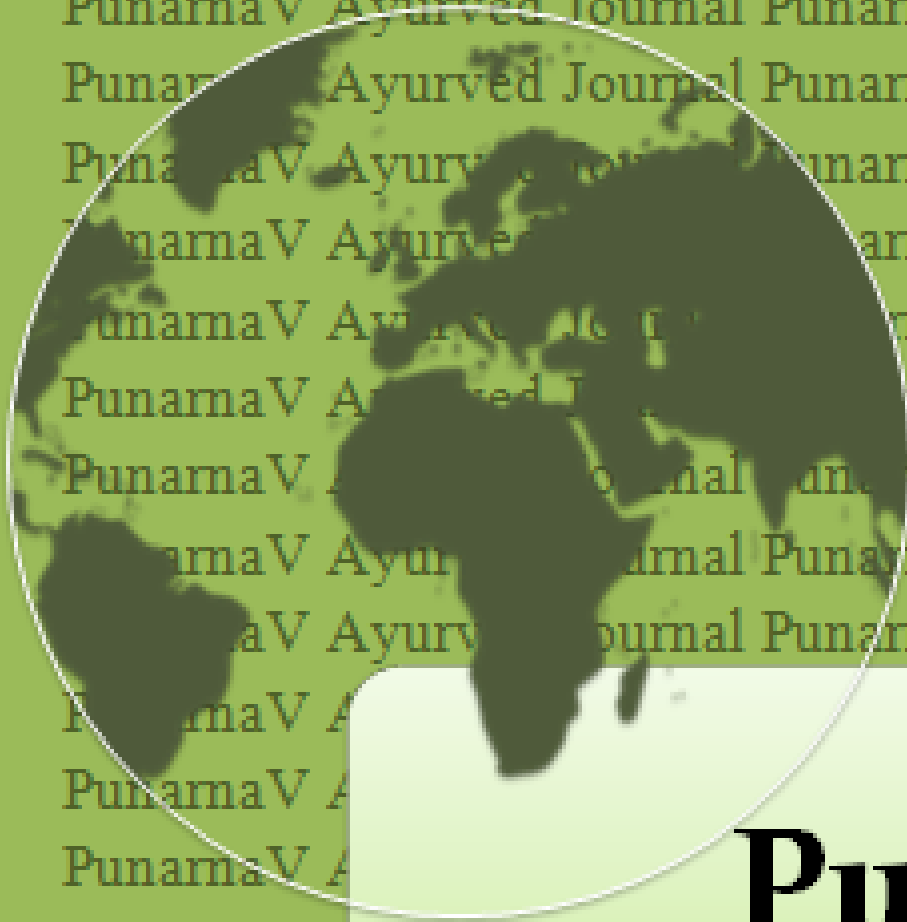


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“A STUDY ON THE EFFICACY OF JET SPINAL BATH IN KATI GRAHA (LOW BACK PAIN)”: A CONTROLLED CLINICAL STUDY

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ABSTRACT:

Background: Kati Graha is a common complaint encountered in every stratum of society, occupation and racial groups. This is one of the most common musculo skeletal disorder. The pain affects the lower lumbar spine, lumbosacral area and sacroiliac joints. It is an unpleasant and discomfort condition, but not a desperate and serious problem. The commonest type of low back pain is caused by some kind of mechanical stress or damage with in the back which gets better quickly. Abnormal posture, excessive stress (physical and physiological) aging problems and mechanical damage may all contribute to low back pain. It is widely prevalent in these days due to sedentary living habits and hazardous work patterns. Non pharmacological management in the foundation of treatment of Katigraha. Therefore naturopathy gives a hope of treating this condition with Neutral jet spinal bath with temperature of 34-36^oc is given importance in hydrotherapy. Warm water relives pain due to ushna guna and ascending jet will give a gentle massage due to the pressure of water to the whole of the spinal column. The improved version of jet spinal bath is not conducted with clinical trials and hence a research is planned.

*Aim: 1. To assess the efficacy of Jet Spinal Bath in reliving Low Back Ache
2. To conceptualize and standardize the method of Jet Spinal Bath*

Materials and Methods:

Subjects willing to participate in the study after fulfilling the criteria will be selected and divided in to 2 groups by random sampling technique.

Group A: 15 patients who underwent Kati Basti with Nirgundi Taila daily 30 minutes for 7 days will be kept as controlled group.

Group B: 15 Patients will be given Neutral Jet Spinal Bath daily (Water will be at 34-36^o temperature) for 15 minutes for 7days.

