

A Comparative Clinical Study of Vajigandhadi Taila Basti and Agnikarma in the Management of Sciatica

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Abstract The study was undertaken to evaluate the clinical efficacy of Vajigandhadi Taila Basti & Agnikarma in the management of Sciatica. Vajigandhadi Taila contains Ashwagandha (*Withania Somnifera*) (Balya, Rasayan), Dashamoola Kwatha (Vataghna) Bala (*Sida Cordifolia*) (Balya, Vatashama), Bilva (*Aegle Marmelos*) (Vatghna, Astringent) & Eranda Taila (*Ricinus Communis*) (Vatashamak, Anulomaka). Both these remedies proves extremely beneficial as it can be performed on the OPD & IPD basis, gives significant relief in the symptoms e.g. radiating pain, stiffness, twitching sensation. The subjective parameters like Pain, SLR, VAD, VDS etc., were used to score clinical outcome. The average clinical improvement was calculated by proper statistical treatment. Our experience with this modality has been encouraging as the response pattern is good in considerably short duration of treatment. The patient improves gradually after 4 weeks of treatment. The pain relief provided by Agnikarma & sustained improvement with Basti presents a window of opportunity in the clinical management of Sciatica. Ideally this technique should be practically taught to the physicians and should be evaluated scientifically using principles of biophysics and nerve conduction studies.

Keywords *Agnikarma; Sciatica; Vajigandhadi Taila Basti*

1. Introduction

Sciatica is characterized by radiating pain in an area of the leg typically served by one nerve root in the lumbar or sacral spine [20]. The most common cause of sciatica is herniated disc. The estimated annual incidence of sciatica in western countries is 5 cases per 1000 adults [22]. Lumbar spine disorders rank 5th among disease categories in the cost of hospital care & account for highest costs resulting from absenteeism from work & disability than any other category.

1.1. Aims & Objectives

- 1) To clinically evaluate the efficacy of Vajigandhadi Taila Kala Basti on the basis of scientific Ayurvedic principles in reversing or halting the process of Sciatica.
- 2) To clinically evaluate the efficacy of on the basis of Agnikarma Scientific Ayurvedic principles in reversing or halting the process of Sciatica [1].
- 3) To study the untoward effect of Agnikarma if any in the patients of Sciatica.
- 4) To compare the effect of 'Vajigandhadi Taila Kala Basti & Agnikarma' in the management of Sciatica w.r.t pain on the basis of time period required for treatment, their efficacy in giving instant relief.

2. Materials and Methods

2.1. Source of Materials

Raw materials were collected from the department of Rasashastra and Bhaishajya Kalpana, Dr. D.Y. Patil College of Ayurved & Hospital & Research Institute, Nerul, Navi Mumbai, and medicines were prepared classically in the Pharmacy of Rasashastra and Bhaishajya Kalpana.

2.2. Research Place

- 1) A clinical survey of subjects attending OPD and IPD of Department of Kaya Chikitsa, Dr. D.Y. Patil College of Ayurveda & Hospital & Research Institute, Nerul, Navi Mumbai Mahavidyalaya were included and subjects fulfilling the criteria of diagnosis as per the Performa have been selected for the study.
- 2) Informed consent of all the subjects registered was duly taken before starting the interventions in each group. Ethical clearance was taken from IEC for this study.
- 3) The data, which was obtained by the clinical trial was statistically analyzed by applying Student't' test [21].
- 4) Ethical clearance for this study was taken from IEC.

Inclusion Criteria

- 1) Irrespective of age, sex, race & religion
- 2) Patient's with positive S.L.R Test
- 3) Radiologically Confirmed Disc Herniation [3]
- 4) Lumbo-sacral radicular syndrome lasted for 6-12 weeks

Exclusion Criteria

- 1) Patient's with infectious disease e.g. HIV positive, HbsAg positive, Koch's
- 2) Patients suffering from Pott's disease, cauda equina syndrome, muscle paralysis
- 3) Patients with Metabolic disorders like Diabetes Mellitus etc. [7]
- 4) Previous spine surgeries, Bony stenosis Spondylolisthesis, Pregnancy [22]
- 5) Patient with skin diseases [8]

