

CLINICAL EVALUATION OF TRAYODASHANGA GUGGULU AND MUSTADI YAPANA YOGA BASTI IN GRIDHRASI

By: Dr. Hariprasad K. M.D.(Ayu)

Guide: Prof. Dr. Shripathi Acharya M.D.(Ayu) Ph.D.

HOD PG Dept. Kayachikitsa, MIAMS, Manipal.

Co-guide: Dr. Guruprasad G. M.D.(Ayu)

PG Dept. Panchakarma, MIAMS, Manipal.

Abstract:

The most common disorder affects the movements of the leg in 30-60years of mans' life is Gridhrasi(Sciatica Syndrome). Lumbar disc lesions are responsible for the disorder and observed about 25% loss of work affects social and economic position of the individual and family. As rational curative medicines are not known, repeated uses of analgesics for prolonged time associated with more serious and irreversible reaction. Now the whole scientific world has high hopes in Ayurveda due to its safe and effective management. One of such efforts conducted in the OPD and IPD of MIAMS, Manipal with 3 trial groups A-Trayodashanga guggulu, B-Mustadiyapana yogabasti and C-Combined Trayodashanga guggulu and Mustadiyapana yoga basti for the period of 10 weeks in 30 diagnosed gridhrasi patients irrespective of their sex and age group18-60.

Study concluded all the 3 groups are effective treatment in Gridhrasi and combined therapy Trayodashanga guggulu and Mustadiyapana yoga basti was more effective and showed highly significant results in clinical symptoms of Gridhrasi and also provided highly significant result in improving Greenough & Fraser scoring method, SLR test (Straight leg raising test), Sugar baker & Barofsky clinical mobility scale and Oswestry disability assessment questionnaire.

Key words: Gridhrasi, Trayodashanga guggulu, Mustadiyapana yoga basti.

Introduction: Every man derives the happiness and benefit of his life through locomotion. Since human origin in earth, man is struggling for food and health. A normal daily life without this is impossible for any human being from the time immemorial to ultra-modern

civilization of life. If power of locomotion is affected, he not only feels himself a miserable creature but also becomes a burden to his family and society. The most common painful disorder effects the movement of the legs known since Vedic period¹.

Lumbar disc lesion is more common painful condition affecting lower-back² area radiates downwards to one or two legs known as Gridhrasi³ and Ayurveda is the most trusted among present day medicines available. The number of Ayurvedic formulations and single drug therapies are clinically evaluated in various parts of the world. So as to find out cost effective and safe oral drug formulation and therapies, Trayodashanga guggulu⁴ and Mustadiyapana yoga basti⁵ have been selected for the clinical trial in Gridhrasi.

Materials and Methods:

1. Source of data: Patients of Gridhrasi fulfilling the Criteria of diagnosis were selected irrespective of their sex from O.P.D and I.P.D of Muniyal Institute of Ayurveda Medical Sciences Manipal. Out of 39 selected patients, 9 patients were dropouts in the initial stages of the study remaining 30 patients completed the course of treatment. The dropouts were not included.

2. Criteria for selection of patients: The patients presenting with the signs and symptoms of Sciatica and Gridhrasi according to Ayurvedic texts, irrespective of their sex, age 18-60 years were selected and clinical symptoms like Stambha, Ruk, Toda, Gruhnam, Spuranam, Gouravam, Aruchi, Tandra and straight leg-raising (S.L.R) test taken as diagnostic criteria for the present study.

(a) Inclusion Criteria:

1. Patients presenting with Pratyatma Lakshanas of Gridhrasi.
2. Patients presenting with signs and symptoms of Sciatica.
3. Patients between the ages of 18 to 60 years old.
4. Either the sex Male and Female

(b) Exclusion Criteria:

1. Congenital deformities of the spine.
2. Trauma or injury to the spine.
3. Neoplastic condition of the spine.
4. Leprosy
5. Diabetes mellitus
6. Pregnancy
7. Infections of the spine.
8. Age below 18 years and above 60 years.

9. Patients with any other systemic illness.

(c) Laboratory investigations: X-ray & MRI LS spine as per need. Hematological investigations CBC, CRP, RA, PPBS, Lepromin test, Urine analysis and Microscopic to rule out other conditions.