Advice : Postural correction advices will be given to all the selected patients.

Follow up: Patients will be fallowed for a period of 1 month at an interval of 15 days.

Result: In group B mean change was observed in pain (p<0.05) ,flexion (p<0.05), extension(p<0.05), left lateral movement (p<0.05), right lateral movement(p<0.05), Rotatary movement(p<0.05), Time taken to cover 50 mts distance (p<0.05) which is statistically significant in comparison with group A.

Conclusion: Improved version of spinal bath i.e. jet spinal bath is more comfortable & very effective in fresh cases kati graham. Water of neutral temperature is 34^o to 36^o c plays an important role in relieving the symptoms. Postural correction also plays an important role in prevention of Katigraha.

KEYWORDS: Kati Graham. Low back pain. Back pain. Spinal bath.

INTRODUCTION

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Kati Graha is a common complaint encountered in every stratum of society, occupation and racial groups. It is widely prevalent in these days due to sedentary living habits and hazardous work patterns. Mechanical pain accounts for about 90% of back pain episodes in persons aged between 20 and 55 years⁷. It forms one of the most frequent and disabling condition affecting adolescent girl's, workers in their productive years thus resulting in loss of economic productivity⁷. There is greater role for prevention of this condition by correcting posture and alternate treatment modalities in the form of naturopathy and physiotherapy. In Ayurvedic literature we find references regarding *Kati shoola*, *Trika shoola*³ *Trika vedana*^{4a} or *Kati graha*² in which pain in the low back region forms the main symptom. These are symptoms due to *kupita Vata* in *Pakvashaya* and *Guda pradesha*. The

conventional treatments in Ayurveda includes *abhyanga*, *swedana*, *basti* for varying periods along with internal medications aimed at controlling of *kupita Vata*. These methods are effective to control *vatha* and reducing pain. Naturopathy incorporates drug less therapy by utilizing the principles of *panchamahabhutas* adopted for different treatments. In this aspect it can be considered as a part of Ayurveda as *panchamaha bhuta sidhanta* is accepted in Ayurveda also. In *Vatha vikara Abhyanga* and *swedana* are undertaken in Ayurveda. *Guru Snigdha gunas* of *snehana* and *ushna guna* of *sweda* helps to pacify *vatha dosha* and helps in relieving of pain. Neutral Jet spinal bath with temperature of 34-36°C is given importance in hydrotherapy. Warm water relieves pain due to *ushna guna* and ascending jet will give a gentle massage due to the pressure of water to the whole of the spinal column⁵. Studies conducted with conventional spinal bath in *katigraha* have given encouraging results, but the duration of treatment required was 14 days. The improved version of jet spinal bath is not conducted with clinical trials and hence a research is planned by adopting this technique with an intention of reducing the intervention duration to 7 days.

REVIEW OF LITERATURE

Vitiated *Sama vata* gets localized in *Kati pradesha* characterized by *shoola* and produces restricted movement of *Kati* i.e. *Kati graha*¹.

Aggravated *Vata* gets localized in *Pakvashaya* and causes *Kati Graha*².

Trika is the joint between 2 hip bones and spinal column. The pain which is Produced in this region is *Trika Shoola*³. *Trika Vedana* is one of the *lakshana* produced due to *Pakvashaya gata Vata*^{4a}. *Trika Shoola* is one of the *lakshana* produced due to *Guda gata Vata*^{4b}. Neutral spinal bath acts on relieving muscular tension of the vertebral Column⁵. Spinal bath acts by providing soothing effect to spinal column, and helps to Stimulate the spinal nerves. It relieves vertebral pain in muscular back ache⁶

Mechanical pain accounts for more than 90% of back pain episodes, usually affecting Patients aged 20-55 years⁷.

Previous research conducted: - Sajitha k (1992).university of kerala.

Trial group: postural corrections, supportive exercises along with spinal bath for 14 days every day for 40 minutes was advised for the Management of low back ache shows highly significant results.

Control group: with conventional Ayurvedic treatment with *Rasna saphthaka kashaya* and *simhanada guggulu, sthanika abyanaga* with *karpooradi taila* and *vaitharana basthi* for 14 days. The significance in both groups was similar but the expenses were less in spinal bath.

OBJECTIVE OF THE STUDY

1. To assess the efficacy of Jet Spinal Bath in reliving Low Back Ache
2. To conceptualize and standardize the method of Jet Spinal Bath

Source of data: Subjects from outpatient and in patients departments of SDM

College of Ayurveda and Hospital, Tanniruhalla, Hassan.

