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Clinical Study of *Navsiddha Taila* and *Swedana* in the management of *Katishoola*

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ABSTRACT

In evolutionary process man remain as the only animal, which stands in upright posture. Indeed the presence of curvatures in the vertebral column, man never attains absolute rest in any posture, owing them to suffer with problems related to vertebral column. As the advancement of busy professional and social life, it encourages sedentary behaviour with long working hours at desk jobs, lack of natural movement, improper sitting posture in offices, factories, continuous and overexertion, jerking movements during travelling and sports causing overtaxing of muscles. All of these stressors take their toll on the body, and yield undue pressure over the vertebral column especially over the Lumbar region. This compression over the nerves is because of decreased intervertebral disc space. Somewhere within the core of this lifestyle prevails the unique cause of *Katishoola.* In *Katishoola*, Vitiated 'Vata' is considered to be the principle *Dosha* involved because the cardinal symptom of vitiation of this *Dosha* is pain which is known as *Shoola*. It is known by the name Low back ache or Lumbago. In the present study use of *Navsiddha Taila (Kalpita Yoga) Snehana* and *Swedana* by infrared lamp in bringing symptomatic relief in patients of *Katishoola* has been chosen.

Key words: *Katishoola, Navsiddha Taila, Infrared lamp.*

INTRODUCTION

The main seats of *Vata* are *Pakwashaya, Kati* and *Sakthi*. Here *Pakwashaya* can be considered as large intestine, *Kati Pradesa* is the region where the vertebral column joins the hip bones on either side which includes - the lumbar, sacral and sacro-iliac joints and its related structures. *Sakthi* are the lower limbs. Vitiation of *Vata* in any one of these locations shows the signs and symptoms of vitiation in all other sites and results in *Katishoola. Hetus* like - heavy manual work carrying heavy weights, riding on horses and vehicles - causes the stress and strain to *Pakwashaya,* which in turn provocates the vitiated *Vata*, to get settled at *Kati Pradesha (Sthanasamshraya)* - where the association of *Dosha Dooshya Sammoorchana* occurs and it gives rise to the manifestation of specific disease *Katishoola. "Katishoola"* is not being given a status of individual disease at any stage but not excluded its appearance as an individual disease with specific pathogenesis and individual pathology. It is known by the name Low back ache or Lumbago in the realm of medicine.

According to a survey, Low back pain is extraordinarily common reason for hospital visits and second to common cold with a lifetime prevalence of 60 to 90% and an annual incidence of 5%. Back pain has been reported among 53% of workers doing light jobs and 64% of those doing heavy work. The mean age of the onset of pain is 35 years. Among those complaining of low back pain, 35% are likely to develop Sciatica and 90%, will have future recurrences.[1] In our OPD also

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the no. of patients of Lumbago are incidentally high. So it has been selected as the present topic of research work.

In the practice of conventional medicine the treatment of lumbago is limited to analgesics, anti inflammatory drugs, physiotherapy as well as surgical intervention in extreme cases, which however tackles the cause of the disorders to some extent but may harm further. Taking painkillers lead to increased risk of GIT complications ranging from stomach pain to ulcers, having severe complications often necessitating surgical intervention. The role of *Ayurveda,* in the area of these spinal ailments is globally appreciated. Since it addresses the root cause of the issue, and as the treatment in *Ayurveda* is aimed at to bring the vitiated *'Dosha'* back to the state of equilibrium, so the results are better than surgical procedures.

The frightening health scenario of the coming millennium put forth the necessity to think and look for something from our ancient *Ayurvedic* heritage based on holistic and ecological views. With the same objective in mind a reliable, simple and cost effective management to this burning problem, having altogether better results without any surgical manipulation has been planned. For this an *Ayurvedic* formulation *"Navsiddha Taila"* has been taken. the ingredients of designed *Kalpit Taila* for local application has *Vatsleshmahar, Shoolahara, Shothahara, Sthairyam, Sandhivataghna, Tiksnaushntava, Ashisandhankar, Balya, Brimhan* and *Rasayana properties.*

In ancient texts, like *Charaka Samhita, Sushruta Samhita* and *Ashtang Hridaya;* concept of a process called *Swedana* is found. *Swedana Karma* in principle consists of induction of sweating by application of heat. Application of heat counteracts the coldness of both *Vata* and *Kapha,* it reduces the body stiffness and heaviness. Though the process mentioned by our *Acharyas* is highly effective, but its practical application has certain limitations as it is expensive, time consuming which in today's fast life where the patient believes in fast recovery is quiet impractical. So, here by the effect of Short Wave Diathermy is also being tried to be ascertained.