Table 1: Methodology used in Group A & B

Details of Procedure	Vajigandhadi Taila Kala Basti (Gadanigraha Vatarogadhikar 19/178)	Agnikarma
No of Patient	20	20
Ingredients	Vajigandha, Bala, Bilva Kalka:- [11] 240 gm Eranda Taila:-960 ml Dashmool Kwatha:-3840 ml for each patient	Rajat yukta Shalaka Agnisadhana
Vidhi		
a) Purvakarma	1) Abhyanga [2] 2) Swedan 3) Bhojana 4) Chankraman	1) Written Consent [19] 2) Pichhil Annasevan 3) Dhavan-Triphala kashaya
b) Pradhankarma		
c) Paschyatkarma	1) Vam Parshwa Avastha Shayan [15] 2) Bastipranidhan 3) Sphika Tadana	1) Identification of site 2) Agnidagdha site:- 4 fingers [18] above or below Janu sandhi (lateral aspect)
	1) Bastipratyagaman & observation of Yog- Atiyog Lakshan 2) Pathyapathya 3) Observation of Sneha Vyapada if any & their treatment [13]	1)Application of Mahatiktak Ghrita + Gairik + Yashtimadhu [16] 2) Observation of Dagdha Vrana 3) Watch for any complication if any
Dose	60 ml/day	One or two Bindu
Kala	Bhuktakala	After Pichhil Annasevan [14]
Type of Basti/ Agnikarma	Matra Bastivat	Binduvata [6]
Route of Administration	Bastivata	Bahya
Duration	16 days	After every 7 days for 4 weeks

3. Drug Specifications

3.1. Contents of Vajigandhadi Taila

Table 2: Properties of Ingredients of Vajigandhadi Taila

No	Dravya	Rasa	Virya	Vipaka	Guna	Karya
<i>Kalka dravya</i>						
1	Ashwagandha [10]	Madhur Kashaya Tikta	Ushna	Madhur	Laghu, Snigdha	Vata Kaphahar Balya, Shukrala Rasayana
2	Bala	Madhur	Shita	Madhur	Guru, Snigdha	Balya Vatahar, grahi Vrishya, Tridosahar
3	Bilva	Kashaya Tikta	Ushna	Katu	Laghu, Ruksha	Grahi, Vatakaphahar Pachana Balya
<i>Kwatha dravya</i>						
4	Bilva	Kashaya Tikta	Ushna	Katu	Laghu, Ruksha	Grahi, Vatakaphahar Pachana Balya
5	Gambhari	Madhur Tikta Kashaya	Ushna	Madhur	Laghu, Ruksha	Kaphavatahar, Shothahar
6	Agnimantha	Tikta Kashaya Katu Madhur	Ushna	Katu	Laghu, Ruksha	Trodoshahar Shothahar
7	Patala	Tikta Kashaya	Anushna	Katu	Laghu, Ruksha	Dipana, Grahi, Tridosahar
<i>Kwatha dravya</i>						
8	Shyonak	Tikta Kashaya	Shita	Katu	Guru, Snigdha	Tridosahar
9	Shaliparni	Madhur Tikta	Ushna	Madhur	Laghu, Snigdha	Tridosahar
<i>Kwatha dravya</i>						
10	Prushniparni	Madhur Tikta	Ushna	Madhur	Laghu, Snigdha	Tridosahar
11	Gokshura	Madhur	Shita	Madhur	Guru, Snigdha	Balya, Vatahar, Bastishodhan, Vrushya
12	Brihati	Tikta Katu	Ushna	Katu	Laghu, Ruksha Tikshna	Grahi, Pachana, Hridya, Malanashana,
13	Kantakari	Katu Tikta	Ushna	Katu	Laghu, Ruksha	Dipana, Pachana, Vatakaphahar
<i>Sneha dravya</i>						
14	Eranda taila	Madhur Katu Kashaya	Ushna	Madhur	Snigdha, Guru	Adhobhagahar Vrushya, Vatahar, Srotovishodhan