3. Study design: Randomized single blind comparative clinical study with pretest and posttest design is adopted.

4. Treatment schedule: Diagnosed Gridhrasi patients were randomly categorized in three therapeutic groups for 10 weeks duration regularly. **Group A** 12 patients were administered Trayodashanga Guggulu 500 mg 2 tablets thrice daily along with sukoshna water as anupana in Adhobhakta sevana kala for the period of 6 weeks. In this group two patients discontinued during the course of the therapy. **Group B** 15 patients were administered Yoga basti – starting with Mahamasha taila⁶ Anuvasana basti then alternative Mustadiyapana basti on 2nd, 4th and 6th day and Mahamasha taila Anuvasana basti on 3rd, 5th, 7th and 8th day, 5 patients were dropouts. **Group C** 12 patients were administered Trayodashanga guggulu 500 mg 2 tablets thrice daily along with sukoshna water as anupana in Adhobhakta sevana kala for the period of 6 weeks, then Yoga basti - starting with Mahamasha taila Anuvasana basti then alternative Mustadiyapana basti on 2nd, 4th and 6th day and Mahamasha taila Anuvasana basti on 3rd, 5th, 7th and 8th day, 2 patients were dropouts.

5. Criteria for assessment: Subjective Parameters: The improvements were assessed on the basis of relief in the signs and symptoms like Stamba, Ruk, Toda, Grahnam, Spuranam, Aruchi, Tandra, Gouravam.. To analyze, the efficacy of the therapy, statistically marks were given to each symptom according to severity present before and after the treatment. **Objective Parameters:** Greenough & Fraser scoring method, SLR test, Sugar baker & Barofsky clinical mobility scale and Oswestry disability assessment questionnaire.

6. Criteria for assessment of overall effect of therapy: 1. Complete relief- 100% relief in the subjective parameters along with 75 scored in Greenough & Fraser scoring method, 90° leg rising in SLR test, 24 scored in Sugar baker & Barofsky Clinical Mobility Scale and 100% scored in Oswestry Disability Questionnaire. 2. Marked improvement- more than 75% improvement subjective and objective parameter. 3. Moderate improvement- more than 50% improvement in subjective and objective parameters. 4. Improvement-25-50% improvement in subjective and objective parameters. 5. Unchanged-less than 25% improvement in subjective and objective parameters were considered.

Observations:

Demographic data: Maximum number of patients (76.67%) were in the age group of 39-60 years, Females (70%), Hindu (90%), House wives (50%), Married (93.33%), Middle socio-economic status (60%), Mixed dietary pattern (83.33%), Negative family history (66.67%), Less than one year chronicity (60%).

Dashavidha pariksha: In the present study maximum number of patients were having Vatakaphaja prakrithi (46.67%), Madyama sara (93.33%), Madhyama samhanana (96.67%), Madhyama satwa (93.33%), Madhyama Abhyavarana Shakti (90%), Madhyama ahara jarana shakthi (86.67%), Avara vyayama shakthi (100%), Pravara pramana (56.67%), Madhyama vaya (100%).

Nidana: Almost all the patients using vehicles to travel to reach their working place so, Rathaticharanam was found in 93.33%, Athishrama were found in 90.00%, Dukhaasayya were found 86.67% Athigamana and Dukhaasana were in 83.33%, Adhyashana were found in 80%, Alpashana found 76.66 Sheeta ahara found in 70%, Rukshanna 66.67%, Katu anna 60% and of patients Kashaya anna, Laghu anna and manasika nidana were found in 13.33% and 10% of patients were Thiktanna, Vishtambi anna and Abojana in nature. Vatakara vihara was observed in 66.66%, vatakara ahara observed in 63.33%.

Result:

Effect of Trayodashanga guggulu: In subjective parameters Trayodashanga Guggulu provided 34.48% relief in Toda which is moderate significant result $p < 0.010$, Stambha, Gruhnam and Spuranam shows 32.00%, 40.00% and 52.17% relief respectively with moderate significant result $p < 0.025$ where as in Ruk and Aruchi provided 31.03% and 44.44% relief respectively with moderate significant result $p < 0.05$. In objective parameters Greenough & Fraser scoring method and Sugarbaker & Barofsky clinical mobility scale showed highly significant relief ($p < 0.005$) by 64.01% and 39.66% respectively whereas Oswestry disability questionnaire showed moderate significant relief ($p < 0.01$) by 32.15%.

Effect of Mustadiyapana yoga basti: In subjective parameters Mustadi yapana yoga basti provided 33.33%, 46.43% and 35.00% relief in Ruk, Toda and Gruhnam by respectively, which is highly significant relief $p < 0.001$. In Spuranam relief was 48.00% which was highly significant $p < 0.005$. In Stambha and gouravam provided moderate significant relief ($p < 0.01$) by 41.66% and 38.89% respectively. In objective parameters Greenough & Fraser scoring method, Sugarbaker & Barofsky clinical mobility scale and

Oswestry disability assessment questionnaire showed highly significant relief ($p < 0.001$) by 52.86%, 35.03% and 24.86% respectively, whereas SLR test Rt. $P < 0.05$ by 27.71%, moderate significant result.

