test as - 53.5%, 71.5%, 49.5% respectively and statistically 'P' value was found highly significant i.e. <0.001, <0.001, <0.001 respectively.

It is evident from the statistical data that the occurrence of relief is much better in group – B in comparison to the relief achieved in group – A; and in overall response, it is found that, among 30 patients of group-A, 4 patients (13.3%) got excellent relief, 46.66% got good effect, 7 patients (23.33%) got moderate effect and only 5 patient (16.66%) got poor effect. So, it can be that, *Rasna-Bala-Ashwagandha Kwatha* in oral use possess good reliving effect on the signs and symptoms of *Gridhrasi* (LDDD), which is statistically significant.

It is very interesting to note that, group – B patients, who were treated with *Rasna-Bala-Aswhagandha Kashaya* as well as *Karma Basti* showed much better response in comparison to group – A patients. The excellent effect was achieved in 7 patients (23.32%), good effect in 18 patients (60%), moderate effect in 5 patients (16.66%) and most fascinatingly no poor effect was noticed in this group.

Rasna-Bala-Ashwagandha kashaya (orally in group-A) showed remarkable effect on *Spandana* (53.6%) and Numbness (47.2%) in this study. *Stambha* and *Supti* i.e. numbness are occurred due to involvement of *Kapha* and *Vayu*. As *Ashwagandha* is *Vata-Kapha shamaka*[7], *Rasayani*[8], *Virya prada*[9], *Kshaya nashaka*[10]; *Bala* is *Vatashamak*[11], *Pushtikaraka*[12], *Virya prada*[13], *Dhatu vardhaka*[14], *Kshaya nashaka*[15] and *Rasna* is *Vata-Kapha hara*[16], *Amapachaka*[17]. So, the combine effect of these three drugs in a form of *Kashayam* becomes able to mitigate the complaints like *Stambha, Spandana*, Numbness and Radiation of pain besides *Ruk, Toda* like features.

In group - B, *Karma Basti* was added with the oral medicine. This group showed much relieving effect over the complaint *Spandana* (70%), *Ruk* (49.5%), LBP (49.5%), Radiation of Pain (46.2%), *Toda* (45%), *Stambha* (41.15%) and Numbness (41.2%). The fact lies on the fact that *Basti* is the best therapy to mitigate *Vataja* disorders. *Anuvasana basti* provides *Snigdhata* to combat *Ruksha guna* of *Vata*, and it offers nutrition to the *Dhatu* by its *Brimhana Guna*. *Niruha basti* helps to nourish *Sira, Snayu, Asthi, Sandhi* adjacent to *Kasheruka* by its *Sroto shuddikara* property. So, the *karma basti* worked over *Vata, Vata-Kaphavrita Apana Vayu, Vyana vayu*, concerned *Srotos* and *Dhatus*. Moreover its *rasayana* (nourishing) effect may rejuvenate the *srotos* as well as *Koshthanga*. As the disease *Gridhrasi* (LDDD) is manifested due to the involvement of *Vata* as well as *Vata-Kapha*, the combination of *Rasna-Bala-Ashwagandha* in the form of *Kashaya* in *Niruha* as well as in the form of *taila* in *Anuvasana* might be responsible for the better response in-group B.

In objective parameters, Knee Jerk, Ankle Jerk and SLR test were carried out. In group A, 40.8% improvement was seen in Knee Jerk where as in group B, it was 53.5%. In case of Ankle Jerk, improvement in group A is 32.6% and in group B is 71.5%. 17.2% improvement was seen in group A in SLR test, where as the improvement of that in group B was 49.5%. The better efficacy in group B in all objective parameters supports the fact that, the efficacy of the drugs and therapies in group B was more potent to combat the disease entity. The reason behind this has already been discussed in above paragraph.

CONCLUSION

Gridhrasi of LDDD variety is a degenerative disorder and it is manifested due to *Vata* as well as *Kapha* as *Anubandha*. *Rasna-Bala-Aswagandha* have a remarkable effect on LDDD, as *Ashwagandha* is *Vata-Kapha shamaka, Rasayani, Virya prada, Kshaya Nashaka, Bala* is *Vatashamak, Pushtikaraka, Virya Prada, Dhatu Vardhaka, Kshaya Nashaka* and *Rasna* is *Kapha- Vata jit, Amapachaka.* So, the combined effect of these three drugs in *Kashaya* form and *Basti* becomes able to mitigate the complaints. Study in a large sample is required to evaluate the exact efficacy.

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