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CLINICAL EVALUATION OF BASTI KARMA AND KATI BASTI IN THE MANAGEMENT OF ASTHI-MAJJA GATA VATA WITH SPECIAL REFERENCE TO LUMBAR DISC PROLAPSE

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ABSTRACTS

Asthi majja gata vata is such a problem where pain in joints and bones, stiffness of thighs, loss of muscle strength, insomnia and diminution of muscle tissue are generally found. It carries the symptomatic similarity with lumber disc prolapsed, defined as extrusion of nucleas pulposus through a rent in annulus fibrosus. The prolapsed disc causes impairment of function by nerve root compression compelling the patient ratio to seek medical advice for low back pain. Basti karma which was praised by our ancestors as a half of the treatment had played vital role in the management of said problem. Bala and tila taila both are reputed vatanasak dravya was considered as vasti dravya in that study. Baladi kasaya and as well as several others kalka dravyas were used in that study. Kati basti with ksheer bala oil with the dose of 200 ml was used, basti karma with baladi kasaya with dose of 450 ml and 60 ml ksheerbala oil were used per rectum as a basti karma in a kala basti procedure. It was observed that kati basti and basti karma in kala basti procedure had good symptomatic improvement in that problem.

KEYWORDS: Asthi majja gata vata, lumber disc prolapsed, basti karma, kati basti, ksheerbala oil, baladi kasaya.

INTRODUCTION

Asthi majja gata vata is such a problem where pain in joints and bones, stiffness of thighs, profound loss of strength, insomnia and diminution of muscle tissue are generally found. When these signs and symptoms take place at the site of kati then this condition is named as

Katyashrita Asthi majja gata vata. Affliction of deeper dhatu Asthi and majja is now very much common in such stress strain full world. It carries the symptomatic similarity with the disease Lumbar Disc Prolapsed. The term disc prolapse defined as extrusion of nucleus pulposus through a rent in annulus fibrosus. The prolapse disc causes impairment of function by nerve root compression compelling the patients ratio to seek medical advice for low backache. The problem of prolapsed of intervertebral disc is of great importance in this part of the world, because of the fact that people in this part are subjected to various physical stress either due to their peculiar living habits, low socio economic status or are subjected to live, work at places with poor infrastructure. Disc disease is most likely to occur at the levle $L_4 – L_5$, $L_5 – S_1$ vertebrae. Highest prevalence rate among people of aged 30 – 50 years with male and female ratio 2: 1. The disease presented by low back pain, with or without the pain radiating to the back of the leg, parasthesia numbness and also weakness of the muscle of dependent parts. management of LDP in modern medicine are not safe, some anti inflammatory and analgesic drugs which are prescribed in allopathic science of treatments neither safe and nor effective for a long time use. So responding the demands of science and sufferers the present study is going to provide a safe as well as comparatively effectrive solution to the suffering humanity. Though Samsodhan and Sansaman therapy are the main variety of the Ayurvedic treatment yet samsodhan is the first and formost therapy towards cure of a disease. As Kati is the main seat of vata and after its huge provocation the deeper dhatu Asthi majja is affected by the same, so the only therapy basti which is praised by our ancestors as a half of the treatment might have some role in the treatment of said ailment. Baladi Kwath and as well as several other kalka dravyas also been taken in consideration during introduction of niruha vasti, (as a part of Kala basti). As clinical trial is necessary for establishing the demand of effectiveness so a trial model has been designed in the present project work, by which the effectiveness of the therapy on the said problem have been assessed in a scientific manner. Randomised open level clinical trial has been performed over 56 patients dividing into three treatment groups. Individually Kati Basti, individually Kala Basti and simultaneous use of Kati and Kala Basti both have been continued for 16 days over this treatment group. In Group (A patients where kati basti with ksheer bala oil)out of 12, pts 8.33% improved markedly 50% moderately and 41.66% showed mild improvement and unfortunately no patient has been cured. In Group (B ,kala basti with baladi kasaya as niruha and kheer bala oil as anuvasan basti) patients it has been found that 11.11% patients are cured by the individual therapy of Kala Basti, 44.44%, 33.33% and 11.11% Patients have showed marked, moderate and mild improvement respectively out of total 18 patients.

In Group (C) where Kala basti and Kati Basti simultaneously used, the effect showed by the patients very much satisfactory, because 23.01% have got complete cured effect, 53.85% and 15.38% have exerted marked and moderate degree of improvement respectively and only 7.69% patients have showed mild improvement.

MATERIAL AND METHODS

Aims and Objectives

1. To establish the effectiveness of kala basti therapy on 'Asthi Majja Gata Vata' (LDP).
2. To Evaluate the action of comparratively newer therapy i.e. Kati Basti in the said problem.
3. To evaluate the comparative effect between kala Basti therapy and kati basti therapy individually and also in combination of them.
4. To evaluate the action of Kheerbala taila in the management of the same par rectally and as well as locally.
5. To offer a unique measure in the worst problem LDP like life style disorder.
6. To judge adverse effect if any of the therapy as well as the drugs.

Selection of the Patients

Though more than 90 patients have been selected first but finally 56 patients with the age group of (18-50) years have been selected from out patients department (OPD) of institute of Post graduate Ayurvedic Education and Research at SVSP hospital, 294/3/1 APC Road Kolkata – 09, and J.B.Roy State Ayurvedic Medical College Hospital, 170-172 Raja Dinendra Nath Street Kolkata – 4, for the clinical study of this research programme. The following subjective criteria, objective criteria, and eleminating criteria have been followed in selection of afore said patients.

Subjective Criteria (Inclusion criteria)

1. Age (18 – 50) years. Irrespective of sex, occupation, educational status and income status etc.

Complains like

a. Low Back Pain of different degree.
b. Pain radiating to the back of the leg
c. Parasthesia
d. Numbness

e. Stiffness
f. SLRT test where found < 40º degree
g. Knee Jerk, Ankle Jerk where exaggerated, diminished or absent.

Exclusion criteria

(1) Severe degree of Lumber Disc bulging
(2) Low Back Pain with the evidence of
(a) Malignancy
(b) Infective arthopathy
(c) T.B.
(d) Osteo arthritis
(e) Congenital LDP

(3) L.D.P. Complicated with the followings
(a) DM
(b) Essential HTN with IHD
(c) Post CVA
(d) Pregnency
(e) Cauda Equina Syndrome
(f) CRF

Grouping of the patients

After proper screening 56 established cases of 'Asthi Majja Gata Vata' have been taken under clinical trial of this research work. All these patients have taken their therapy at I.P.D. of I.P.G.A.E. &.R at SVSP and J.B.R.S.A.M.C&.H Kolkata.

All these 56 patients followed the advises properly, these are absolute bed rest, nutritious diet, restricted spicy food and vatala ahar like Peas, dry food, cold drinks, etc. Banana and curd also strickly prohibited. All these patients were advised to take bath with Luke warm water and also their bowel movement has been observed very sincerely.

Grouping of the patient

56 selected patients were randomly catagorised into 3 groups as per their specific therapy, irrespective of their age, sex, religion, educational status etc.

Group A: 12 patients have been randomly selected for this group. These patients treated with the Kati Basti therapy (The Preparation as well as method of kati Basti therapy has been mentioned earlier in therapy review).

Here 200 ml of kheerbala taila have been used daily at morning (about 10 AM) for 16 days.

Group B: 18 patients have bene randomly selected for this group. Where Kala Basti therapy have been employed.

As per process total 16 Basti have been introduced, where 10 anuvasana basti with kheerbala taila, in the dose of 50 ml/day and Baladi Kasaya have been introduced as niruha Basti in the dose of 450 ml/day for 6 such Total process continued for 16 days.

The regimen of both anuvasana and niruha Basti have been followed as below
Day – 1st, 3rd, 5th, 7th, 9th, 11th, 13th, 14th, and 15th,—**Anuvasana by Kheerbala taila**.
Day – 2nd, 4th, 6th, 8th, 10th, 12th —**Niruha by Baladikasaya**

Group C – 26 patients have been selected in this group where Kati basti and kala Basti therapy have been introduced as per their specific method. [Preparatory Process as well as method of introduction of Kati Basti and Kala Basti (10 Anuvasana 6 niruhea) has been mentioned earlier in therapy review].

Time schedule for Kati Basti – Everyday morning at about 10 AM for 16 days.

Time schedule for Kala Basti – Followed as mentioned earlier, which have been (Anuvasana-10, Niruhana-6) introduced just after application of Kati Basti, which continued 16 days.

Table 1: Asthimajja Gata Vata (LDP) grouping of patient as per their respective therapy.

Sl. No.	Group	Therapy	No. of Patient	Percentage (%)
1.	A	Kati Basti	12	21.43%
2.	B	Kala Basti	18	32.14%
3.	C	Kati Basti + Kala Basti	26	46.43%
		Total	56	100%

Laboratory Investigation

- Pathologiocal investigations like TC/DC/ESR/Hb%/blood sugarPP/Urea/ creatinine/Uric Acid/RA Factor/SGOT/SGPT/Bilirubin and Lipid Profile have been performed in all patients.
- Radiological investigations like X-ray Lumbosacral Spine AP and Lat view.
- MRI (after treatment done only few patients ,due to financial problem it is restricted)

  These investigations have been performed before treatment and also after treatment where needed.

Assessment of Results

The effectiveness of the therapy was assessed on the basis of subjective and objective parameter before and after treatment. Statistical analysis also performed through the data achieved before and after treatment. A specially prepared case history sheet have been used in this study which is annexed in the thesis.

Subjective Parameter

Clinical improvement that is relief of signs and symptoms (Specially Cardinal Symptoms) has been taken under consideration. Scoring System as per opinion of Carolyn M Hicks 1999 have been followed in this study to evaluate the effectiveness of the therapy in comparison to before and after treatment.

Scoring System followed for 8 major signs and symptoms.

1. Intensity of low Back Pain

(a) No Pain = 0

(b) Mild Pain = 1

(c) Moderate Pain = 2

(d) Severe Pain = 3

(e) Very Severe Pain = 4

2. Duration of low Back Pain

(a) Never = 0

(b) In frequently = 1

(c) Frequently = 2

(d) Pain persist through out the day = 3

(e) Pain in day and night = 4

3. Radiation of Pain

(a) Pain never radiates = 0

(b) Pain radiates in major movement = 1

(c) Pain radiates also in moderate movement = 2

(d) Pain radiates even in minor movement = 3

(e) Pain radiates all the time = 4

4. Numbness of Lower extrimites

(a) No numbness = 0

(b) Numbness in some portion of any one of the Leg = 1

(c) Numbness all over the one leg = 2

(d) Numbness Some portion of both leg = 3

(e) Numbness all over the both legs = 4

5. Stiffness

(a) No Stiffness = 0

(b) Stiffness Persists (5 – 10) minutes in a day = 1

(c) Stiffness Persists (10 – 30) minutes in a day = 2

(d) Stiffness Persists(½ hour – 1) hour in a day = 3

(e) Stiffness Persists > 1 hour/day = 4

6. Knee Jerk

(a) Normal = 0

(b) Just Diminished = 1

(c) Markedly diminished = 2

(d) Exaggerated = 3

(e) Absent = 4

7. Ankle Jerk

(a) Normal = 0

(b) Just Diminished = 1

(c) Markedly Diminished = 2

(d) Exaggerated = 3

(e) Absent = 4

8. SLRT Test

(a) 91º and above= 0

(b) 71 – 90º degree = 1

(c) 51 – 70 degree = 2

(d) 31 – 50 degree = 3

(e) Below 30º degree = 4

Objective Parameter

(1) X-Ray – L/S Spine: Plain X-ray does not show any positive signs in a case of acute disc prolapse. X-ray has done basically to rule out bony pathology such as infection etc. In cases of chronic disc prolapse, the affected disc space may be narrowed, and there may be lipping of the vertebral margins posteriorly. So before and after treatment the necessity of X-ray findings ware only for differential diagnosis.

(2) MRI: This is the investigation of choice. It shows the Prolapse disc, theca, nerve roots, etc., very clearly. It is also very much useful in assessment of effectiveness of therapy through findings after treatment. It is here worth to mention that it was not possible for performing such costly investigation by all patients but fortunately only 7 patients of group c had gone through this investigation before and after treatment.