Short wave diathermy is a form of heat treatment using electromagnetic currents, which causes molecules in deep tissues to vibrate with overheating of tissues and body organs, increased local metabolism and blood flow to them. It produces high skin and subcutaneous temperature. Heat is absorbed at the surface and then spreads inwards by conduction and convection, causing a more vigorous blood flow to that area, extensibility of connective tissue, decreased joint stiffness, pain and muscle spasm and helps inflammation, edema and exudate resolve. It thereby supports absorption of chronic, inflammatory, post injury infiltrates, improves tissue elasticity and has analgesic effect. For accomplishing this target, Infrared lamp has been selected; which is comparatively inexpensive, portable, easy to use and moreover stand by all modern parameters. In it radiant heat and Infrared rays are given by focusing the rays from a lamp out to the incapacitated part of the body.[2]

AIMS AND OBJECTIVES

Aim:

Clinical study of *Navsiddha Taila* and *Swedana* in the management of *Katishoola.*

Objectives:

To evaluate the therapeutic effect of *Navsiddha Taila Snehana* and *Swedana* by infrared lamp in bringing symptomatic relief in patients of *Katishoola.*

MATERIALS AND METHODS

The patients attending the O.P.D. & I.P.D of Shalya Department of Jammu Institute of the Ayurveda and Research & C.H.C. R.S. Pura provided the material for the clinical study and were selected irrespective of their Age, Religion, Race, Occupation etc. fulfilling the Criteria of slection and eligibility for the present study.

Criteria for selection of patients

The patients were randomly selected and diagnosed on the basis of subjective and objective criteria of

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Katishoola. In this study the patients are included irrespective of sex.

Inclusion Criteria

1. Age above 20 yrs and below 60 yrs
2. Either sex
3. Duration / Chronicity not more than 10 yrs
4. All cases of Lumbago Sacral disorders of non congenital origin
5. All non surgical cases of Lumbago Sacral disorders viz. Sciatica, Osteoarthritis, Rheumatoid arthritis.

Exclusion Criteria

1. All the cases with serious Accidental injuries involving structural deformity.
2. All the Postoperative cases involving foreign material implantation.
3. Patient"s with Pott"s spine.
4. Patients with Diabetic neuropathy.
5. Patients with Haemorrhagic problems.
6. Patients with Skin diseases.
7. Patients with Kidney diseases.
8. Patients with Spinal and Paravertebral tumors.
9. Patients with Fractures, Kyphosis, Scoliosis, Osteoporosis.
10. Patients suffering from Multiple organ disorders.
11. Patients with advanced Heart Disease.
12. Patients with Peripheral Vascular Disease.
13. Patients with impaired Skin sensation, particularly to temperature and pain.
14. Patients with Hepatic / Renal insufficiency.
15. Patients with known hypersensitivity to Sulpha drugs.

Assessment Criteria

For assessing the condition of Lumbago before and after treatment, the patients response is assessed on Subjective and Objective Parameters.

Subjective Criteria

1. Pain
2. Postural defects
3. Stiffness
4. Restriction in movement
5. Muscle spasm and cramps
6. Paraparesis
7. Numbness
8. Tingling sensation
9. Anorexia
10. Indigestion

Objective Criteria

1. S.L.R
2. Curvature of spine
3. Tenderness
4. Flexion
5. Extension
6. Lateral flexion
7. Rotation

SUBJECTIVE PARAMETERS

Pain

- 0 - No pain (score 61-66)
- 1 - Mild pain (score 41-60)
- 2 - Moderate (score 21-40)
- 3 - Severe (score<20)

Postural Defects

- 0 - No postural defect
- 1 - Mild leaning during walk after prolonged sitting< 5-10 min
- 2 - Mild leaning during walk after prolonged sitting< 10 -30
- 3 - Mild leaning during walk after prolonged sitting< more than 10 -30 min.