3.2. Rasa Panchaka of Vajigandhadi Taila

Table 3: Gunapradhanata of Vajigandhadi Taila

Panchak	Property	Kalka	Kwatha	Taila	Percentage
Rasa	Madhur	2	120	6	24.24
	Kashaya	2	120	6	24.24
	Tikta	2	192	-	36.74
	Katu	-	72	6	4.78
Virya	Ushna	2	168	6	70.68
	Shita	1	48	-	19.68
	Anushna	-	24	-	9.54
Vipaka	Katu	1	144	-	58.23
	Madhur	2	96	6	41.77
Guna	Laghu	2	192	192	37.60
	Snigdha	2	96	96	20.15
	Guru	1	48	48	9.50
	Ruksha	1	144	144	32.75
	Tikshna	-	-	-	-
Karma	Vatahara	3	240	240	52.53
	Kaphahar	3	216	216	47.47

3.3. Parameter of Assessment

Clinical assessment was done under these basic subjects.

1) **Assessment of Efficacy**

A) Subjective improvement B) objective improvement

2) **Assessment of Tolerability and other procedure**

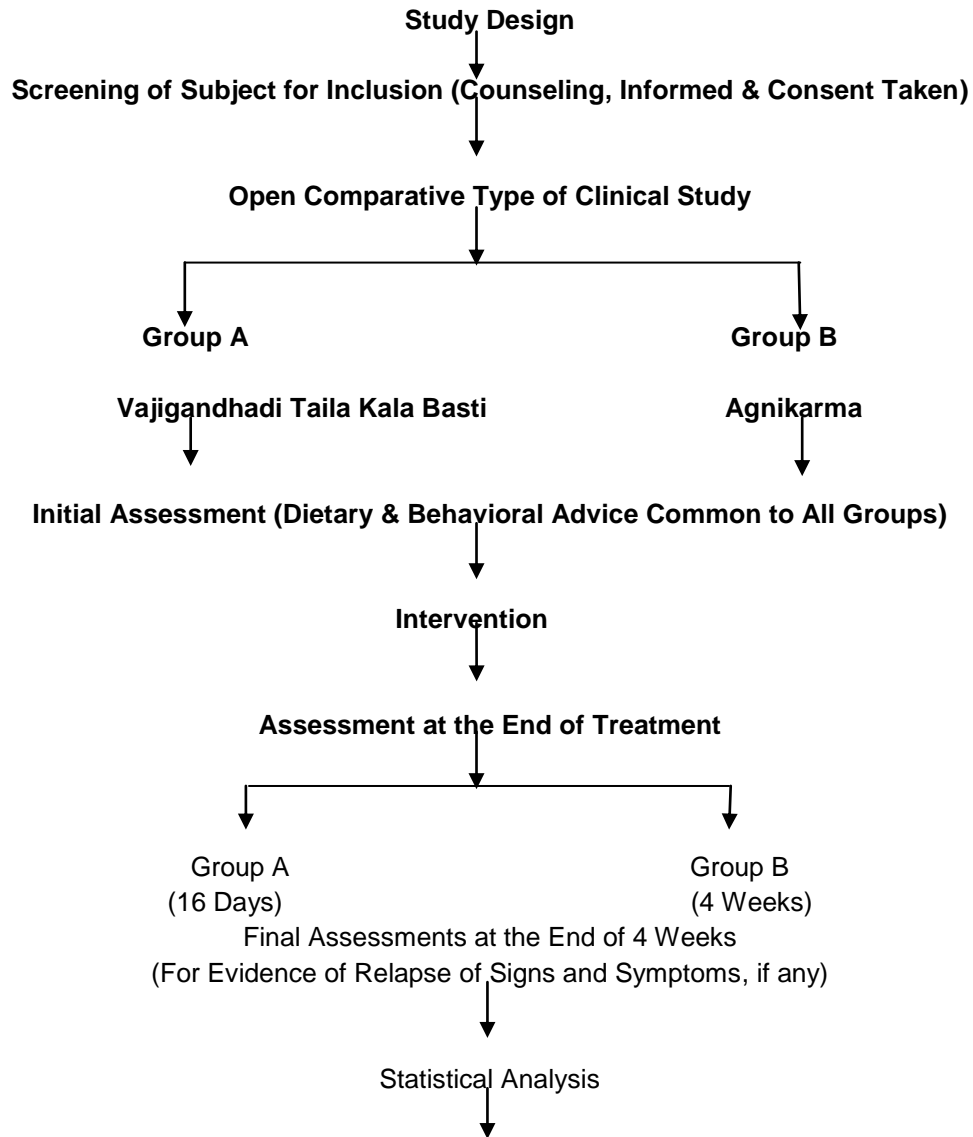
e.g. premature discontinuation-incomplete case-unsatisfactory or cured case