(3) Routine Blood and Bio-Chemistry: Examination of Blood for TC/DC/ESR/Hb/Uric Acid/RA factor/Serum Urea/Creatinine/SGOT/SGPT/ Lipid Profile/sugar pp/Bilirubin, all have been performed before and after treatment for assessing effect as well as adverse effect.

Statistical Analysis

The data which achieved from the scoring of Cardinal Symptoms like Intensity of pain, Duration of pain, Radiation of pain, Numbness, Stiffness, Ankle jerk, Knee jerk and SLRT test before and after treatment have been calculated statistically to prove the result whether statistically significant or not.

Gross Effect of Therapy

Gross effect of the therapy was assessed in terms of complete Remission, Marked improvement, moderate improvement and mild improvement and unchanged by adopting the following criteria.

Mild Improvement: Below 25% improvement in chief complains and associated symptoms were considered as mild improvement.

Moderate Improvement: 26% to 50% improvement in chief complaints and associated symptoms was considered as moderate improvement.

Marked Improvement: 51% - 75% improvement in chief complaints and associated symptoms are recorded as marked improvement.

Complete Remission: 76% - 100% relief in chief complains and associated symptoms no recurrence during followed up study was considered as complete remission or cure.

Follow Up

After the completion of therapy the patients were asked to come weekly for two months for check up. It was to be noted whether the relief provided by therapy was permanent on or there was any recurrence.

Anuvasana Vasti

Anuvasana literally means that which remains the body for some time without causing any adverse effect. It can be given every day. It is also called anubasana as because it is administered after taking food.

Kala Basti in Proper

According to Acharya Charak Kala Basti consist of 16 Vasti, among them 10 vasti are anuvasana and 6 Vasti are niruha type of vasti.

Anuvasana Vasti Vidhi

The procedure of administration of Basti in general can be divided into three stages, which have been introduced by us in present study.

Purva Karma

The Patients were instructed to come after taking light diet and after passing of stool and urine. The patients were also advised not to take diet more than ¾th routine quantity. The patients were mainly subjected for local Abhyanga and mridu Swedana prior to the administratiomn of Anuvasana Basti.

Abhyanga (Massage) The local Abhyanga over abdomen, buttock and thigh for 5-10 mints done by Luke warm kheerbala taila.

Swedana: After Snehana, the patients were subjected for local mridu Swedana by using wet towel socked in hot water. Swedana was done on abdomen, buttocks, and on thighs for 5-10 mints.

Time for adminstration of Anuvasana Vasti = morning (abouit 10 AM).

Materials reaquied for Anuvasana Vasti

1. 100 ml syringe (Vasti Yantra)
2. Taila (Kheerbala taila,)
3. Catheter (simple l rubber catheter size *8 no*).

After Purva karma the Patients was advised to lie down on left lateral position on the basti table with left lower extrimity straight and right lower extrimity flexed on knee and hip joint. The patient was asked to keep his left hand below the head. Kheer bala taila was applied to annus in small amount. 60 ml of Luke warm kheerbala taila was taken in Vasti Yantra (enema syringe). After removing the air from Vasti Yantra, rubber catheter was administered into the anus of the patient's upto the length of 4″. The patent was asked to take deep breath and not to shake his body while introducing the catheter and the drug. The total taila was not administered in order to avoid entrance of vayu (air) into pakvashaya which may produce pain.

Pashchat Karma

After the administration of basti, the patients were advised to lie in supine position with free spreading of hand and legs over the table. Thereafter patient's both legs were raised few times so as to raise the waist and gently tapped over hips and buttocks, simulatenously taps were also given on his soles, over elbow and palms. So that Anuvasana Vasti may spread through the body and may be retained for required period. After some time (20 minutes) patients was advised to get up from the table and take rest in his bed and also not to take day sleep. Normally basti Dravya (Kheer bala taila) retained maximum for 2 hours. In cases where it comes immediately without passing stool then again another 60 ml of Kheerbala taila was introduced in the same manner.

Precaution

(1) Light food was advised to the patient in the evening

(2) Patients were adviced to take bath with Luke warm water.

(3) They were advised to drink Luke warm water.

(4) Advised to take rest after basti.

Niruha Vasti Kalpana

Vasti Samyogana vidhi

(Preparation of vasti dravya)

(1) Honey = 50 ml

(2) Saindhav Lavan = 5 gm

(3) Kheer bala taila = 100 ml

(4) Kalka Dravya (Paste) = 15 gm

(5) Kwath (Decoction) = 250 ml

(6) Cow-urine = 50 ml

A. Preparation of Kwath

All drugs using for decoction() are taken about 50 gm, and mixed with 1000 ml of water, boiled it and reduced it to 400 ml of decoction, then filtered Properly and kept it into the mortar.

B. Preparation of Vasti Dravya

50 ml of honey and 5gm Saindhav lavan mixed properly in khal Yantra. Then 100 ml of Kheerbala taila—added on it and stirred continuously until it attained a uniform consistency. After that 15 gm paste of Kalka dravya which is a fine paste of drug is added on it. Then whole mixture are mixed with decoction in the morter, again mixed it properly. Finally 50 ml of cow-urine mixed with the same and triturated properly to ensure a homogenous solution and filtered and kept in a vasti putaka (Polythene bag) and tightening the Vasti Yantra Properly.

Purvakarma – Just same as Anuvasana Vidhi.

Pradhan Karma

Time for administration = morning (10 Am)

After purvakarma the patients was advised to lie down on left lateral position on the Basti table with left lower extrimity flexed on knee and hip joint. The patient was asked to keep his left hand below the head. Kheer bala taila was applied to annus in small amount. 450ml of Niruha vasti dravya was taken in the vasti Putakas (Polythene bag). After removing the air from vasti Yantra was administered into the anus of the patients upto first Karnika (1st ring of Vasti Yantra). The patient was asked to take deep breath while introducing the Vasti Yantra. Total Vasti Dravya was not administered in order to avoid entrance of air in Pakasaya which may produce pain.

Paschat Karma

Just similar to Anuvasana vasti.

Observed the patient carefully and asked him whether any sort of pain or feeling of any discomfort over abdomen. If there were any evidence of getting vega they were advised to go for latrine. Some times the patient may get 2-3 motions, when patient feels comfortness, easiness and lightness in the body then they were advised to take complete rest for 2 hours, whenever they got good appetite they ware advised to take light diet (fresh and warm).

Next day morning patients were prepared for Anuvasan Vasti.

Precaution

- Where Vasti not came immediately there again 100 ml of cow-urine were introduced.
- In a condition where vasti dravya came immediately not along with the stool there also another vasti dravya have been introduced properly.
- All the Patiens were advised to take bath after vasti karma.

DISCUSSION

Table 2: Age wise distribution of patients of Asthi Majja Gata Vata (LDP).

Sl. No.	Age Group	No. of Patients	Percentage
1.	(18 – 28) years	13	23.21%
2.	(29 – 39) years	29	51.79%
3.	(40 – 50) years	14	25.00%
	Total	56	100%

From the above incidence it has been found that 18-28 yrs of age group use to suffer from L.D.P are less ie 23.21% and 29-39 yrs of age group are maximmum in number ie 51.79%, where as 40-50 yrs of age group patients are suffering from L.D.P only 25%.

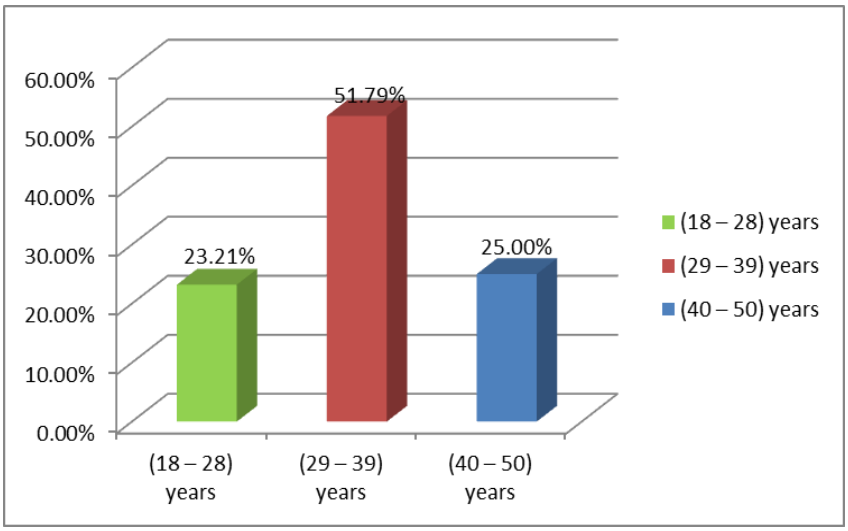

Figure showing Age wise distribution of patients of Asthi Majja Gata Vata (LDP).

Table 3: Sex wise distribution of patients of Asthimajja Gata Vata (LDP).

Sl. No.	Sex Group	No. of Patients	Percentage
1.	Male	33	58.93%
2.	Female	23	41.07%
	Total	56	100%

The above table shows that maximmum i.e. 58.93% patients were male while rest of the patients were Female i.e. 41.07%. It could be said that the male are suffering more than the female in L.D.P.

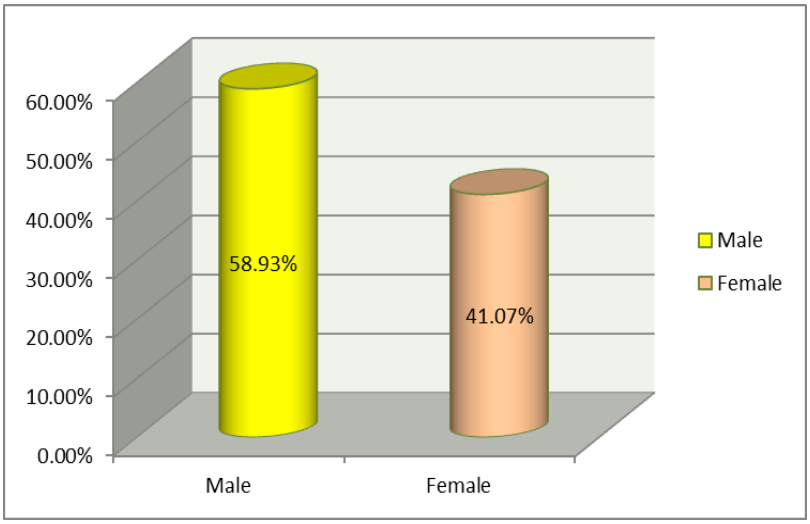

Figure showing Sex wise distribution of patients of Asthimajja Gata Vata (LDP).

Table 4: Showing the religion incidence in 56 L.D.P patients.

Sl. No.	Religion	No. of Patient	Percentage
1.	Hindu	23	41.1%
2.	Muslim	33	58.9%
3.	Others	0	0
	Total	56	100%

It has been observed that among 56 patients of LDP 33 patients are Muslim, 23 patients are Hindu.

From above incidence it has been found that Muslim patients are more ie 58.95 and Hindu Patients are less in number ie 41.1%. As LDP occurs due to trauma and it is also seen in degenerative process so we could not say that Muslims are more prone to LDP than Hindu but the reasons behind such incidence are as both the hospital are situated in minority rone area .so naturally number of Muslim patients are coming more than the Hindu.

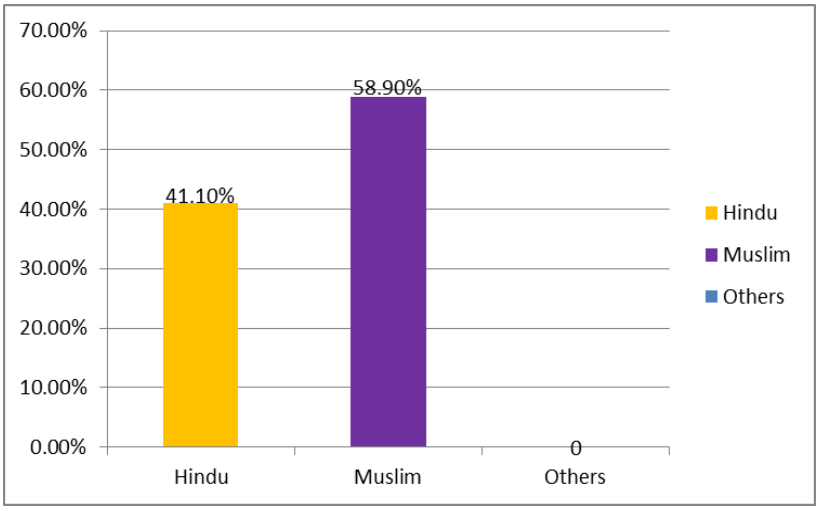

Figure Showing the religion incidence in 56 L.D.P patients.