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- 4 - Permanent defect requiring support.

Stiffness

- 0 - No stiffness at all.
- 1 - Stiffness <5-10 min.
- 2 - Stiffness <10-30 min.
- 3 - Stiffness <more than 30 min, hindering daily routine requiring assistance/medication.
- 4 - Debilitating stiffness.

Restriction in movement

- 0 - No restriction in movement.
- 1 - Mild restriction <5-10 min.
- 2 - Mild Moderate <10-30 min.
- 3 - Moderate <more than 30 min.
- 4 - Severe requiring assistance/medication.

Muscle spasm and cramps

- 0 - No muscle spasm & cramps.
- 1 - Cramps subsiding without assistance / medication.
- 2 - Cramps subsiding with assistance / local massage.
- 3 - Cramps subsiding with mild medication (NASAIDS).
- 4 - Cramps subsiding with strong medication like (Injectables/Opoids).

Paraparesis

- 0 - No Paraparesis
- 1 - Paraparesis of lower limbs after prolonged exertion.
- 2 - Paraparesis during long sitting/after long sitting.
- 3 - Paraparesis even after fever fewer exertion /short duration of sitting.
- 4 - Paraparesis even without any exertion.

Numbness

- 0 - No Numbness
- 1 - Numbness of lower limbs after prolonged exertion.
- 2 - Numbness during long sitting/after long sitting.
- 3 - Numbness even after fever fewer exertion /short duration of sitting.
- 4 - Numbness even without any exertion.

Tingling Sensation

- 0 - No Tingling sensation.
- 1 - Tingling sensation of lower limbs after prolonged exertion.
- 2 - Tingling sensation during long sitting/after long sitting.
- 3 - Tingling sensation even after fever fewer exertion /short duration of sitting.
- 4 - Tingling sensation even without any exertion.

Anorexia

- 0 - Absent
- 1 - Present

Indigestion

- 0 - Absent
- 1 - Present

OBJECTIVE PARAMETERS

S.L.R.

- 0 - Can lift upto 90°
- 1 - Can lift upto 75°
- 2 - Can lift upto 50°
- 3 - Can lift upto 25°
- 4 - Cannot lift.

Curvature of spine

- 0 - Normal.
- 1 - Straightening of lower half.
- 2 - Straight rod like.

Tenderness

- 0 - No tenderness.
- 1 - Mild-Pain on heavy thumping.
- 2 - Moderate-Pain even at light thumping.
- 3 - Severe not allowing to examine.

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Flexion

- 0 - Easy flexion without pain.
- 1 - Flexion painful but needs no medication.
- 2 - Painful Flexion requiring medication.
- 3 - Painful flexion not subsiding even after heavy medication.

Extension

- 0 - Easy extension without pain.
- 1 - Extension painful but needs no medication.
- 2 - Painful extension requiring medication.
- 3 - Painful extension not subsiding even after heavy medication.

Lateral Flexion

- 0 - Easy lateral flexion without pain.
- 1 - Lateral flexion painful but needs no medication.
- 2 - Painful lateral flexion requiring medication.
- 3 - Painful lateral flexion not subsiding even after heavy medication.

Rotation

- 0 - Easy rotation without pain.
- 1 - Rotation painful but needs no medication.
- 2 - Painful rotation requiring medication.
- 3 - Painful rotation not subsiding even after heavy medication.

Total Effect

- **Complete Remission:** 100% relief in signs and symptoms and movement by patients without any pain were considered as complete remission.
- **Marked Improvement:** 75 - 99% relief in signs and symptoms were considered as marked improvement.
- **Moderate Improvement:** 50 - 74% relief in signs and symptoms were considered as moderate improvement.
- **Mild Improvement:** 25 - 49% relief in signs and symptoms were considered as mild improvement.
- **Unchanged:** No reduction in signs and symptoms.