1) **Assessment of Efficacy**

Patients were weekly assessed under these guidelines:-

A) Subjective Assessment

Assessment of signs & symptoms were done in every week for 4 weeks. The specific criteria adopted for gradation of pain & tenderness. To assess the improvement in clinical symptoms of Sciatica patients were arbitrarily graded into four grades (0 to 3) on the basis of severity–duration-stage.



3.4. Gradation of Clinical Symptoms

Table 4: Gradation of Clinical Symptoms

Lakshana (Clinical Symptoms)	Grade 0	Grade 1	Grade 2	Grade 3
(Pain)	No pain	Mild (+) pain complained by patient when asked	Moderate (++) patient frequently complains of pain & has painful look	Severe (+++) excruciating pain associated with painful cries & agonizing look
(Tenderness)	No Tenderness	Mild (+) patient winces after digital pressure	Moderate (++) patient winces & withdrawals' the affected part	Severe (+++) patient doesn't allow to touch the affected part

2) Signs

Table 5: Gradation of Clinical Signs

Sr. No.	Clinical Signs	Absent 0	Mild(+) 1	Moderate(++) 2	Severe(+++) 3
1	SLR Test [26]	SLR 90	SLR 61-80	SLR 31-60	SLR 0-30 degree
2	Bragard's sign [25]	No pain on SLR, following hip & knee flexion	Mild pain on SLR following hip & knee flexion	Moderate pain on SLR following hip & knee flexion	Severe pain on SLR following Knee & hip flexion
3	Lasegue's sign [24]	No pain	Mild increase in pain on SLR, following foot dorsiflexion	Moderate increase in pain on SLR, following foot dorsiflexion	Severe increase in pain on SLR, following foot dorsiflexion
4	Verbal Dating Scale	No pain	Mild pain	Moderate pain	Worst possible pain
5	Visual Analogue scale [22]	No pain	0-5 scale	5-10	10-15

3) Investigations

Table 6: Investigational Findings in Both the Groups

C	Investigations	Before Treatment			After Treatment		
		Good	Fair	Poor	Good	Fair	Poor
1	CBC with ESR						
	Hb	13-14	10-11	>10	13-14	10-11	>10
	ESR						
2	Blood sugar fasting & postprandial	65-100	Up to 130	>130	90-130	Up to 165	> 180
3	Lipid profile						
	Total cholesterol	Up to 200	Up to 240	>260	Up to 200	Up to 240	>260
	Triglycerides	Up to 150	Up to 250	>250	Upto150	Up to 250	>250

4) X ray L.S – Before & After Treatment

Following reflexes were assessed after every week.

Reflexes

Table 7: Reflexes

Sr. No.	Reflexes	Right	Left
1	Planter		
2	Ankle		
3	Knee		

4. Observations and Results

4.1. Effect of Vajigandhadi Taila Kala Basti in Symptoms of Sciatica (Group A)

Table 8: Effect of Vajigandhadi Taila in Symptoms of Sciatica

Sr. No.	Cardinal Symptoms	Mean Score		Mean	SD±	S E±	‘t’	P	%
		B.T	A.T						
1	Pain	2.15	0.25	1.9	0.640	0.143	13.26	<0.0001	88.37
2	Tenderness	1.8	0.95	0.85	0.366	0.0819	10.37	<0.0001	47.22