Table 5: Education status wise distribution of 56 LDP Patients.

Sl. No.	Education group	No. of Patient	Percentage
1.	Illiterate	12	21.4%
2.	Primary	15	26.8%
3.	Secondary	17	30.3%
4.	Graduate	7	12.5%
5.	Post Graduate	5	8.9%
	Total	56	100%

From the above incidence illiterate to secondary group of educational status are more in number ie, 44 (78.5%), its indicating that these groups are less health conscious.So they are more affected by the problem like L.D.P.

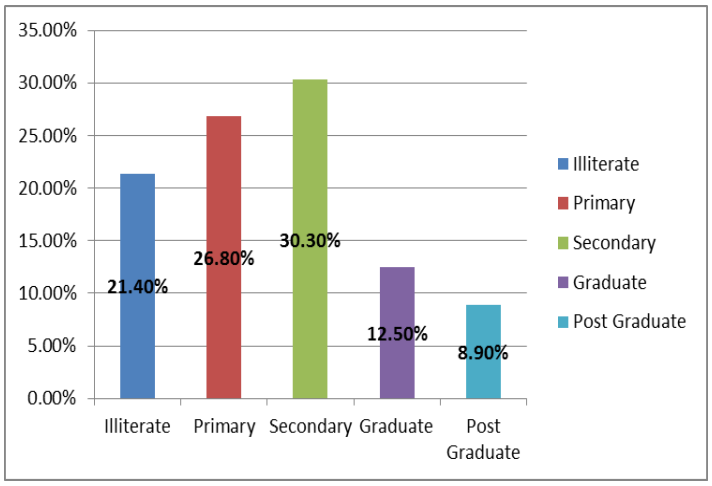

Figure showing the education status wise distribution of 56 LDP Patients.

Table 6: Socio-economical status wise distribution of patients of Asthi-Majja Gata Vata (LDP).

Sl. No.	Socio-Economic Status	No. of Patient	Percentage
1.	Rich	10	17.86%
2.	Middle	28	50.00%
3.	Poor	18	32.14%
	Total	56	100%

From above incidence of Socio-Economic Status it has been proved that almost all income group of patients may suffer from LDP but it is more common in middle class patients ie 50%.

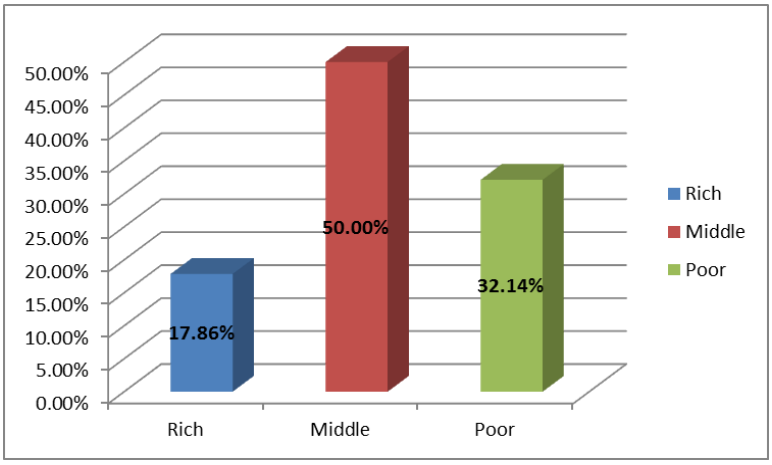

Figure showing the socio ecommical status wise distribution of 56 LDP Patients.

Table 7: Occupation wise distribution of 56 patients of LDP.

Sl. No.	Occupation	No. of Patient	Percentage
1.	Service	12	21.43%
2.	Business	17	30.36%
3.	House hold	09	16.07%
	Labour	18	32.14%
	Total	56	100%

The above table depicts that the majority of the patients i.e. 32.14% were of labour class, it could be said that the patients who are engaged in business as well as labourior work they are more prone to attack with L.D.P.

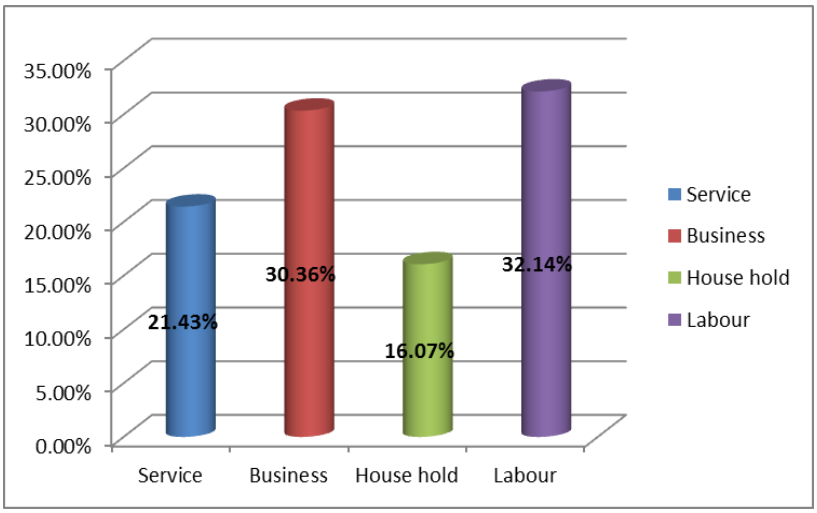

Figure showing Occupation wise distribution of 56 patients of LDP

Table 8: Marital Statuswise distribution of 56 LDP Patients.

Sl. No.	Marital Status	No. of Patient	Percentage
1.	Married	48	85.71%
2.	Unmarried	08	14.29%
	Total	56	100%

Above data shows that 85.71% patients were married and only 14.29% patients are unmarried, as marriage comes in advancement of age so in connection with age L.D.P are mostly found in married person.

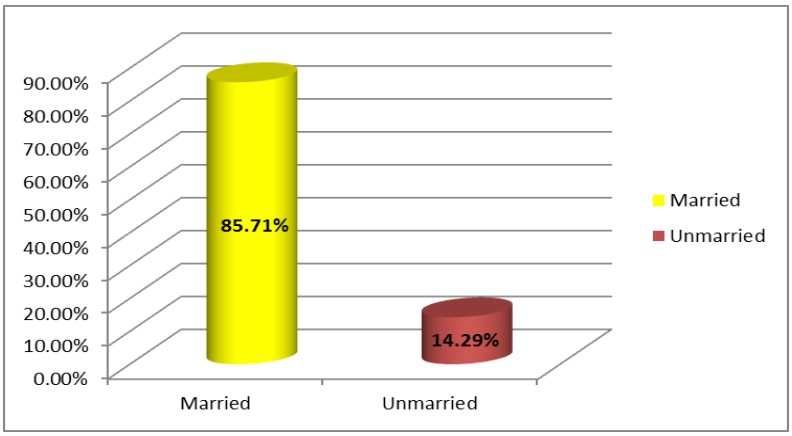

Figure showing the marital Statuswise distribution of 56 LDP Patients.

Table 9: Habitatwise distreibution of 56 LDP Patients

Sl. No.	Habitat	No. of Patient	Percentage
1.	Urban	38	67.86%
2.	Rural	18	32.14%
	Total	56	100%

From above incidence it can not be said that LDP is more prevalent in urban area than rural area, because the SVSP hospital, J.B. Roy State Agurvedic Hospital, where this clinical trial has been conducted is in urban area so the urban people have more attended.

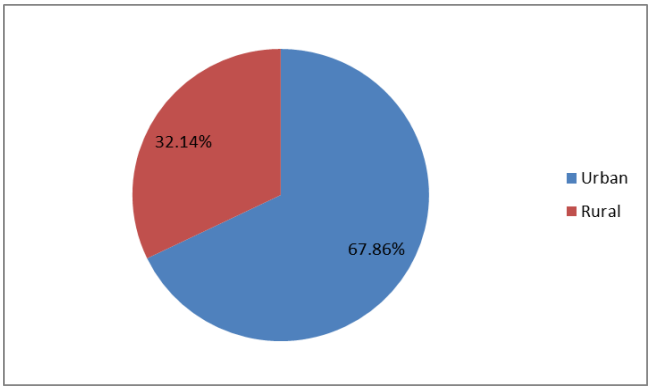

Figure showing Habitatwise distreibution of 56 LDP Patients.

Table 10: Diet wise distribution of 56 LDP Patients.

Sl. No.	Diet	No. of Patient	Percentage
1.	Vegetarian	11	19.44%
2.	Non Vegetarian	45	80.36%
	Total	56	100%

From above table it is clear that vegetarian and non vegetarian both group of patients are suffered from LDP.

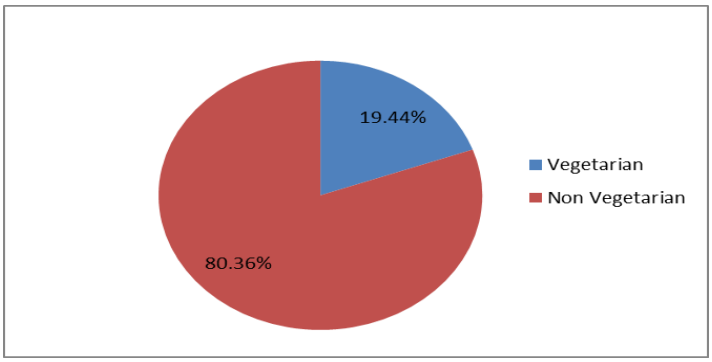

Figure showing Diet wise distribution of 56 LDP Patients.

Table 11: Appetite wise distribution of 56 LDP patients.

Sl. No.	Appetite	No. of Patient	Percentage
1.	Good	10	17.86%
2.	Low	28	50.00%
3.	Disturb	18	32.14%
	Total	56	100%

From the above table out of 56 patient's maximum ie 50.00% patients were having low appetite and 32.14% patients were having disturbed appetite.

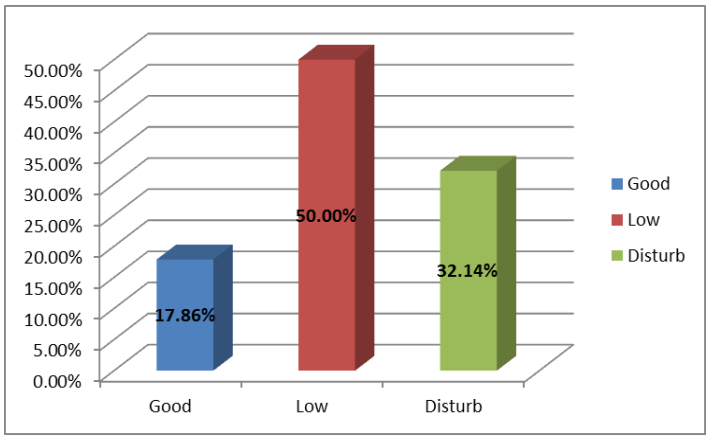

Figure showing the appetite wise distribution of 56 LDP patients.

Table 12: Sleep wise distribution of 56 LDP Patients.

Sl. No.	Sleep	No. of Patient	Percentage
1.	Sound	28	50.00%
2.	Disturb	28	50.00%
	Total	56	100%

From the above chart, out of 56 patients equal number of patients ie 50% patients were having sound sleep and disturb sleep. It agains proved that Aswapana (sleepless ness) is a feature of Asthi majja gata vata.

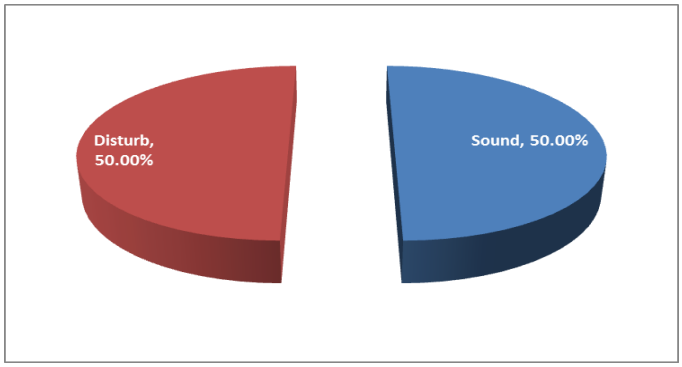

Figure showing Sleep wise distribution of 56 LDP Patients.

