

**ETIOPATHOGENESIS OF GRIDHRASI W.S.R. TO SCIATICA & ITS
UPASHAYATAMAKA PARIKSHANA WITH AABHADI CHURNA****Dr. Aakanksha Kushwaha^{*1}, Prof. Avadhesh Kumar², Dr. Anubha Srivastava³ and Dr. Prakash Raj Singh⁴**¹Junior Resident Department of Rog Nidan Evum Vikriti Vigyan.²Professor and Head Department of Rog Nidan Evum Vikriti Vigyan.³Assistant Professor Department of Rachna Sharir.⁴Assistant Professor Department of Kriya Sharir Government P.G. Ayurveda College and Hospital, Varanasi, UP.***Corresponding Author: Dr. Aakanksha Kushwaha**

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ABSTRACT

The world is becoming increasingly globalised nowadays, and individuals from many cultures and civilizations are interacting with one another more frequently. Due to modernization resulting in sedentary lifestyle, more and more young and older population are falling prey to different 'Vatika disorder'. Among three doshas vata is responsible for all cheshtas and all diseases. Gridhrasi comes under 80 types of nanatmaja vatavyadhis. Low back pain is one of the common condition of musculoskeletal system disorder, affects people during their productive life. Prevalence of sciatica varies considerably ranging from 3.8% in the working population to 7.9% in the nonworking population. To study etiology, clinical features, prognosis and management in current medical practice and evaluate the therapeutic effect of Aabhaad Churna on Gridhrasi patients. Total 60 patients will be randomly selected for the study who will be given Aabhadichurna with lukewarm water. Data was analysed with the help of descriptive statistics and upashayatamaka parikshana was analyzed.

KEYWORDS: Gridhrasi, Sciatica, Aabhadhi churna.**INTRODUCTION**

At present, the lifestyle is gradually shifting away from healthy living, and therefore people fall victim of various diseases. Due to modernization resulting in sedentary lifestyle, more and more young and older population are falling prey to different 'Vatika disorder'. Among three doshas vata is responsible for all cheshtas and all diseases. A variety of vatavyadhis described in Charak Samhita are divided into samanyaja and nanatmaja. Gridhrasi comes under 80 types of nanatmaja vatavyadhis. The chances of occurrences is expected to be increasing through the coming years due to the increasing tendency for computerization and also because of increasing body weight, mental stress, sedentary lifestyle, improper posture, continuous jerky movements, long travelling etc, put maximum pressure on the spine and lower portion of the pelvis.

Low back pain is one of the common condition of musculoskeletal system disorder, affects people during their productive life. About 40% cases of low back pain are radicular in origin. It is pain dominant disease and reduces human activity considerably in terms of personal as well as social and professional life.

The condition resembles disease Gridhrasi mentioned in Ayurveda under the umbrella of vatavyadhi, and here piercing type of pain which restricts the movement of the affected leg, make his walking pattern like bird vulture (Gridhra) and put him / her in disgraceful condition.

स्फिकपूर्वाकटिपृष्ठोरु जानुजंघापदंक्रमात् । (च० सू० 28/56)

Gridhrasi is described as type of vatavyadhi which starts from hip and gradually comes down to waist, knee, shank and foot. There are various marma situated in the gluteal region or low back area namely –

1. Katikatarun.
2. Kukkundara.
3. Nitambha.

Injury to above mentioned marma can also affect the Sciatic nerve, and cause the pain resulting in Sciatica.

When we analyse the conditions which precipitate 'Gridhrasi', it can be learnt that any abhighat affecting the lower part of the spinal cord can produce the disease. But then even mild stresses induced in the above part can make considerable alterations in the functions of musculoskeletal system. This may predispose the

conditions similar to 'Gridhrasi' in due course. The cardinal signs and symptoms are

- Ruk (pain).
- Toda (piercing pain).
- Muhuspandana (tremors).
- Stambha (stiffness) in sphik, kati, uru, janu, jangha and pada in order.
- Sakthishepanigraha ie restricted lifting of the leg.