MATERIALS AND METHODS

The Subjects willing to participate in the study after fulfilling the criteria will be selected and divided in to 2 groups by random sampling technique.

DIAGNOSTIC CRITERIA

Subjective: - Pain in the lumbo sacral region

Objective:

- Difficulty in Spinal movements
- Restriction of spinal movements

INCLUSION CRITERIA

- 1 Patient irrespective of sex between 20 yrs and 50 yrs
- 2 Pain in the Lumbosacral region
- 3 Limitation of movement at spine

EXCLUSION CRITERIA

1. Patient associated with any other systemic disorder
2. Intravertibral disc prolapse
3. Ankylosing Spondylitis
4. Spina bifida
5. Sciatica

Ethical clearance and consent ; The study was approved by the institutional ethical committee and signed informed consent was obtained from all the patients.

STUDY DESIGN: 30 patients of *Kati Graha* were selected from OPD & IPD of S.D.M.C.A & H. Patients selected were divided into two groups:

Group-A (*Kati basti*) (N=15),1 sitting for 30 min/day X 7 days

Group-B (Jet Spinal Bath) (N=15),1 sitting for 15 min/day X 7 days

Group A: 15 patients who underwent *Kati Basti* with *Nirgundi Taila* daily 30 minutes for 7 days will be kept as controlled group.

Group B: 15 Patients will be given Neutral Jet Spinal Bath daily

(Water will be at 34-36⁰ temperature) for 15 minutes for 7days.

ADVICE: Postural correction advices will be given to both the groups

Follow up: Patients will be followed for a period of 3 month at an interval of 15 days for 2 months and last follow up after 1 month.

ASSESSMENT CRITERIA

1. **Ruja(Pain)** – self assessment by the patient based on logarithmic pain assessment scale (international standard for comparative pain assessment scale).

No pain - Grade 0

Pain during work - Grade 1

Pain at Rest - Grade 2

2. **Graha (Restricted movements at spine)**

Flexion (Forward bending)

Ground -Grade 0

10cms from the ground -Grade 1

20cms from the ground -Grade 2

Extension

Normal range 200 from the medial line - Grade 0

100 from the medial line - Grade 1

Pain during movement - Grade 2

Left lateral movement

400 from the medial line - Grade 0

200 from the medial line - Grade 1

Pain during movement - Grade 2

Right lateral movement

400 from the medial line - Grade 0
200 from the medial line- Grade 1
Pain during movement - Grade 2

Rotating movement

400 from the medial line - Grade 0
200 from the medial line - Grade 1
Pain during movement - Grade 2

Time taken to cover 50 meters distance

0min to 1min:20sec - Grade 0
1min:20sec to 2min:40sec - Grade 1
2min:40sec to 4 min - Grade 2

LAB INVESTIGATIONS

1. X-Ray of Lumbosacral Spine for Anterio posterior view & Lateral View
2. Blood routine investigations
 - Hemoglobin gm %
 - Total Leucocytes count
 - Differential Leucocytes count
 - Erythrocyte Sedimentation Rate
 - Fasting blood sugar
3. Urine routine investigations
Urine for albumin, Sugar , Microscopic

RESULTS

Result: In group B mean change was observed in pain ($p < 0.05$), flexion ($p < 0.05$), extension($p < 0.05$), left lateral movement ($p < 0.05$), right lateral movement($p < 0.05$), Rotatory

movement($p < 0.05$), Time taken to cover 50 mts distance ($p < 0.05$) which is statistically significant in comparison with group A.

DISCUSSION

Probable mode of action of Jet Spinal Bath: Using water externally with the jet spinal bath improves blood & lymph circulation. Relaxes tension in the tissues, alleviates pain & calms down the nervous system. Water maintained in this temperature exerts beneficial effects on the human system. It improves circulation, boosts muscular tone. It also tones up the activity of sweat glands. As density of water is near to that of human body, can be used as an exercise medium in paralysis or atrophy of muscle. It helps in the process

of elimination of the damaged cells & toxic matter from the system.

Conclusion : . Improved version of spinal bath i.e. jetspinal bath is more comfortable & very effective in fresh cases *kati graham*. Water of neutral temperature is 34^0 to 36^0 c plays an important role in relieving the symptoms. Wrong posture with sedentary life style is also one among the risk factors of *Katigraha.Graha* (spasm) associated with restricted spinal movements are the main clinical features that drawn the attention of the patient &

brings them to the physician. Postural correction also plays an important role in prevention of *Katigraha*. Jet Spinal Bath is

very effective in fresh cases.

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