Table 13: Chronicity wise distribution of 56 LDP Patients.

Sl. No.	Chronicity	No. of Patients	Percentage
1.	(0-1) year	29	51.79%
2.	(1-2) year	10	17.86%
3	>2 years	17	30.35%
	Total	56	100%

The above table shows that maximmum 51.79% patients having the chronicity (0-1) year, 17.86% patients were having (1-2) years chronicity and 30.35% patients were having more that 2 years chronicity. It could say that LDP is a acute disease.

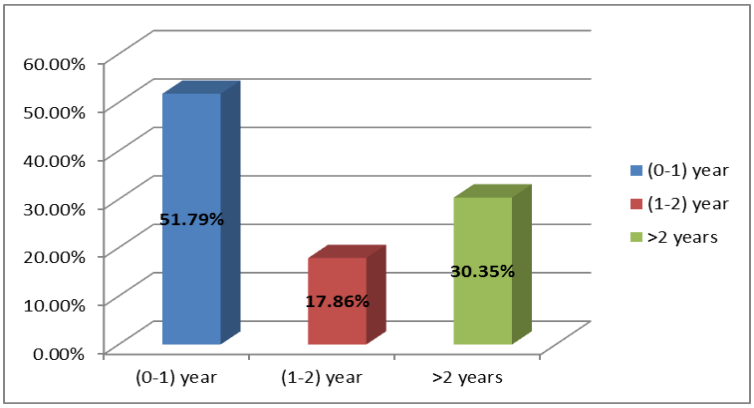

Figure showing the chronicity wise distribution of 56 LDP Patients.

Table 14: Prakritiwise distribution of 56 LDP Patients.

Sl. No.	Prakriti	No. of Patients	Percentage
1.	Vataja	12	21.43%
2.	Pitta	6	10.71%
3.	Kapha	9	16.07%
4.	Vata-Pitta	10	17.86%
5.	Vata-Kapha	12	21.43%
6.	Pitta-Kapha	3	5.36%
7.	Tridoshya	4	7.14%
	Total	56	100%

Among the 7 deha Prakriti, the maximum numbers of Patients were dandaja Prakriti out of 56 established cases of LDP vatja Prakriti kaphaja Prakriti and Vata-Kaphaja Prakriti patients were more suceptable to LDP, than other Prakriti.

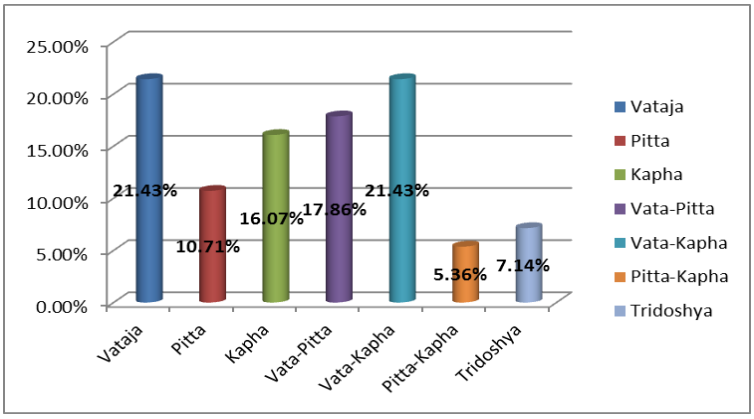

Figure showing Prakritiwise distribution of 56 LDP Patients.

Table 15: Samhanana wise distribution of 56 LDP Patients.

Sl. No.	Samhanana	No. of Patients	Percentage
1.	Pravara	10	17.86%
2.	Madhyama	46	82.14%
3.	Avara	00	00
	Total	56	100%

The above table shows that the majority of the patients, i.e. 82.14% were of madhyama Samhanana, while 17.86% patients were of 17.86% Pravara Sara. No. of patients were found avara samhanan.

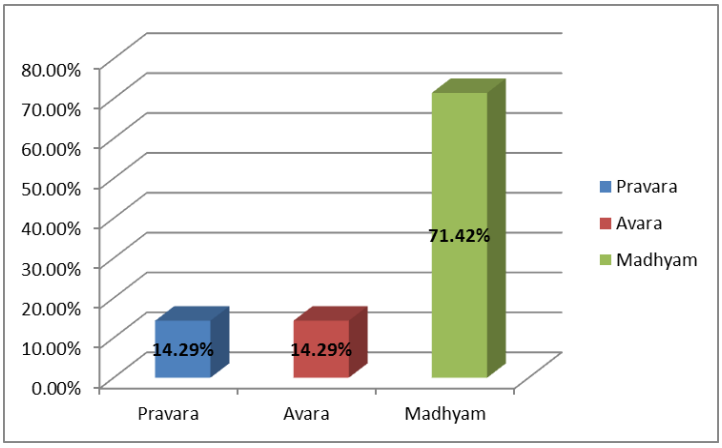

Figure showing Samhanana wise distribution of 56 LDP Patients.

Table 16: Satva wise distribution of 56 LDP patients.

Sl. No.	Satva	No. of Patients	Percentage
1.	Pravara	10	17.86%
2.	Madhyama	32	57.14%
3.	Avara	14	25.00%
	Total	56	100%

The above table shows that the majority ofthe patients, i.e. 57.14% were madhyam Satva and 17.86% patients were Pravar Satva and most important that 25% patients were avar Satva.

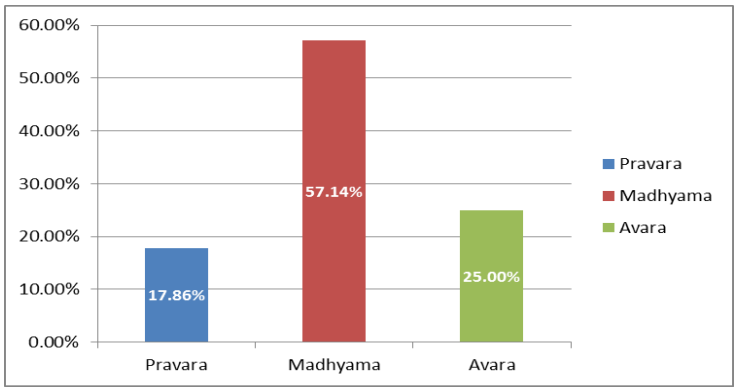

Figure showing Satva wise distribution of 56 LDP patients.

Table 17: Vyayama Shakti wise distribution 56 patients of LDP.

Sl. No.	Vyayama Shakti	No. of Patients	Percentage
1.	Pravara	10	17.86%
2.	Madhyama	38	67.86%
3.	Avara	08	14.28%
	Total	56	100%

The above table shows that the majority of the patients, i.e. 67.86% were having Madhyama Vyayama Shakti, while 17.86% patients were having Pravara and 14.28% were having avara Vyayama Shakti.

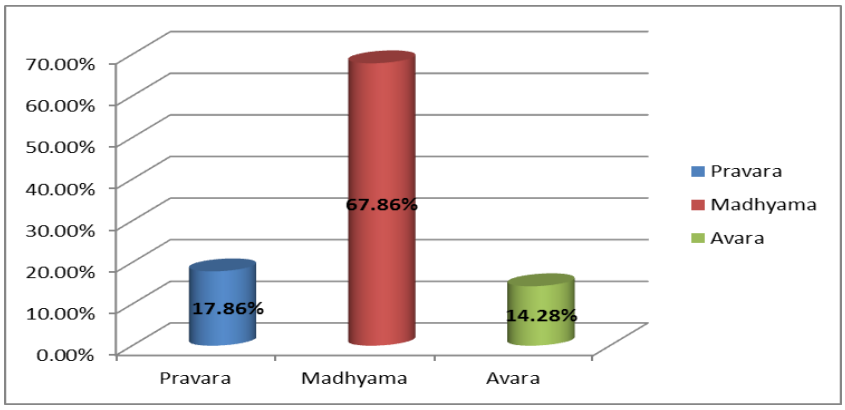

Figure showing Vyayama Shakti wise distribution 56 patients of LDP.

Table 18: Kostha wise distribution of 56 patients of LDP.

Sl. No.	Kostha	No. of Patients	Percentage
1.	Mridu	10	17.86%
2.	Madhyama	12	21.43%
3.	Krura	34	60.71%
	Total	56	100%

The above table shows that out of 56 patients, maximum i.e. 60.71% patiens were having krura Kostha, 17.86% patients were having Mridu Kostha and 21.43% patients having Madhyam Kostha. From the above table it could be saying that most LDP patieents having krura kostha.

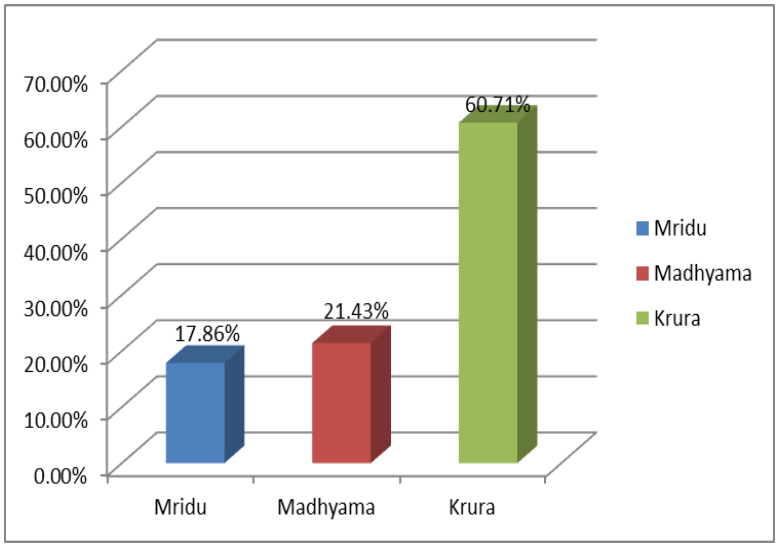

Figure showing Kostha wise distribution of 56 patients of LDP.

Table 19: Agni wise distribution of 56 patients of LDP.

Sl. No.	Agni	No. of Patients	Percentage
1.	Sama	04	7.14%
2.	Visama	18	32.14%
3.	Manda	28	50.00%
4.	Tikshna	06	10.71%
	Total	56	99.99%

The above table shows out of 56 patients the majority of patients i.e. 50% were having mandagni, 32.14% were having visama-agni, 7.14% were having sama agni and only 10.71% were having Tikshna agni.

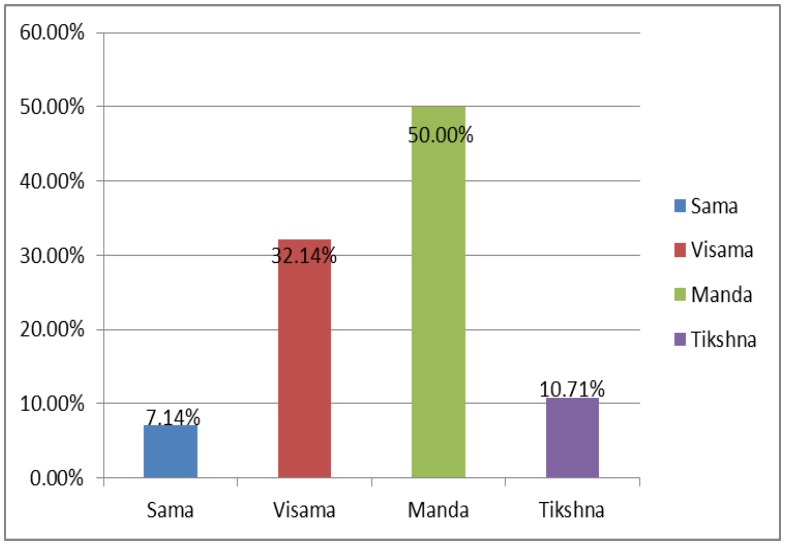

Figure showing Agni wise distribution of 56 patients of LDP.

Table 20: Addition wise distribution of 56 LDP.

Sl. No.	Addiction	No. of Patients	Percentage
1.	Tea	52	94.6%
2.	Alcohol	09	16%
3.	Tobacco	47	83.9%
4.	Pan Masala	13	23.2%

Among 56 patients of LDP it has been found that maximum number of patients is addicted to tobacco.