In Kaphanubandha Gridhrasi these signs are present

- Tandra.
- Arochaka.
- Gaurav.

It is worthwhile to study various etiologies mentioned for the formation of Vatavyadhis and their role in the formation of vatavaigunya with special reference to *Gridhrasi*.

As per the signs and symptoms seen we can correlate *Gridhrasi* with 'SCIATICA' in the modern science. The disease sciatica is named because of the involvement of sciatic nerve. Sciatica is a disease with neurological symptoms pertaining to sciatic nerve. Sciatica is a term used to describe low backache which radiates from low back to foot via hip, thigh and leg. Irritation of the 4th and 5th lumbar and 1st sacral roots, which form the sciatic nerve, causes pain that extends mainly down the posterior and anterolateral aspects of leg and into the foot is termed as sciatica.

Need of This Research Work

Now a days with the advancement of busy professional and social life, improper sitting posture, over exertion, jerking movements during travelling and sports, increasing tendency of computerization and also because of increasing body weight, mental stress creates undue pressure on the spinal column and plays an important role in producing low backache and sciatica.

Acute low back pain is the 5th most common reason for all visits to the physicians. Sciatica affects approximately 5 to 10 of every 1000 people. People between 30 – 50 years of age are most likely to get sciatica syndrome.

Prevalence of Sciatica varies considerably ranging from 3.8% in the working population to 7.9 % in the non-working population. Due to its prevalence all over the world disease is being chosen for the study.

In modern science, there is no particular or permanent treatment of sciatica, only analgesics and anti-inflammatory drugs are given. Now a whole scientific world has high hopes in Ayurveda, as it's capable to provide proper and safer methods of management in disorders where the efforts of modern medicine have failed to achieve the desired results.

AIMS AND OBJECTIVE

- To study the concept of Etiopathogenesis of Gridhrasi.
- To study the comparative and analytical description of Gridhrasi w.s.r to Sciatica in different ayurvedic samhitas and modern literature
- To study etiology, clinical features, prognosis and management in current medical practice.
- To evaluate the therapeutic effect of Aabhaadi Churna on Gridhrasi patient.

PLAN OF STUDY

- Conceptual Study
- Clinical study
- Observation and Result
- Summary and Conclusion

CONCEPTUAL STUDY

1. **Review of Literature:** In this part, historical review about Gridhrasi which had been collected from classical text of Ayurveda, previous research work done, scientific journal, periodic magazines, monographs and other available sources. Similarly modern review regarding the Sciatica have been gathered from Modern Texts and various other online media. The information has been gathered and organised after being thoroughly examined.
2. **Disease Review:** This section includes the detailed description of Gridhrasi from both the Ayurvedic point as well as the Modern point of view.
3. **Drug Review:** This section includes the brief description of the drugs involved in the formation of Aabhaadi Churna.

Clinical Study

[A] Source of Data

In this study patients of Gridhrasi will be registered from OPD and IPD of Rognidan and Kayachikitsa and Panchkarma department of Government Ayurvedic P.G. college and Hospital, Varanasi. Selection of patient will be done on the basis of clinical features and diagnosis will be sustained by laboratory investigation.

[B] Method of Collection of Data

Selection of cases-Total 60 patients will be randomly selected for the study who will be given Aabhaadi churna with lukewarm water.

Diagnostic Criteria

A special form has been created containing information on the history-taking process as well as physical symptoms and indicators that are discussed in our classics. Patients have been examined and chosen appropriately. Patients displaying the standard Gridhrasi signs and symptoms, such as Ruka, Toda, Stambha, Spandan, Sakthinikshepanigraha etc. After fifteen days of treatment and a 30-day follow-up, the investigation's post-test was conducted. The following are a few techniques for gathering data.