4.2. Effect of Agnikarma in Cardinal Signs of Sciatica

Table 9: Effect of Vajigandhadi Taila in Symptoms of Sciatica

Sr. No.	Cardinal signs	Mean Score		Mean	SD±	S E±	‘t’	P	%
		B.T	A.T						
1	SLR Test	1.8	0.95	0.85	0.366	0.0819	10.376	<0.0001	47.22
2	Bragard’s sign	1.8	0.95	0.85	0.366	0.0819	10.376	<0.0001	47.22
3	Lasegue’s sign	1.8	0.95	0.85	0.366	0.0819	10.376	<0.0001	47.22
4	Verbal Dating Scale	2.15	0.25	1.9	0.640	0.143	13.262	<0.0001	88.37
5	Visual Analogue Scale (VAS)	2.15	0.25	1.9	0.640	0.143	13.262	<0.0001	88.37

Table 10: Effect of Vajigandhadi Taila in Investigations in Patients of Sciatica

Sr. No.	Investigations	Mean Score		SD±	S E±	‘t’	p	%
		B.T	A.T					
1	CBC							
	Hb	13.16	13.17	1.193	0.2667	0.0168	0.9867	-0.075
	ESR	17.85	14.10	7.297	1.632	2.298	0.0331	21
2	Blood sugar							
	fasting & Postprandial	86.10	83.32	28.85	6.45	0.4494	0.6582	3.22
3	Lipid profile							
	Total cholesterol	184.9	176.95	11.19	2.50	3.177	0.005	4.29
	Sr. triglycerides.	191.3	187.35	10.55	2.35	1.674	0.1104	2.06

4.3. Effect of Agni karma in Cardinal Symptoms of Sciatica (Group B)

Table 11: Effect of Agnikarma in Symptoms of Sciatica

Sr. No.	Cardinal Symptoms	Mean Score		Mean	SD±	S E±	‘t’	p	%
		B.T	A.T						
1	Pain	2.35	0.30	2.05	0.510	0.114	17.96	<0.0001	87.23
2	Tenderness	1.85	0.55	1.3	0.571	0.127	10.177	<0.0001	70.27

Effect of Agnikarma in Cardinal Signs of Sciatica

Table 12: Effect of Agnikarma in Symptoms of Sciatica

Sr. No.	Cardinal Signs	Mean Score		Mean	SD±	S E±	‘t’	p	%
		B.T	A.T						
1	SLR Test	1.8	0.55	1.25	0.55	0.123	10.162	<0.001	69.44
2	Bragard’s sign	1.8	0.55	1.25	0.55	0.123	10.162	<0.001	69.44
3	Lasegue’s sign	1.8	0.55	1.25	0.55	0.123	10.162	<0.001	69.44
4	Verbal Dating Scale	2.5	0.25	2.25	0.638	0.142	15.75	<0.0001	90
5	Visual Analogue Scale (VAS)	2.5	0.25	2.25	0.638	0.142	15.75	<0.0001	90

Table 13: Effect of Agnikarma in Investigations in Patients of Sciatica

Sr. No.	Investigations	Mean Score		SD ±	S E ±	‘t’	p	%
		B.T	A.T					
1	CBC							
	Hb	12.89	12.905	0.559	0.128	0.08198	0.9356	-0.07
	ESR	19.2	13.7	8.22	1.839	2.991	0.0075	28.64
2	Blood sugar							
	fasting &	9.65	9.30	7.92	1.773	0.1974	0.8456	3.626
	Postprandial	110.5	109.15	7.67	1.716	0.8159	0.4247	0.90
3	Lipid profile							
	Total cholesterol	153	147.10	6.52	1.458	4.047	0.0007	3.85
	Sr. triglycerides.	178.15	169.3	8.85	12.44	2.78	3.181	5.15