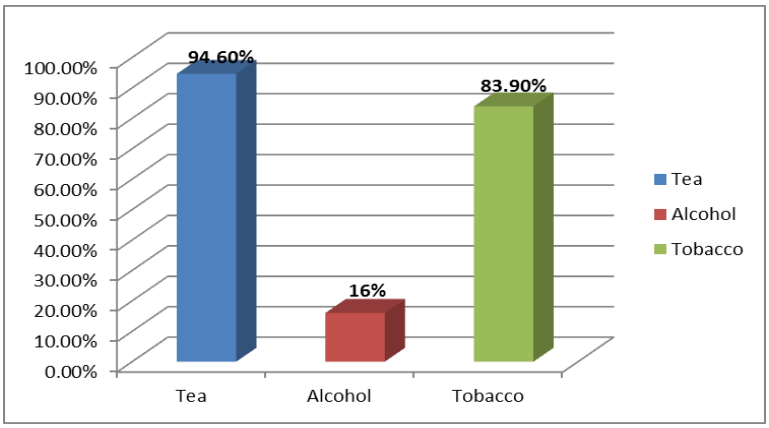

Figure showing Addition wise distribution of 56 LDP.

Table 21: Family History wise distribution of 56 LDP patients.

Sl. No.	Family History	No. of Patients	Percentage
1.	Positive	09	16.08%
2.	Negative	47	83.92%
	Total	56	100%

Among 56 patients from the above incidence it could say that LDP is not associated with family history, about 83.92% patients having no positive significant family History was found.

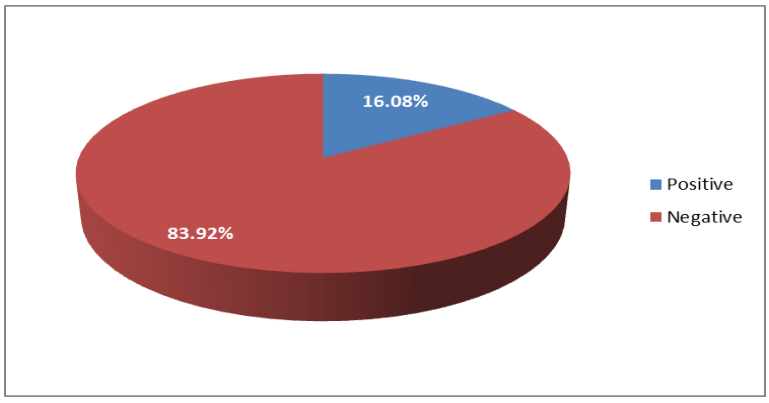

Figure showing family history wise distribution of 56 LDP patients.

Table 22: Travelling incidencewise distribution of 56 LDP patients.

Sl. No.	Maximym Travelling	No. of Patients	Percentage
1.	Walking	2	3.57%
2.	By Car	1	1.79%
3.	By Cycle	12	21.43%
4.	By Motor vehicles	2.5	44.64%
5.	By Bus	10	17.86%
6.	Others	6	10.71%
	Total	56	100%

From the above table it is clear that LDP mostly seen among who are travelling by motor cycle (44.69%) and LDP is also seen minimum among who are walking.

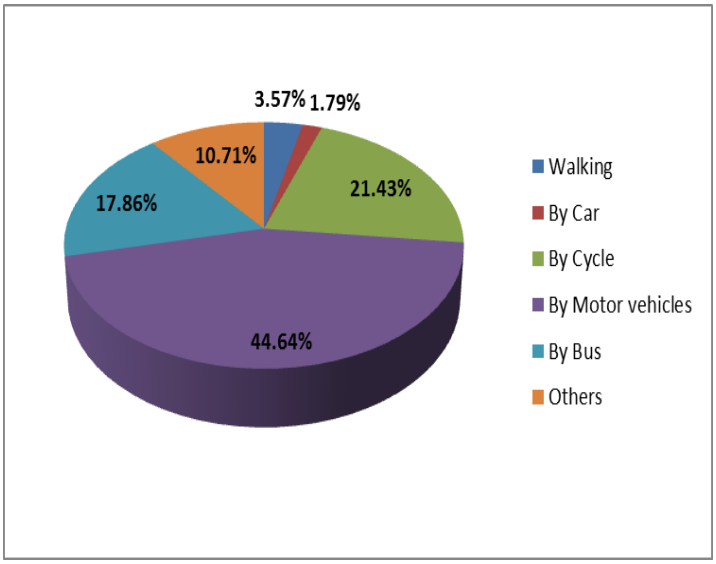

Figure showing travelling incidencewise distribution of 56 LDP patients.

Table 23: Working Status wise distribution of 56 LDP Patients.

Sl. No.	Working Status	No. of Patients	Percentage
1.	Sitting with bad postute	12	21.43%
2.	Excessive madinery works	18	32.14%
3.	Load Bearing works	18	32.14%
4.	Normal works	02	3.57%
5.	Others works	06	1.71%

From the above table it is clear that LDP related mainly Load Bearing works and Excessive machinery works. It was observed that prolong bad posture may also create the problem LDP.

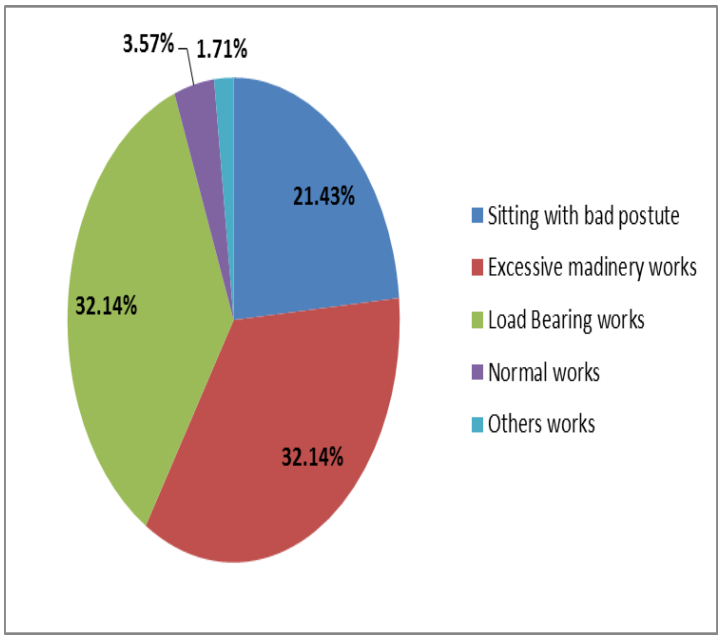

Figure showing working status wise distribution of 56 LDP Patients.

Table 24: Obstratical Historywise distribution of LDP Patients.

Sl. No.	Obstractical History	No. of Patients	Percentage
1.	Nullipara	1	4.35%
2.	Para	06	26.08%
3.	Multipara	16	69.57%
	Total	23	100%

From above table we observed that LDP mainly seen multipara patients in maximum number about 69.57% and only 4.35% patients suffering LDP in nullipara. So we could say that definite role among repeted pregnency and LDP.

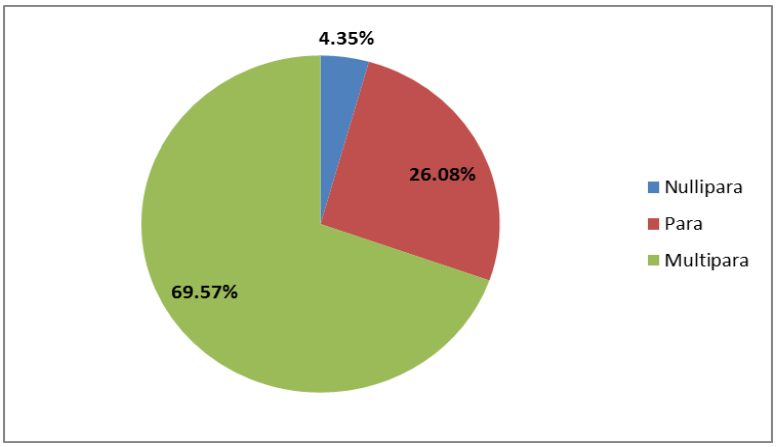

Figure showing obstratical historywise distribution of LDP Patients.

Table 25: Incidence of body weight of 56 to LDP Patients.

Sl. No.	Body weight	No. of Patients	Percentage
1.	(21-30) Kg.	0	0
2.	(31 – 40) Kg.	5	8.9%
3.	(41-50) Kg.	7	12.5%
4.	(51-60) Kg.	15	26.8%
5.	(61-70) Kg.	17	30.3%
6.	71 and above	12	21.4%

In our present study incidence of body weight in all 56 patients of LDP are given. This shows that maximum number of patients 17 (30.3%) having body weight in between (61 – 70) Kg. This is followed by 15 (26.8%) and 12 (21.4%) having the body weight (51-60) kg and 71 Kg and above respectively so LDP is directly related with body weight.

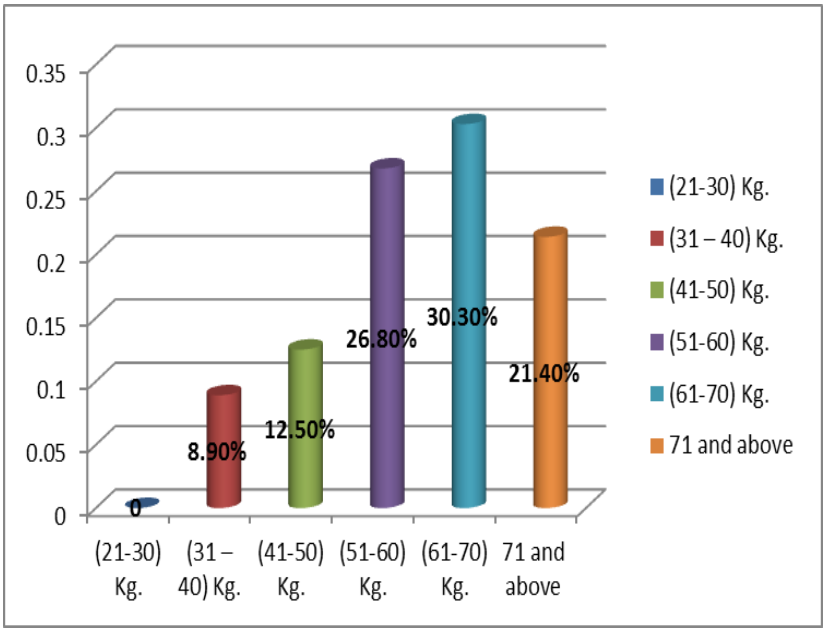

Figure showing Incidence of body weight of 56 to LDP Patients.

In present study major Cardinal Symptoms have been taken into consideration as a subjective parameter, where relief of these symptoms have been judged through some scoring before and after treatment. Effectiveness of trial therapy has been assessed by these methode.

Table 26: Evidence of Major Cardinal Symptoms Presented by the 56 LDP Patients.

Sl. No.	Major Cardinal Symptoms	No. of Patients	Percentage
1.	Low Back Pain (Katisula)	56	100%
2.	H/o Radiation of pain	48	85.71%
3.	Numbness	16	82.14%
4.	Stiffness	44	78.57%

From the above incidence it has been found that 4 major symptoms are present more than 70% of patients where L.B.P. and H/o radiation of pain are present in maximum number of patients about 100% and 85.71% respectively.

Some other features are not so much common but their presence was very much significant for diagnosis of LDP.

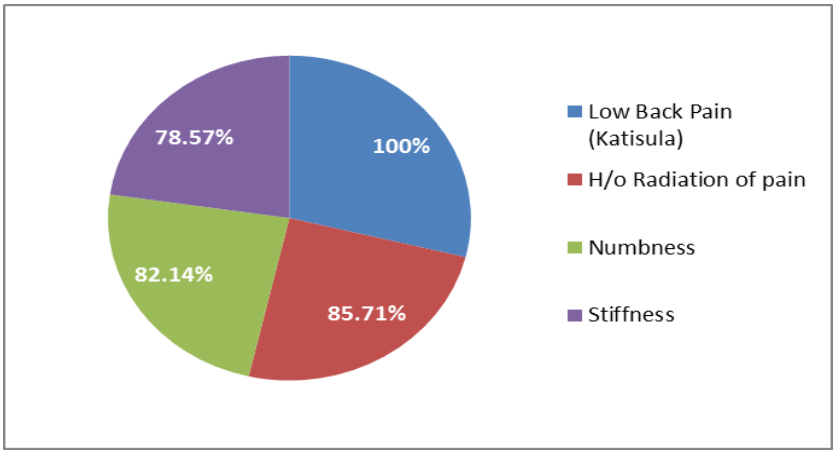

Figure showing Evidence of Major Cardinal Symptoms Presented by the 56 LDP Patients.