Table 1: Greenough and fraser scoring method for Pain

Question	Answer	Points
How often do you have to take pain killers for your pain?	Never	6
	Occasionally	4
	Almost every day	2
	Several times every day	0
How often do you have consultation with a doctor?	Never	6
	Rarely	4
	1-2 times per month	2
	1-2 times per week	0
At present, are you working?	full time at regular job	9
	full time at a lighter job	6
	part time	3
	not working	0
So you need to rest during the day because of pain?	not at all	6
	a little	4
	half the day	2
	Over half the day	0
At present, can you undertake household chores or additional jobs?	Normally	9
	as many as usual, but slowly	6
	A few, not as many as usual	3
	not at all	0
At present, can you undertake sports or active pursuits, such as dancing?	as much as usual	9
	almost as much	6

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	as usual	
	Some, much less than usual	3
	not at all 0	0
How much does back pain affect your ability to dress?	no effect	3
	mildly or moderately affected	2
	Difficult	1
	not possible	0
How much does back pain affect your ability to sit?	no effect	3
	mildly or moderately affected	2
	Difficult	1
	not possible	0
How much does back pain affect your ability to walk?	no effect	3
	mildly or moderately affected	2
	Difficult	1
	not possible	0
How much does back pain affect your ability to sleep?	no effect	3
	mildly or moderately affected	2
	Difficult	1
	not possible	0
How much does back pain affect your ability to travel?	no effect	3
	mildly or moderately affected	2
	Difficult	1
	not possible	0
How much does back pain affect your sex life?	no effect	6
	mildly or moderately affected	4
	Difficult	2
	not possible	0

Plan of work

A detailed proforma was prepared regarding the disease and the patient as a whole.

Investigations

a) Hematological Assessment-

- Haemogram: Hb, CT, BT, ESR, Blood sugar (Random)
- Biochemistry: RA Factor, S.Uric acid, S.Creatinine

b) Radiological Assessment-

- X-Ray Lumbosacral spine (Anterio-posterior and Lateral view)

Table 2: Drug schedule

Drug / Source	*Navsiddha Taila* & Infrared Lamp.
Forms	Oil & Rays
Dose / Duration	20 Min.
Route	Local

Duration of treatment: 15 days, 6 days a week.

Follow Up: 15 days, twice weekly.

Statistical Analysis

For assessing the improvement of symptomatic relief and to analyze statistically the observations were recorded before, after the treatment and after follow-up. The mean, percentage, S.D, S.E, and t-value were calculated from the observation recorded. The total result including the overall effect of therapy is given in tables.

Observations

Incidence in this study showed a maximum number of patients in the age group of 31 - 40 years, i.e. 33.33%. In the age group of 41 - 50 years & 51 - 60 years

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26.66% of patients were obtained. Minimum numbers of patients were seen from the age group 21 - 30, i.e. 13.33%. The percentage of females (66.66%) was seen to be more in this study compared to the percentage of males (33.33%). Among the patients selected for the study 86.66% were Hindus, 13.33% were Sikh. More incidence (56.66%) were seen in patients from the Housewife category. 16.66% of patients were from the Govt. employee category and 13.33% of patients from the business category. 10% were in Ex-servicemen category and 3.33% were others. Out of 30 patients, 10 patients were higher secondary passed (33.33%), 09 patients (30%) were middle passed, 06 patients (20%) were graduate, 04 patients (13.33%) were illiterate and 1 patient (3.33%) were primary. Among the patients 90% were married and 10% were widows. The study showed more incidences (76.67%) of the condition in patients hailing from middle class. About 13.33% of patients were from poor and only 10% from upper middle. Out of 30 patients, 11 patients (36.66%) had a history of 6.1 - 12 months, 9 patients (30%) had a history of 3.1 - 6.0 months, 08 patients (26.66%) had a history of 1.6 - 3.0 months, 02 patients (6.66%) had a history of 0 - 1.5 months.

Assessment of Pain: Before treatment mean was 2.6 and after treatment it was reduced to 0.9

Efficacy of treatment on Pain: Gradual reduction in pain was observed during the follow up. There is statistically significant change in the group. ($p<0.001$)

Assessment of postural defects: In Group before treatment mean was 1.7 and after treatment it was reduced to 0.1.

Efficacy of treatment on postural defects: Gradual reduction in postural defects was observed during the follow up. The change in the postural defect that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. ($p<0.01$)

Assessment of stiffness: In Group before treatment mean was 1.7 and after treatment it was reduced to 0.