1) Age Wise Distribution

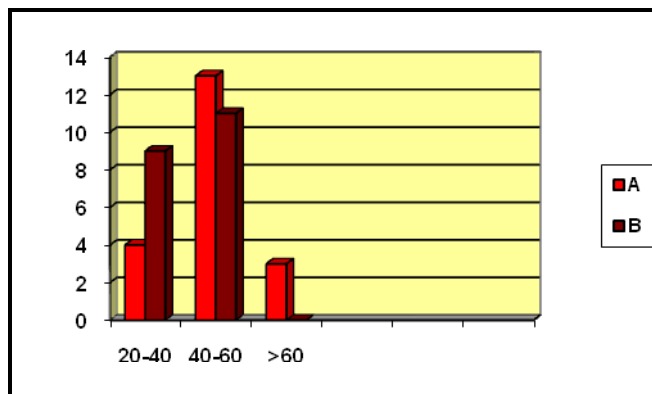


Figure 1: Age Wise Distribution of Patients

2) Sex Wise Distribution

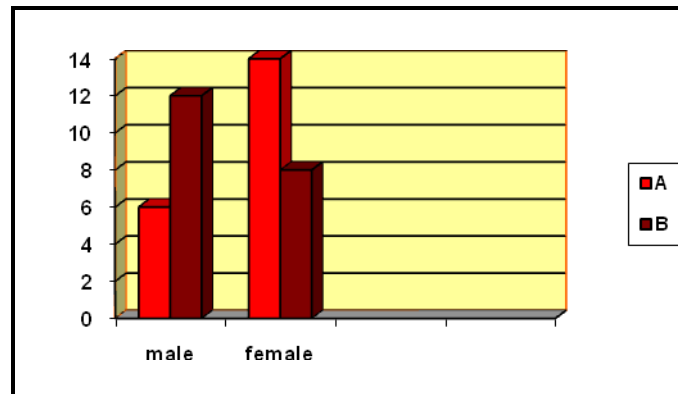


Figure 2: Sex Wise Distribution of Patients

3) Religion Wise Distribution

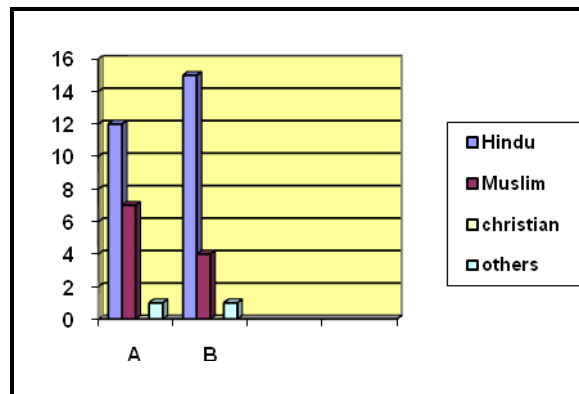


Figure 3: Religion Wise Distribution of Patients

4) Socio-Economic Status

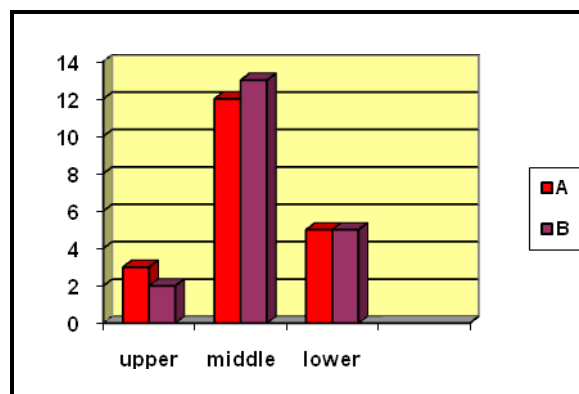


Figure 4: Socio-economic Distribution of Patients

5) Occupation Wise Distribution

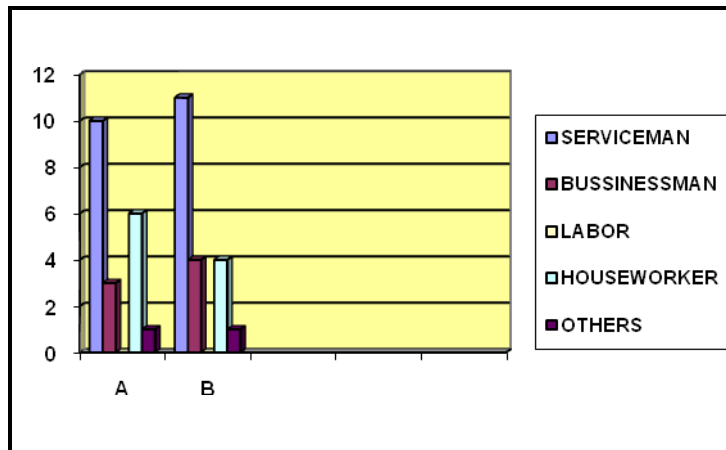


Figure 5: Occupation Wise Distribution of Patients

6) Chronicity Wise Pattern

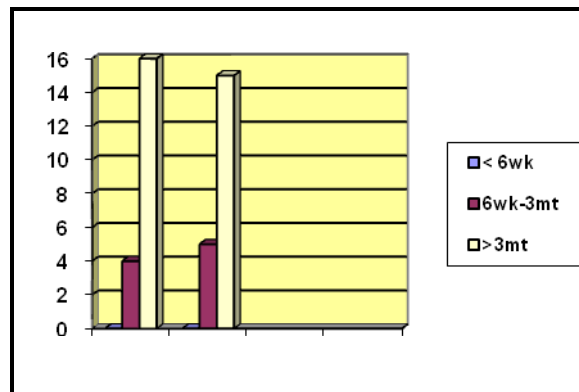


Figure 6: Chronicity Wise Distribution of Patients

7) Prakriti Wise Pattern

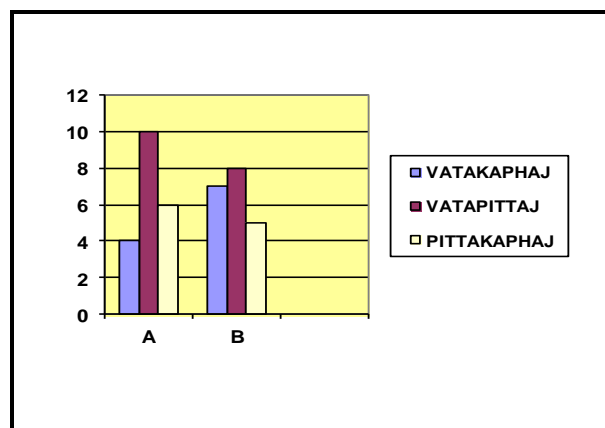


Figure 7: Prakriti Wise Distribution of Patients

Neurological Findings

1) Knee Jerk

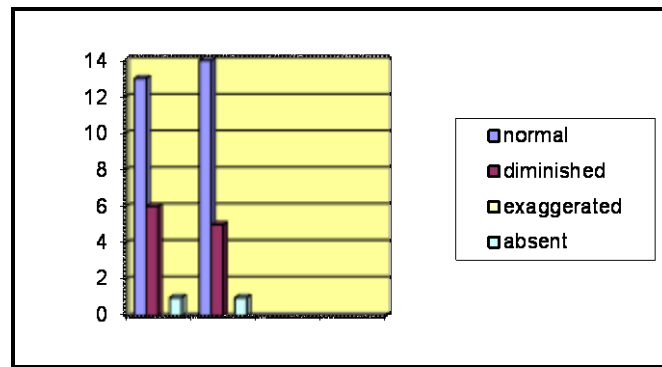


Figure 8: Knee Jerk Findings in Both the Groups

2) Ankle Jerks

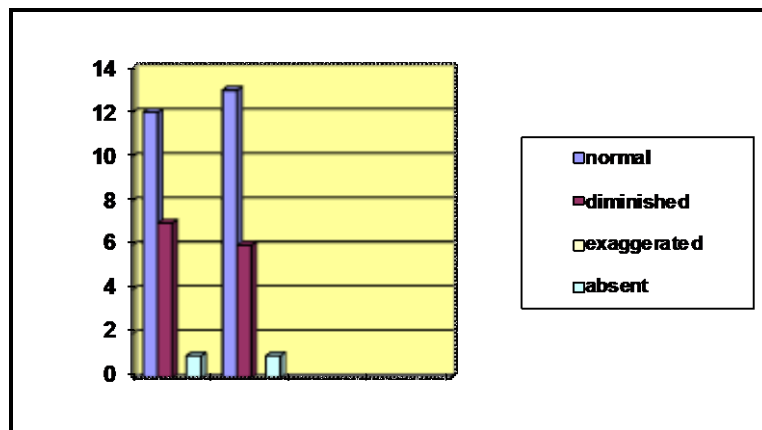


Figure 9: Ankle Jerk Findings in Both the Groups

Effect in Mean Grade, Scores of Investigations

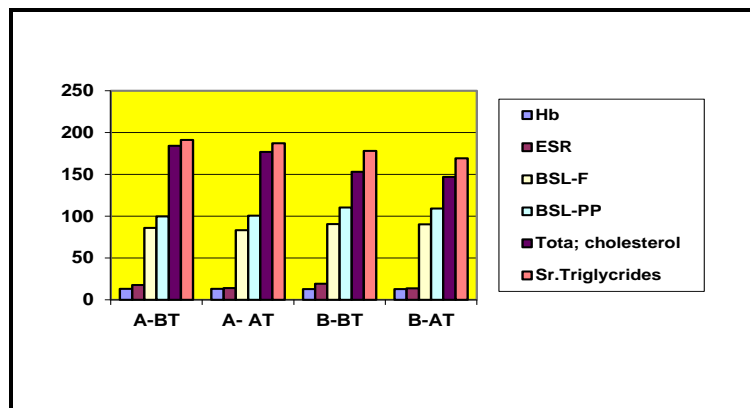


Figure 10: Investigations in Both the Groups

5. Discussion