OBSERVATIONS AND RESULTS

The effectiveness of therapy is kala Basti & Kata Basti over the patients of group A, group B, and group C have been assessed as per relief of subjective parameters and objective parameters. Intensity, duration and Radiation history of pain have been assessed first than numbness, stiffness have been assessed. Lastly knee jerk, Ankle jerk & SLRT test have been performed over all the patients of all group after treatment. The data revealed Previously is before treatment have been compared with the data which have been observed after

treatment. So effectiveness or degree of effectiveness achieved by such comparative study of subjective Parameters as well as objective Parameters.

Laboratory investigations like Hb% ESR, Blood Urea, Serum creatinine, SGPT, SGOT Total Bilirubin, Serum Triglyceride, Total cholesterol & PPBS have been performed after treatment and these are also compare with the data before treatment to assess the effectiveness as well as adverse effect of any. All the data related to assessment of effectiveness have gone through the statistical analysis to make scientific evaluation of the effectiveness of the therapy. These resultant effect of different parameters are submitted here.

Table showing Effect of therapy in 8 major Parameters in Kati Basti grupu (gr A) n = 12.

SL No.	Major Parameter	Meanscoring		Percentage of Relief	SD ±	SE ±	t	P
		BT ± SE	AT ± SE					
1.	Intensity of L.B.P	2.75 0.40	2.42 0.33	12%	0.49	0.14	2.34	p<0.05
2.	Duration of L.B.P	2.75 0.33	2.25 0.33	18%	0.67	0.19	2.56	p<0.05
3.	Radiation of Pain	2.50 0.34	2.08 0.31	16.80%	0.79	0.23	1.82	p<0.1
4.	Numbness	1.33 0.28	1.08 0.26	18%	0.45	0.13	1.91	p<0.1
5.	Stiffness	2.17 0.42	1.67 0.36	23.04%	0.52	0.15	3.31	p<0.001
6.	Knee jerk	1.33 0.28	0.92 0.26	30.82%	0.67	0.19	2.15	p<0.1
7.	Ankle jerk	1.42 0.26	1.08 0.29	23.94%	0.65	0.19	1.77	p<0.1
8.	SLRT	2.00 0.33	1.67 0.31	16.50%	0.65	0.19	1.77	p<0.1

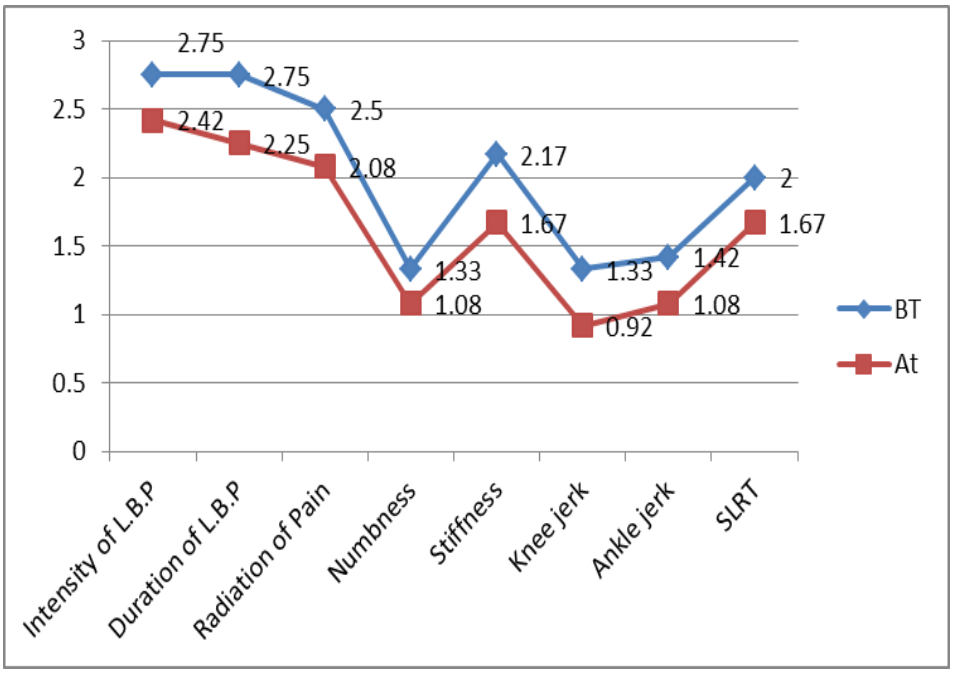

Figure showing Effect of therapy in 8 major Parameters in Kati Basti grupu (gr A) n = 12.

Table showing Effect of therapy in 8 major Parameters in Kala Basti (group B) n = 18.

SL No.	Major Parameter	Meanscoring		Percentage of Relief	SD ±	SE ±	t	P
		BT ± SE	AT ± SE					
1.	Intensity of L.B.P	2.28 0.25	1.72 0.18	24.56%	0.62	0.15	3.82	p<0.01
2.	Duration of L.B.P	2.17 0.26	1.72 0.27	20.73%	0.62	0.15	3.06	p<0.01
3.	Radiation of Pain	2.00 0.28	1.56 0.23	22%	0.51	0.12	3.68	p<0.01
4.	Numbness	2.00 0.28	1.44 0.26	28%	0.98	0.23	2.39	p<0.05
5.	Stiffness	2.72 0.27	2.28 0.24	16.17%	0.70	0.17	2.67	p<0.02
6.	Knee jerk	1.33 0.21	1.11 0.18	16.54%	0.55	0.13	1.71	p<0.1
7.	Ankle jerk	1.33 0.21	1.11 0.18	35.13%	0.55	0.13	1.71	p<0.1
8.	SLRT	3.06 0.19	2.61 0.20	14.70%	0.78	0.18	2.40	p<0.02

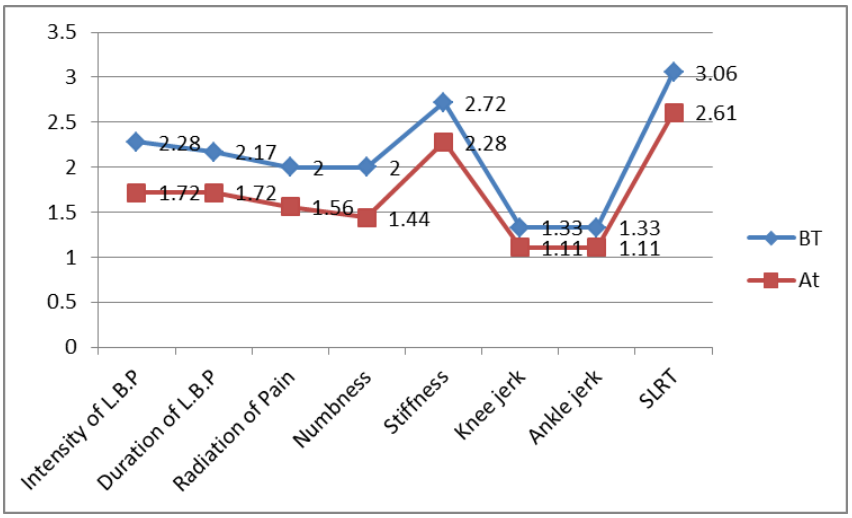

Figure showing Effect of therapy in 8 major Parameters in Kala Basti (group B).

Table showing Effect of therapy in 8 major parameters in Group C (Kata Basti & Kati Basti) n = 26.

SL No.	Major Parameter	Meanscoring		%	SD ±	SE ±	t	P
		BT ± SE	AT ± SE					
1.	Intensity of L.B.P	2.77 0.19	1.35 0.17	51.26%	0.18	0.16	8.97	p<0.001
2.	Duration of L.B.P	2.31 0.20	1.04 0.17	54.97%	0.67	0.13	9.70	p<0.01
3.	Radiation of Pain	2.58 0.22	2.19 0.20	15.11%	0.64	0.12	3.07	p<0.01
4.	Numbness	2.00 0.21	1.54 0.19	23%	1.14	0.22	2.06	p<0.05
5.	Stiffness	2.04 0.27	1.00 0.21	50.98%	1.18	0.23	4.47	p<0.001
6.	Knee jerk	1.35 0.21	1.15 0.20	14.81%	0.40	0.08	2.43	p<0.05
7.	Ankle jerk	1.46 0.20	1.31 0.18	10.27%	0.37	0.07	2.132	p<0.05
8.	SLRT	3.00 0.21	2.04 0.24	32%	1.59	0.31	3.08	p<0.01

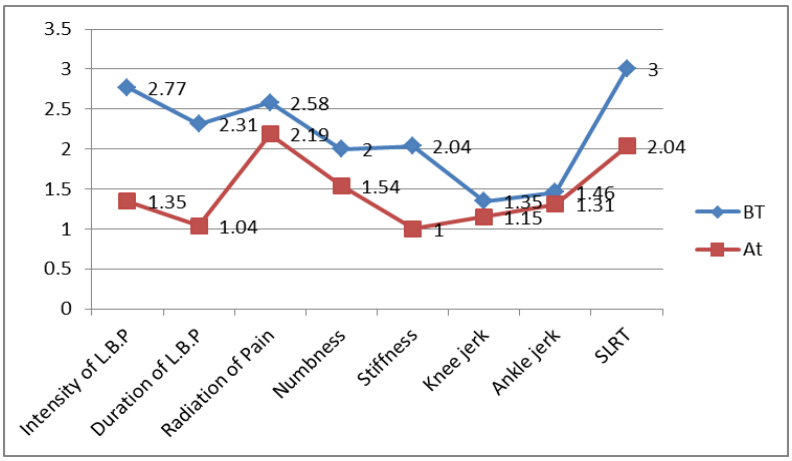

Figure showing Effect of therapy in 8 major parameters in Group C (Kata Basti & Kati Basti) n = 26