Efficacy of treatment on stiffness: Gradual reduction in stiffness was observed during the follow up. The change in the stiffness that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. ($p<0.01$)

Assessment of restriction in movement: In Group before treatment mean was 2.1 and after treatment it was reduced to 0.1.

Efficacy of treatment on restriction in movement: Gradual reduction in restriction in movement was observed during the follow up. The change in the restriction in movement that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. ($p<0.001$)

Assessment of muscle spasm and cramps: In Group before treatment mean was 1.2 and after treatment it was reduced to 0.3

Efficacy of treatment on muscle spasm and cramps: Gradual reduction in muscle spasm and cramps was observed during the follow up. The change in the muscle spasm and cramps that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. ($p<0.001$)

Assessment of paraparesis: In Group before treatment mean was 1.5 and after treatment it was reduced to 0.1

Efficacy of treatment on paraperesis: Gradual reduction in paraperesis was observed during the follow up. The change in the paraparesis that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. ($p<0.02$)

Assessment of Numbness: In Group before treatment mean was 1.4 and after treatment it was reduced to 0.1

Efficacy of treatment on Numbness: Gradual reduction in numbness was observed during the follow up. The change in the numbness that occurred with the treatment is greater than would be expected by chance the group. There is statistically significant change in the group. ($p<0.02$)

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Assessment of Tingling sensation: In Group before treatment mean was 0.6 and after treatment it was reduced to 0.

Efficacy of treatment on Tingling sensation: The change in the tingling sensation that occurred with the treatment in group is smaller than would be expected by chance. Hence it is statically not significant. (p>0.10)

Assessment of S.L.R.: In Group before treatment mean was 2.4 and after treatment it was reduced to 0.

Efficacy of treatment on S.L.R.: Gradual reduction in S.L.R. was observed during the follow up. The change in the S.L.R. that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.001)

Assessment of tenderness: In Group before treatment mean was 1.6 and after treatment it was reduced to 0.

Efficacy of treatment on tenderness: Gradual reduction in tenderness was observed during the follow up. The change in the tenderness that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.01)

Assessment of flexion: In Group before treatment mean was 1.2 and after treatment it was reduced to 0.1

Efficacy of treatment on flexion: Gradual reduction in flexion was observed during the follow up. The change in the flexion that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.001)

Assessment of extension: In Group before treatment mean was 2.3 and after treatment it was reduced to 0.8

Efficacy of treatment on extension: Gradual reduction in extension was observed during the follow up. The change in the extension that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.001)

Assessment of lateral flexion: In Group before treatment mean was 1 and after treatment it was reduced to 0.

Efficacy of treatment on lateral flexion: Gradual reduction in Lateral flexion was observed during the follow up. The change in the Lateral flexion that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.02)

Assessment of rotation: In Group before treatment mean was 1.3 and after treatment it was reduced to 0.7

Efficacy of treatment on rotation: Gradual reduction in rotation was observed during the follow up. The change in the rotation that occurred with the treatment is greater than would be expected by chance in the group. There is statistically significant change in the group. (p<0.01)

Table 3: Percentage wise reduction in the parameters.

Sl.No.	Parameters	Group
1.	Pain	65.38
2.	Postural Defects	94.11
3.	Stiffness	100
4.	Restriction In Movement	95.23
5.	Muscle Spasm & Cramp	75
6.	Paraparesis	93.33
7.	Numbness	92.85
8.	Tingling Sensation	100
9.	S.L.R.	100
10.	Curvature Of Spine	-

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11.	Tenderness	100
12.	Flexion	52
13.	Extension	65.21
14.	Lateral Flexion	100
15.	Rotation	46.15

In the end it was found that all the three groups have shown improvement, which was found 75.25 % in group.

Figure 1: Showing reduction in the symptoms of *Katishoola*.