The term Sciatica refers to pain beginning in the lumbar region and spreading down the back of one lower limb to the ankle or foot. There is usually little weakness or sensory loss but sometimes diminution or loss of the ankle jerk. The recurrence rate of sciatica is a major concern. Advances in science have not yielded substantial treatment option on the pain with the help of analgesics and steroidal therapy. However its role in treating the disease remains doubtful. As Ayurvedic management is believed to manage the root cause of the disease [17]. Therefore whole medical fraternities are looking towards this ancient medical science. The present study entitled aims to study and to find out the effects of Panchakarma & Anushalya procedures in Sciatica [15].

5.1. Age Groups

Age distribution was divided into three groups. (32.5%) patients were belonging to the age group of 20-40 years. (60%) patients were belonging to the age group of 40-60 years. (7.5%) were belonging to the age group of group 61 onwards. This data suggest that most of these patients fall in the age group of 40-60 years.

5.2. Sex Distribution

Out of 40 patients there were (45%) male & (55%) female.

5.3. Religion Wise Distribution

Out of 40 patients there were (72.5%) Hindu, (27.5%) Muslim, & (5%) of other religion.

5.4. Occupation Wise Distribution

There were (52.5%) Serviceman class, (17.5%) Businessman class & (25%) House worker, & (5%) of other class. This data show that Sciatica occur mostly in serviceman, & house worker who are busy in doing their strenuous work.