Showing Comparative Analysis response of treatment

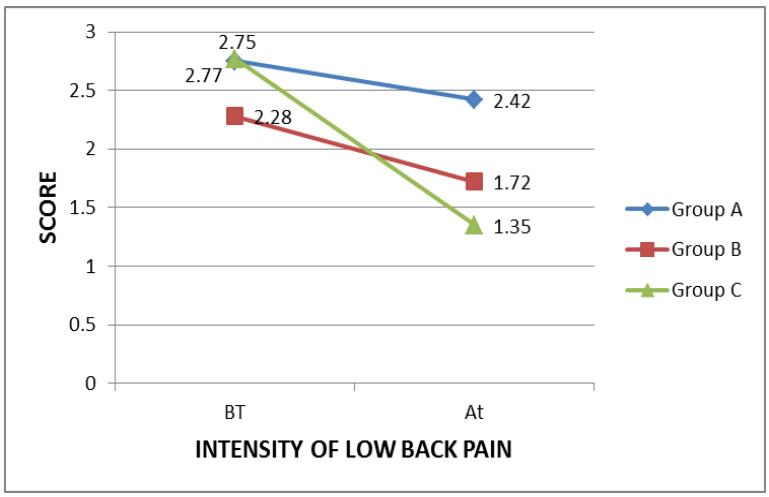

Figure showing Clinical improvement over Low back pain in different therapy

Showing Comparative Analysis response of treatment

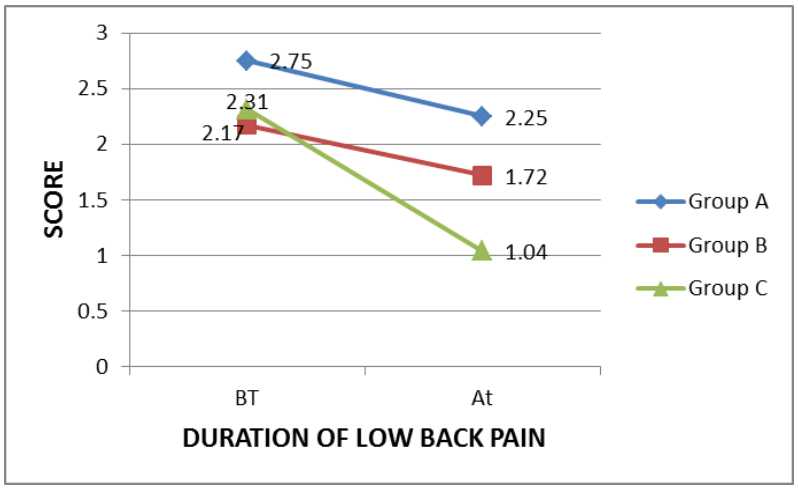

Figure showing Clinical improvement over duration of LBP in different therapy

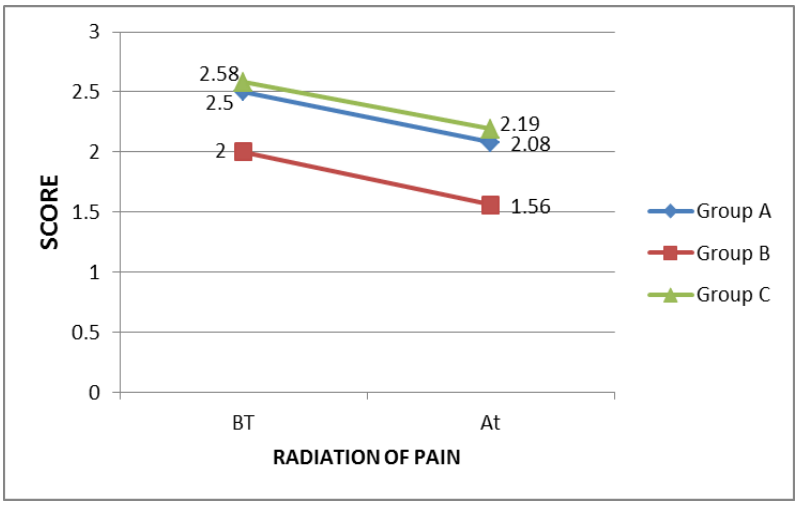

Figure showing Clinical improvement over radiation of pain in different therapy

Showing Comparative Analysis response of treatment

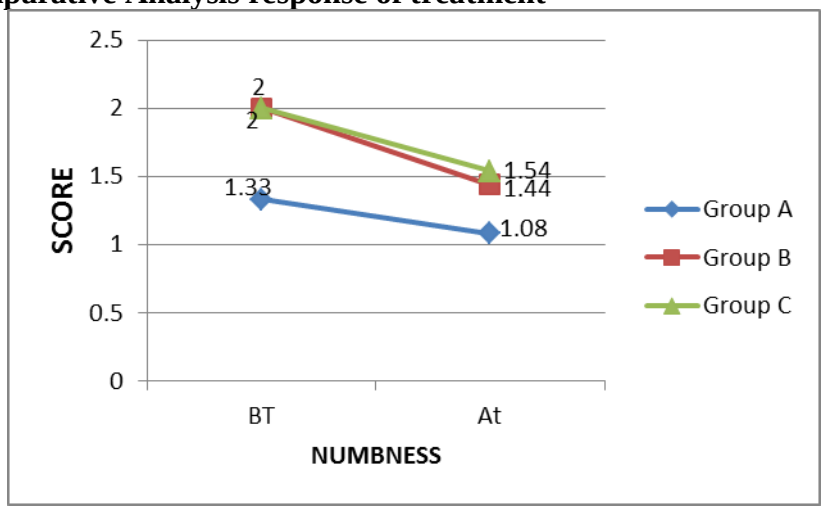

Figure showing Clinical improvement over numbness in different therapy.

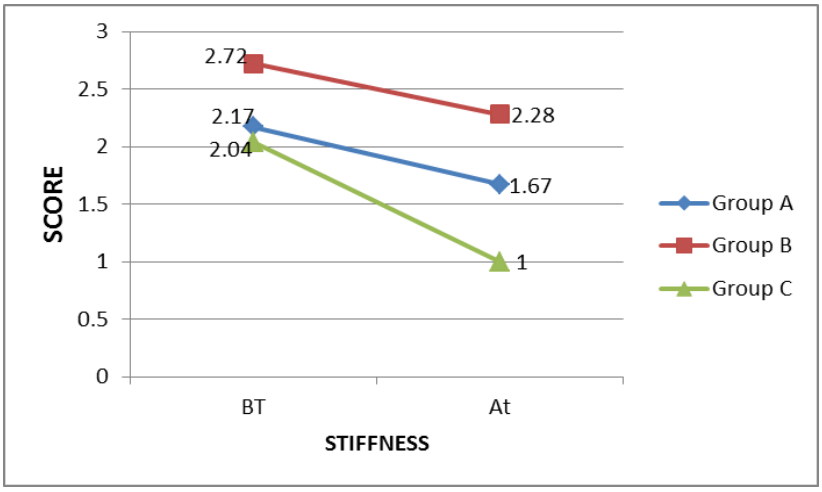

Figure showing Clinical improvement over stiffness in different therapy

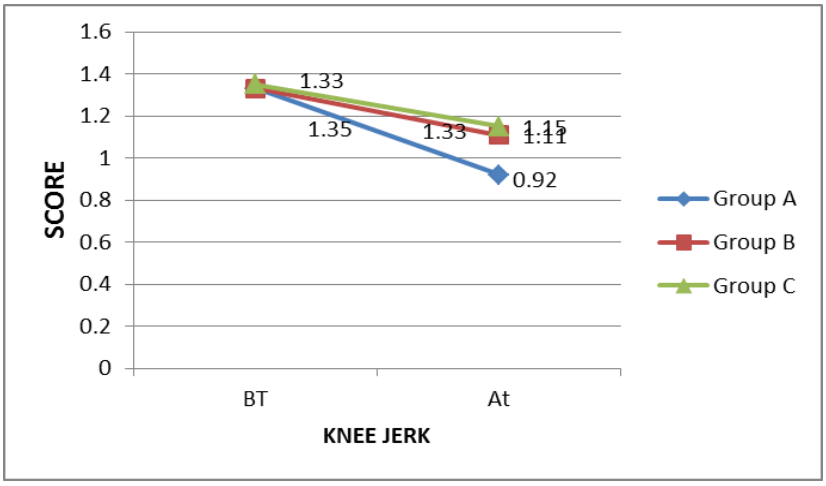

Figure showing Clinical improvement over knee jerk in different therapy

Showing Comparative Analysis response of treatment

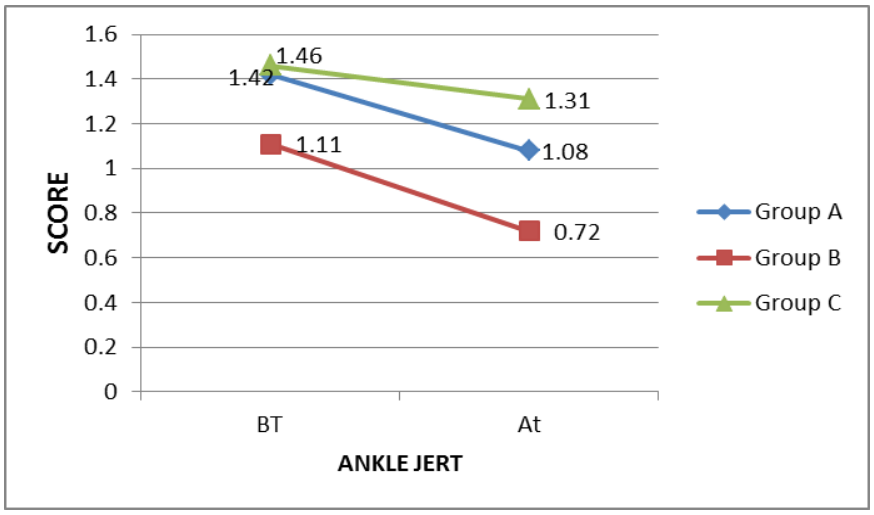

Figure showing Clinical improvement over Ankle jerk in different therapy

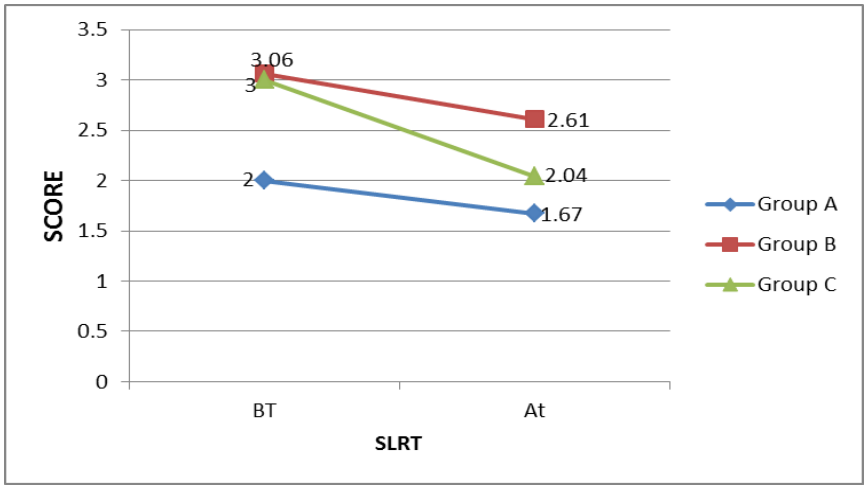

Figure showing Clinical improvement over SLRT in different therapy

Seven special cases who able to perform MRI before and after treatment

Sl. No.	Name	MRI Finding in BT	MRI Finding in AT	Remearks
1	Sankari Dutta, 49 YRS H/F	Disc desiccation at l3-l4 level. Posterior disc protrusion at l4-l5,l5-s1 level	Disc Desiccation AT L3-L4 Level. Posterior Disc Protrusion L5-S1 Level. Posterior Disc Bulging AT L4-L5	Mild Change Seen After Treatment.
2	SK Jahangir, 40 Yrs, M/M	Disc Space Reduced ar l5-s1 Level. Posterio Lateral Disc Bulging.	Disc Space Reduced AR L5-S1 Level. Posterio Lateral Disc Bulging.	No Change in Mri
3	S. M. Pandit 50 YRS, H/M	Lumber Spondylosis. left neural foramina with ligmentum flavum thicking. postero lateral disc bulgeing.	Lumber Spondylosis. Left Neural Foramina With Ligmentum Flavum Thicking. Postero Lateral Disc Bulgeing.	Nothing Significant Change In MRI
4	R. Banerjee, 38 YRS. H/F	Spondylotic Change AT L3-L4 Level. Chronic Disc Degeneration AT L4-L5 Level. Postero & Postero Lateral Disc Prolapse	Spondylotic Change AT L3-L4 Level. Chronic Disc Degeneration AT L4-L5 Level. Postero & Postero Lateral Disc Prolapse.	No Change in MRI
5	N. Parven, 23 YRS M/F	Postero lateral Disc Bulging AT L4-L5	Postero Lateral Disc Bulging AT L4-L5	Nothing Significant
6	R. N. Bera, 42 YRS H/M	C5-C6 Postero Central DISC Prolapse Causeing Central Stenosis and Compressive Myelopathy. Disc Bulging AT L3-L4	C5-C6 Postero Central Disc Prolapse Causeing Central Stenosis And Compressive Myelopathy. Disc Bulging AT L3-L4.	Nothing Significant
7	Rahidul Islam, 20 Yrs M./M	Prolapsed L4-L5 DISC Causing BI Lat Inferior Recess Narrowing. BI Lateral L3-L4 and BI Lat Facet Disease. Sacralization of L5 Vertebral Body.	L4-L5 Disc Bulging AT L3-L4 and BI Lat Facet Disease. Sacralization OF L5 Vertebral Body.	Mild Change In MRI

Statistically showing the effectiveness of therapy (Kati Basti) on group A over different laboratory investigation.

Sl. No.	Parameter	Mean scoring ± SEM		SD	SE±	t	P
		BT	AT				
1.	Hb %	11.85 0.46	11.85 0.42	1.35	0.39	0.388	p>0.1
2.	ESR	41.67 5.43	35.50 6.27	14.91	4.30	1.43	p>0.1
3.	Blood Urea	35.04 2.63	34.50 2.54	5.81	1.68	0.348	p>0.1
4.	Serum Creatinine	0.80 0.06	0.71 0.05	0.21	0.06	1.53	p>0.1
5.	Serum Uric Acid	6.40	6.08	0.56	0.16	1.95	p>0.10

		0.16	0.21				
6.	SGPT	47.00 2.11	45.08 1.95	3.94	1.14	1.168	p>0.1
7.	SGOT	47.50 2.74	45.25 3.24	4.11	1.19	1.89	p>0.10
8.	Total Billirubin	0.97 0.03	0.93 0.04	0.12	0.03	1.00	0>0.10
9.	Serum Triglycerides	129.42 7.20	129.0 7.26	2.50	0.72	-	-
10.	Total Cholesterol	160.33 7.69	158.83 7.91	3.85	1.11	1.34	p>0.10
11.	PPBS	149.92 6.34	147.83 6.40	3.73	1.08	1.93	p<0.10

Statistically showing the effectiveness of therapy (Kala Basti) on Group B over different laboratory investigation.