Effect of combined therapy Trayodashanga guggulu and Mustadiyapana yoga basti: In subjective parameters combined therapy of Trayodashanga guggulu and Mustadi yapana yoga basti provided highly significant relief ($p < 0.001$) in Stambha, Ruk and Toda by 78.26%, 54.84% and 60.00% respectively. In Gruhnam, Spuranam, Tandra and Gouravam highly significant relief ($p < 0.005$) by 57.14%, 72.73%, 63.16% and 65.00% respectively, whereas Aruchi ($p, 0.025$) was 76.47% relief. All the objective parameters Greenough & Fraser scoring method, Sugarbaker & Barofsky clinical mobility scale Oswestry disability assessment questionnaire and SLR test Rt.& Lt. showed highly significant relief ($p < 0.001$, in SLR Lt. $p < 0.005$) by 73.96%, 47.62%, 43.26%, 57.14% and 68.57% respectively.

EFFECT OF TRAYODASHANGA GUGGULU & MUSTADIYAPANA YOGA BASTI AFTER 10 WKS THERAPY

| Sl.No | Objective parameter | | Mean score | | M.D. | % Relief | S.D (±) | S.E (±) | t value | p value |
|-------|---|-------|------------|------|------|----------|---------|---------|---------|---------|
| | | | BT | AT | | | | | | |
| 1. | SLR test | Right | 3.5 | 1.5 | 2.0 | 57.14 | 1.09 | 0.35 | 5.71 | <0.001 |
| | | Left | 3.5 | 1.1 | 2.4 | 68.57 | 2.01 | 0.64 | 3.75 | <0.005 |
| 2. | Greenough & Fraser scoring method | | 10.7 | 41.1 | 30.4 | 73.96 | 6.10 | 1.93 | 15.75 | <0.001 |
| 3. | Sugarbaker & Barofsky clinical mobility scale | | 11.0 | 21.0 | 10.0 | 47.62 | 3.63 | 1.15 | 8.69 | <0.001 |
| 4. | Oswestry disability assessment questionnaire | | 71.2 | 40.4 | 30.8 | 43.26 | 10.78 | 3.41 | 9.03 | <0.001 |

Overall effect of the therapy: In group A-Trayodashanga guggulu, 50.00% of patients were assessed under improved category, 10.00% each were assessed under marked improvement and moderate improvement category and 30.00% showed Unchanged. Nobody included under complete relief category. In group B-Mustadiyapana yoga basti, 90.00% of patients were assessed under improved category, 10.00% were showed Unchanged. Nobody included under complete relief, marked improvement or moderate improvement category. In group C-combined therapy of Trayodashanga guggulu and Mustadiyapana yoga basti, 50.00% of patients were assessed under moderate improvement category, 40.00% were assessed under improved category and 10.00% were showed marked improvement category. Nobody included under complete relief or unchanged category.

TOTAL EFFECT OF TRAYODASHANGA GUGGULU & MUSTADI YAPANA YOGA BASTI AFTER 10WKS THERAPY

| Result | Group A | | Group B | | Group C | |
|----------------------|------------|-------|------------|-------|------------|-------|
| | No. of Pt. | % | No. of Pt. | % | No. of Pt. | % |
| Complete relief | 0 | 00.00 | 0 | 00.00 | 0 | 00.00 |
| Marked improvement | 1 | 10.00 | 0 | 00.00 | 1 | 10.00 |
| Moderate improvement | 1 | 10.00 | 0 | 00.00 | 5 | 50.00 |
| Improved | 5 | 50.00 | 9 | 90.00 | 4 | 40.00 |
| Unchanged | 3 | 30.00 | 1 | 10.00 | 0 | 00.00 |