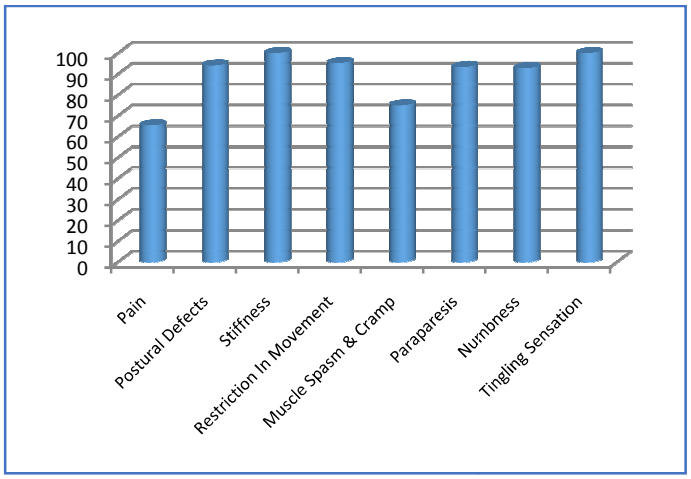
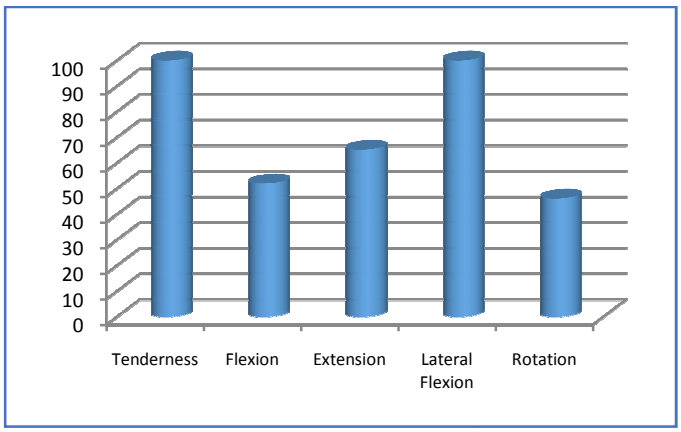


Figure 2: Showing reduction in the symptoms of *Katishoola*.



DISCUSSION

The study of demographic profile of 30 registered patients of *Katishoola,* visiting Shalya Department, O.P.D., J.I.A.R., Hospital, Nardani, Jammu and Department of Surgery, Govt. Community Health Center, R.S.Pura, Jammu for different problems and ailments revealed following interesting information.

Age: The present study about age has shown predominance in the age group of 31-40 (33.33%). Modern life style which leads to irregular exercise, more traveling, abnormal postures, and to long working hours without proper rest may be the reason behind this.

Sex: Although patients of both the sexes visited the hospital, but the highest incidence was observed in females (66.66%) because females are tend to more physical work like lifting, bending, sitting and sustained non neutral postures.

Religion: In the present study majority of patients registered for the study were Hindu's (86.66%); as the data is only reflection of geographical predominance of the community around the feeding area of Govt. Hospital R.S.Pura.

Occupation: From the present study it can be concluded that *Katishoola* affects the person from varied occupation with varied degree of spinal stress and strain caused by irregular posture of sitting, standing, walking, improper lifting of heavy weight, driving etc., however more cases were observed in House wives (56.66%) because of the cumbersome household activities and negligence towards own health.

Education: Data reveals that 10 patients were higher secondary passed (33.33%), 09 patients (30%) were middle passed, 06 patients (20%) were graduate, 04 patients (13.33%) were illiterate and 1 patient (3.33%) was primary. The above data does not show any relationship between education and *Katishoola*.

Marital status: Incidences on Marital status signifies that married population is more afflicted to *Katishoola* (90%). No relationship can be predicted in between marriage and *Katishoola*.

Social status: Socio-economic status data shows that the incidence was more in middle class (76.67%). There seems to be no relationship between the two.

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Duration: In the present study, (36.66%) had a history of *Katishoola* for 6.1 - 12 months. This shows that maximum patients were suffering from chronic back ache.

Disscusion on Result

Effect on Pain: The pain was decreased 65.38% which was statically highly significant, (t-6.53)

Effect on Postural Defects: The postural defects was decreased 94.11% which was statically significant, (t-3.80)

Effect on Stiffness: The stiffness was decreased 100% which was statically significant, (t-3.61)

Effect on Restriction In Movement: The restriction in movement was decreased 95.23% which was statically highly significant, (t-5.12)

Effect on Muscle Spasm and Cramps: The muscle spasm and cramps was decreased 75% which was statically significant, (t-5.29)

Effect on Paraparesis: The paraparesis was decreased 93.33% which was statically significant, (t-3.11)

Effect on Numbness: The numbness was decreased 92.85% which was statically significant, (t-3.09)

Effect on Tingling Sensation: The tingling sensation was decreased by 100% which was statically not significant, (t-1.81)

Effect on S.L.R.: The S.L.R. was decreased 100 % which was statically highly significant, (t-15.00)

Effect on Curvature of Spine: This symptom was not observed in the group.