SL No.	Parameter	Mean scoring ± SEM		SD	SE	t	P
		BT	AT				
1.	Hb %	12.00 0.33	12.25 0.36	0.55	0.13	-1.93	p<0.05
2.	ESR	42.67 5.05	38.22 4.58	8.58	2.02	2.41	p<0.02
3.	Blood Urea	35.76 1.97	32.06 2.00	6.55	1.59	2.33	p<0.05
4.	Serum Creatinine	0.73 0.04	0.64 0.03	0.17	0.04	2.16	p<0.05
5.	Serum Uric Acid	6.47 0.12	6.14 0.15	0.50	0.12	2.75	p<0.02
6.	SGPT	46.89 1.59	44.78 1.43	3.46	0.82	2.58	p<0.02
7.	SGOT	45.61 1.96	41.72 1.77	5.09	1.20	3.24	p<0.01
8.	Total Billirubin	0.83 0.04	0.71 0.03	0.20	0.05	2.43	p<0.05
9.	Serum Triglycerides	126.85 6.12	123.43 6.19	8.73	1.71	1.97	p<0.10
10.	Total Cholesterol	162.89 5.44	151.83 3.80	12.93	3.05	3.62	p<0.01
11.	PPBS	150.0 4.56	148.4 4.65	3.70	0.87	1.78	p<0.10

Statistically showing the effectiveness of therapy (Kala Basti & Kati Basti) on Group C over different laboratory investigation.

SL No.	Parameter	Mean scoring ± SEM		SD	SE	t	P
		BT	AT				
1.	Hb %	12.04 0.27	12.50 0.28	1.13	0.22	-2.076	p<0.04
2.	ESR	40.27 3.84	37.0 3.74	6.91	1.35	2.41	p<0.02
3.	Blood Urea	32.40 1.69	29.04 1.73	6.77	1.35	2.48	p<0.05
4.	Serum Creatinine	0.08 0.40	0.71 0.03	0.23	0.04	2.08	p<0.05
5.	Serum Uric Acid	6.46 0.10	6.19 0.13	0.54	0.11	2.55	p<0.02
6.	SGPT	49.96 1.97	47.85 1.78	3.88	0.76	2.77	p<0.02
7.	SGOT	45.54 1.58	41.12 1.35	7.31	1.43	3.08	p<0.01
8.	Total Billirubin	0.87 0.03	0.87 0.03	0.21	0.04	2.46	p<0.05
9.	Serum Triglycerides	126.85	123.43 6.19	8.73	1.71	1.97	p<0.10
10.	Total Cholesterol	167.46 5.50	160.42 4.61	11.87	2.33	3.02	p<0.01
11.	PPBS	149.65 3.85	148.19 3.72	4.28	0.28	-	-

Table showing overall therapeutic effectiveness

Sl. No.	Result	No. of Patients			Total	%
		Gr. A	Gr. B	Gr. C		
1.	Cured	0	02	6	8	14.29
2.	Marked improvement	01	08	14	23	41.01
3.	Moderate improvement	06	06	04	16	28.57
4.	Mild improvement	05	02	02	9	16.7

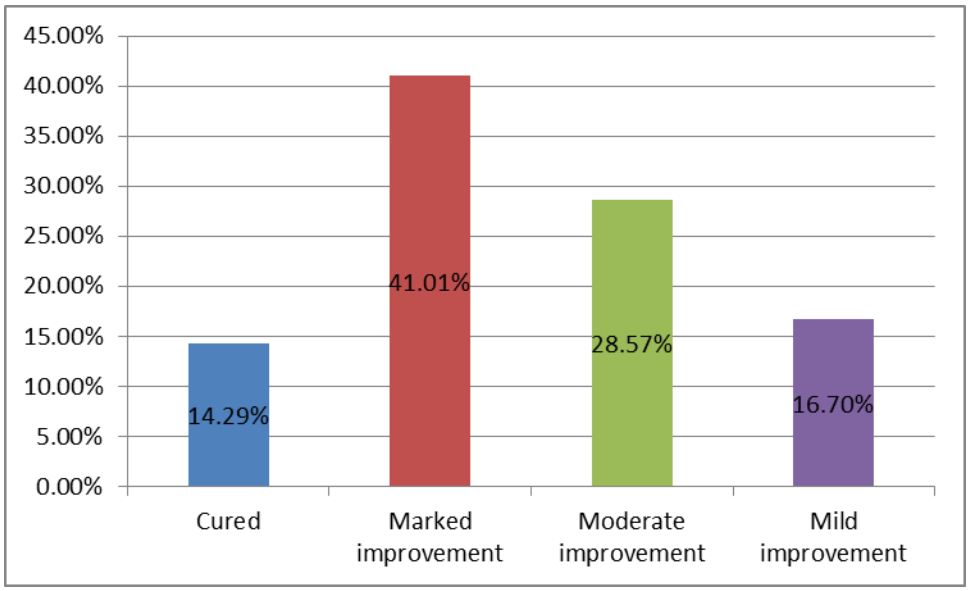

Figure showing overall therapeutic effectiveness

Effect of therapy was assessed on each signs and symptoms of the disease. These sign and symptoms were given scoring pattern before treatment and after treatment and were assesed statistically to see the significance. The effect of therapy in all groups in each signs and symptoms as below.

In case of group A the scoring of Low Back Pain, duration of low back pain, radiation of pain, numbness, stiffness, knee jerk, Ankle jerk and SLRT were 2.75, 2.75, 2.50, 1.33, 2.17, 1.33, 1.42 and 2.00 respectively before treatment which are reduce upto 2.42, 2.25, 2.08, 1.08, 1.67, 0.92, 1.08 and 1.67 respectively after treatment. It is revealed that all these scoring reduced to 21%, 18%, 16.80%, 18% 23.04%, 30.82%, 23.94% and 16.50%. In case of only intensity of LBP and duration of LBP it is found statistically significant effect ($P < 0.05$). It is found highly significant ($P<0.001$) in case of stiffness where as all others symptoms found statistically insignificant ($p< 0.1$).

In case of group B the scoring of intensity of Low Back Pain, duration of LBP, radiation of pain, numbness, stiffness, Knee jerk, Ankle jerk, and SLRT were 2.28, 2.17, 2.00, 2.00, 2.72, 1.33 1.11 and 3.06 respectively BT which are reduce upto 1.72, 1.72, 1.56, 1.44, 2.28, 1.11, 0.72 and 2.61 respectively AT. It is revealed that all these scoring reduced to 24.56%, 20.73%, 22%, 28%, 16.17%, 16.54%, 35.13% and 14.70%. In case of only knee jerk it was found statistically insignificant ($P < 0.1$). It is found highly significant ($P < 0.01$) in case of intensity of LBP. Duration of LBP, Radiation of pain, stiffness, and SLRT. In case of numbness and ankle jerk it is found statistically significant ($P < 0.05$).

In case of group (C) the intensity of LBP, Duration of LBP, radiation of pain, numbness, stiffness knee jerk, Ankle jerk, SLRT were 2.77, 2.31, 2.58, 2.00, 20.04, 1.35, 1.46 and 3.00 respectively BT which are reduce upto 1.35, 1.04, 2.19, 1.54, 1.00, 1.15, 1.31 and 2.04 respectively AT. It is revealed that all these scoring reduced to 51.26%, 54.97%, 15.11%, 23%, 50.98%, 14.81%, 10.27% and 32%. In case of numbness, knee jerk, ankle jerk it is found statistically significant ($P < 0.05$). But in case of radiation of pain and SLRT it is found statistically modrate significant ($P<0.01$). It is found highly significant in case of intensity of LBP, Duration of LBP and stiffness.

The data revealed through blood bio-chemistry like Hb%, ESR, Blood Urea, serum creatinine, serum, uric acid, SGPT, SGOT total bilirubin, total chlesterol are found in significant ($P<0.1$) in Group (A) patients through Group (B) and Group (C) patients showed significant ($P < 0.05$) effect in relation to BT and AT. only PPBS and TG level have not been changed in BT and AT in all groups. This evidence prove that our therapy are have no such adverse effect on vital organs. It is also note worthy that as basti therapy causes bio-purification so it could show some beneficial effect over the vital organ as because Group (A) patients by their Kati basti (Local oil application) have not showed any significant effect In Group (B) and Group (C) patients Kala basti individually, Kati basti and kala basti combinely have showed significant beneficial effect. So it is clear that where there is presence of Kala basti there is a reflection of beneficial systemic effect other wise not. MRI findings after treatment are not significant because where clinical improvement has been found satisfactory there also the MRI signs are not encouraging.

As we know in contraction and relaxation mechanism of the muscles are dependent on the membrane depolarisation. Then Ca^{++} released, myosin ATPase activation which leads muscle contraction. Perhaps after our therapy with taila it soothen the muscle fibres and prevents the production of myosin ATPase which causes relaxation. So it could be stated that the P/R and local absorbtion of the taila in the system presented the release of Ca^{++} as well as myosin ATPase by its soothing activities over muscle fibres.

The observation and results have been found in the present study are encouraging, because the Kati Basti therapy in case of Group (A) patients showed mild to moderate degree of curative effect. In case of Group (B) patients where Kala Basti has been introduced have showed much mroe curative effect than Group (A) patients by reliving the cardinal Symptoms. Group (C) patients where both the therapy i.e. Kati Basti and Kala Basti

simultaneously used, the best effect have been observed. This incidence proved that Kati Basti have the mild effect only Kala Basti have the moderate and simultaneous use of Kala basti and Kati Basti could excert the best effect on the management of Asthi majja gata vata.

In average response of the therapy which have been discussed have supported our demands. In Group (A) patients out of 12, pts 8.33% improved markedly 50% moderately and 41.66% showed mild improvement and unfortunately no patient has been cured.

In Group (B) patients it has been found that 11.11% patients are cured by the indivudual therapy of Kala Basti, 44.44%, 33.33% and 11.11% Patients have showed marked, moderate and mild improvement respectively out of total 18 patients.

In Group (C) where Kala basti and Kati Basti simultaneously used, the effect showed by the patients very much satisfactory, because 23.01% have got complete cured effect, 53.85% and 15.38% have exerted marked and moderate degree of improvement respectively and only 7.69% patients have showed mild improvement.

CONCLUSION

1. Asthi majja gata vata is a state (Pathological Process) where highly afflicted vata produces some typical features after entering and dearranging the deeper dhatu Asthi and majja.
2. Katyashrita Asthi majja gata vata could be co-related with the disease of modern medicine LDP.
3. It is mandatory to have the knowledge about habit and diet to get free from such life style disorder Asthi majja gata vata.
4. Probable mode of action of Kala Basti (Anuvasan 10 + Niruha 6) destroys the roughness, lightness, and coldness by its unctous, heavyness and hotness properties respectively, which pecifies vata and generated agni, later reduces the pain and stiffness.
5. Kala Basti (Anuvasan 10 + Niruha 6) therapy have the average satisfactory effect over Asthi majja gata vata, where it could show curative, marked moderate, and mild improvement like action 11%, 44%, 33%, and 11% respectively.
6. Kati Basti indivudually could provide mild relieving effect on the problem specially by relieving pain and stiffness.

7. Effect of Kala Basti and Kati Basti are highly satisfactory in Asthi majja gata vata. It could produce curative, marked, moderate and mild improvement like action 23%, 54%, 15%, and 18% respectively.
8. No systemic adverse effect of Kala basti and Kati Basti have been noted.
9. The main striking actions of 'Kala Vasti' quick absorbsion of Vasti dravya, enhancement Na^{+} conduction of, rising of rectal permiability and stimulation of rectal neuroreceptors are.
10. Probably Kala Basti and Kati Basti quick absorbing into the system preventing the release of muscle contracting factors like Ca^{++} and myosin ATPase and resulting diminution of the pain and stiffness.