Discussion: Trayodashanga guggulu contains fine powders of Babbula twak, Ashwagandha, Hapusha, Guduchi, Shatavari, Gokshura, Vriddhadaruka, Rasna, Shatahva, Shati, Yamani and Shunti uniformly mixed with thriphala and guduchi shodhita guggulu and making pills adding gritha. Here main ingredient is guggulu having very good anti inflammatory, analgesic, balya and rasayana properties along with the properties of other ingredients act as synergistic action. Mustadi yapana yoga basti is an emulsion of oil in water base prepared from the mixer of Honey, rock salt, lipid, medicinal powder, decoction prepared with milk and meat soup given through the rectal root which is neither pass through the upper gastro-intestinal canal nor undergoing the process of gastro-intestinal enzyme transformation of digestion but directly absorbs through micro villi of rectum and sigmoid colon in to the blood stream reach liver through mesenteric vessels, portal circulation and hepatic circulation. So the transformation takes place directly in the liver, circulates systemic for cellular metabolism. Meanwhile lipid soluble drugs present in the basti absorb lipid soluble toxic substance from the lower intestinal colon along with water soluble waste material expels out through rectum and anus. Basti having the property of its best vata shodhaka expels vata dosha from the pakwashaya and palliates vata from the whole body. Mustadiyapana basti yields better result in pacifying Vataja, Vatakaphaja and also in pittaja prakruti patients. Mustadiyapana basti acting on colon expels adhered bowel and cleans the colon and body by which the consumed food well digested, improves the assimilation, increases appetite, nourishes and reverses the process of degeneration. It also decreases the unusual pressure exerted in the colon, relives the pain in the region of buttock and waist. The yapana basti which is prepared from the milk which is having the properties of snigdha, balya, rasayana and sheeta veerya reduces the vata properties and nourishes the organs. The drugs present in the compound Trayodashanga guggulu, Mahamasha taila and Mustadiyapana basti having Vatahara, vedanasthapana, Balya,

Rasayana, Dhathuvarhdhaka, Shothahara, virechana, Malavatanulomana, Anti-inflammatory, Analgesic, Anti-stress and Anxiolytic properties. So, the combined therapy reduces the symptoms Stambha, Ruk, Toda, Gouravam, Spuranam and getting marked improvement in subjective and objective parameters with highly significant result. No adverse effect or any unwanted effects are observed during the study.



X-ray LS spine AP view

Conclusion: The disease Gridhrasi though yapya in nature, can be brought back to kruchrasadhya if the patient follows regular medicine along with controlled diet and regimen. From this study we can conclude that both the drug Trayodashanga guggulu and the therapy Mustadi yapana yoga basti acts as Gridhrasighna, vatakaphahara, ruchyam, deepana, medhohara, pachana, rasayana and dhatuposhana. Combined therapy of Trayodashanga guggulu and Mustadiyapana yoga basti provided long lasting results than single Trayodashanga guggulu or Mustadiyapana yoga basti while go through the results.

Acknowledgement: I remain grateful forever to my respected Guide Prof. Dr. Shripathi Acharya M.D (Ayu) Ph.D., Diploma in Yoga, Ex. Dean and Director (Academic), Head of P.G. Dept. Kayachikitsa, MIAMS, Manipal, for his valuable guidance, meticulous supervision, timely advises motivation and co-operation towards me throughout this dissertation work. I remain grateful to my respected co-guide Dr.Guruprasad G. M.D., for his valuable guidance and supervision in therapeutic procedure and statistical analysis. I am grateful to Dr. Vijayabhanu Shetty, President, MIAMS Manipal, for giving me an opportunity to do my P.G. Studies. I am grateful to Dr. Sathyanarayana B. M.D (Ayu), Principal, MIAMS Manipal, for his help and support in completing this work.

References:

1. Atharvaveda, Atharva samhitha, Manthranukramiya samhitha ed. 1994, Nagaprakashak, 21/60/2.
2. Harrison's principle of internal medicine, editor Dan L Longo, 18th edition, volume II, ch. 331, published by Mc Graw-Hill Companeis, United States of America, Pg.No. 2824, Pp 3609.
3. Madhavakara – Madhavanidanam, Madhukosha commentary by srivijayarakshita and srikanthadatta, edited by Prof. Yadunandana Upadhyaya, Vatavyadhinidanam ch. 54 – 56 published by Chaukambha Sanskrit Sansthan, Varanasi, edition reprint 2004, Pg. No. 483, Pp.568.
4. Bhavamisra – Bhavaprakasha, Vidyotini Hindi commentary, by Bhishak Ratna Shri Brahma Shankara Shastry, Madhya khanda, vatavyadyadikara, ch-24/117- 121, published by Choukamba Sanskrit Sansthana, Varanasi, 9th. edition 2005, Pg. No. 240, Pp 835.
5. Acharya Agnivesya, elaborated by Charaka and Dridabala - Charaka Samhitha, Ayurveda deepika commentary by Chakrapanidatta, edited by Vaidya Jadavaji Trikamji Acharya, Siddhithana, ch 12/16 – 1, published by Chaukhambha Surabharati Prakashan, Varanasi, edition reprint 2005, page No. 731, Pp 738.
6. Shri. Govinda Das - Baishajya ratnavali, Vidyotini Hindi commentary of Shri. Kaviraja Ambika data Shastri, by Bhishak Ratna Shri Brahma Shankara Mishra, ch - 26/570 – 577, vatavyadhi chikitsa prakaranam, published by Choukamba Samskrita Samsthana, Varanasi, 8th. edition 1987, page No. 413, Pp 892.