Effect on Tenderness: The tenderness was decreased 100 % which was statically significant, (t-4.84)

Effect on Flexion: The flexion was decreased 52 % which was statically highly significant, (t-6.19)

Effect on Extension: The extension was decreased 65.21 % which was statically highly significant, (t-6.81)

Effect on Lateral Flexion: The lateral flexion was decreased 100 % which was statically significant, (t-3.03)

Effect on Rotation: The rotation was decreased 46.15 % which was statically highly significant, (t-4.66)

Overall result of therapy: It has been evaluated that 75.25% of patients have shown improvement.

Probable mode of action of *Navsiddha Taila*

The action of Drug *Navsiddha Taila*, can be interpreted as follows. This preparation is a self formulation with *Tila Taila* as base and 9 other ingredients namely *Bhanga, Nirgundi, Rasona, Parijata, Rasna, Devdaru, Ashwagandha, Mulethi* and *Tagar. Vagbhata* has advised *Brimhana* treatment in *Asthi Kshaya* and *Vata Vriddhi (Vayu Vriddhou Brimhanam Asthi Kshayae Brimhanam).*[3] A base of *Tila Taila,* which is said as the best to pacify *Vata* with its unctuousness and specific properties of *Vata Haratwam*. It also acts as *Brimhana*, thereby nullifies *Vata*. *Tila Taila* by its *Sara, Sookshma, Vikasi, Snigdha, Mardava Gunas* enters into *Srotas,* relieves obstruction causes *Dhatu Vriddhi*; thereby *Asthi Dhatu Poshana. Tila Taila* is said as *Vatagneshu Uttamam Balyam.*[4]

All the ingredients of this *Yoga* possess *Kaphavatshamak* and *Vednasthapaka* properties. In addition to this *Mulethi,*[5] *Ashwagandha,*[6] *Nirgundi,*[7] *Rasona,*[8] *Rasna*[9] and *Devadaru*[10] exhibit *Shothahara* properties. Apart from that *Mulethi,*[11] *Ashwagandha,*[12] *Tagara,*[13] *Nirgundi*[14] and *Rasna*[15] are *Balya, Brimhana* and *Rasayana* in nature. *Bhanga*[16] has exclusive property of *Sangyarahitya*, *Mulethi*[17] of *Jeevaniya* and *Sandhaniya*, *Rasna*[18] of *Sheetahara* and *Devadaru*[19] of *Sthoulya Nashana* and *Swedajanan*. *Parijata*[20] By the virtue of the above properties, the drugs enhances the proper nourishment of *Dhatus* and relieves *Sthamba, Ruk, Toda, Daha, Sakti, Utkshepana* effectively.

In addition to this, principle of Short Wave Diathermy was also applied, by the use of Infrared Lamp. It is a form of heat treatment wherein high frequency alternating current is generated to heat deep and soft tissues of the affected areas, which cause increased flow to them, thereby producing high skin and subcutaneous temperature.[21] In ancient times substances like sand, brick or cotton cloths were

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heated and directly applied to the body of the patient to produce fomentation. In case of *Jentaka Sweda*, *Kuti Sweda, Karsha Sweda, Holaka Sweda* etc. Heat produced by *Angarkosthi*, was In practice. They on being red hot emit Infrared rays,[22] Which lead to local *Swedana* thereby liquefying *Doshas*, causing a more vigorous blood flow to the painful site, relaxes the muscles reduces swelling, improves tissue elasticity and directs the *Doshas* to selective places from where they can be expelled easily and has analgesic effect. Thus by the use of Infrared Lamp above said results can be had in an easy, portable and cost effective way.

CONCLUSION

The following conclusion can be drawn from current research project. Topical application of *Navsiddha Taila,* along with infrared lamp shows significant result. Therefore it can be concluded that *Navsiddha Taila* is a very potent remedy for the management of *Katishoola.*

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