5.5. Chronicity Wise Distribution

There were (22.5%) patients of 6 weeks to 3 months chronicity & (77.5%) patients of chronicity more than 3 months.

5.6. Prakruti Wise Distribution

There were (27.5%) patients of Vatakaphaj prakruti, (45%) Vata Kaphaj & (27.5%) of Pittaj Kaphaj

5.7. Neurological Findings

Knee Jerks

There were shows normal knee jerk (67.5 %), (27.5%) diminished knee jerk & (5%) of absent knee jerk.

Ankle Jerks

There were (62.5%) normal jerk, (32.5%) diminished jerk and (5%) of absent ankle jerk.

Blood & X ray- L.S. Investigation in Patients of Sciatica

There were no significant changes seen in patients Sciatica of before and after treatment. Detail values in both groups before and after treatment

An objective assessment by blood investigation & X ray -L.S shows. No significant change in both the groups. No untoward effects have been observed in any of the patients in either treatment group.

6. Conclusion

- 1) In group a highly significant results were found than group B.
- 2) The pain relief provided by Agnikarma and sustained improvement with Vajigandhadi Taila Basti presents a window of opportunity in the clinical management of Sciatica.
- 3) There were no significant changes seen in blood & radiological investigation in patients of Sciatica before and after treatment.

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