a) Inclusion Criteria

1. Age group 20 – 60 years of both sex.
2. Patients having lakshana's of Gridhrasi as per Ayurvedic texts.
3. Patients having sign and symptoms of Sciatica as per modern medicine.
4. Patients having positive SLR test on examination.
5. Patients diagnosed on the basis of radiological findings.
6. Newly diagnosed cases of Sciatica.
2. Patients having spinal deformity, spinal tumours, severe traumatic injury.
3. Patients having Spinal injury.
4. Patients having Carcinoma of Spine.
5. Patients having congenital spinal deformity like Spina Bifida.
6. Patients with immunocompromised disease like AIDS, Leukemia, Hepatitis etc.
7. Patients with uncontrolled Diabetes (> 130mg/dl fasting) (> 180 mg/dl post-prandial)
8. Patients with uncontrolled Hypertension (> 100mm Hg diastolic)(> 180mm Hg systolic)

b) Exclusion Criteria

1. Age < 20 yrs and >60yrs.

c) Assessment Criteria**Subjective criteria**

S.No.	Parameters	Descriptions	Grade	B.T	A.T
1.	<i>SphikapurvaRuk</i> (Pain)	No pain	0		
		Intermittent pain on walking and subsides on its own (nospecific time)	1		
		Pain at rest especially at morning after awakening, and evening and subsides without any treatment	2		
		Persistent pain at rest aggravated in morning afterawakening and evening subsides by local treatment (<i>mruduswedan and peedan</i>)	3		
		Severe pain throughout the day and not relieved by local treatment (<i>mruduswedan and peedan</i>), Patient becomesrestless	4		
2.	<i>Stambha</i> (Stiffness)	No stiffness	0		
		Occasionally restricted movements of legs but can-do usual work	1		
		Continuously restricted movements of legs which hamperusual work	2		
		Unable to walk due to restricted movements of legs	3		
		Unable to do any movements of legs	4		
3.	<i>Toda</i> (Piercingpain)	No piercing pain	0		
		Occasionally piercing pain	1		
		Daily frequent moderate pain but not persistent piercing pain	2		
		Severe persistent piercing pain, patient cannot bear pain and becomes restless	3		
4.	<i>Tandra</i>	No sleepiness	0		
		Occasional sleepiness, awaken on external stimulus	1		
		Daily, intermittent sleepiness, takes few times to awake on external stimulus	2		
		Daily, persistent, frequent sleepiness, not react/awake on external stimulus	3		
5.	<i>Gaurava</i> (Heaviness)	No heaviness in body	0		
		Occasionally heaviness in body at morning and evening subsides without exercise.	1		
		Daily, intermittent heaviness in body at morning and even-ing, subsides with mild Exercise	2		
		Daily, persistent, frequent heaviness in body at morning and evening not subsides by exercise	3		
6.	<i>Arochak</i>	Having proper taste and appetite	0		
		Occasional loss of taste with normal diet	1		
		Daily, frequent loss of taste with decreased appetite	2		
		Daily, persistent,frequent loss of taste with loss of appetite	3		
7.	<i>Spandan</i> (Tingling Sensation)	No Spandan			
		Occasional mild spandan			
		Frequent, daily moderate spandan but not persistent			
		Severe , daily persistent spandan			

Objective criteria

S.NO.	CRITERIA	SCORING PATTERN					B.T	A.T
1.	GAIT i. Walking Time	25 feet distance and time was noted in seconds						
	ii. Stepping Time	50 steps with flexion of hip upto 90 ⁰ and time was noted						
2.	SLR TEST	0	1	2	3	4		
		>90 ⁰	71 ⁰ -90 ⁰	51 ⁰ -70 ⁰	31 ⁰ -50 ⁰	Upto 30 ⁰		
3.	Reflex (Knee Jerk)	0	1	2	3			
		Normal	Just Normal	Exaggerated	Absent			
4.	Graha Score (Hastapadasana)	0	1	2	3			
		Forward bending upto toes	Forward bending upto mid legs	Forward bending upto knee	Forward bending upto mid- thigh			
5.	X- RAY							

Criteria for Assessment of Result

These 60 patients will be selected to assess the overall effect of therapy with

- Subjective parameter before and after the treatment
- Objective parameter before and after the treatment

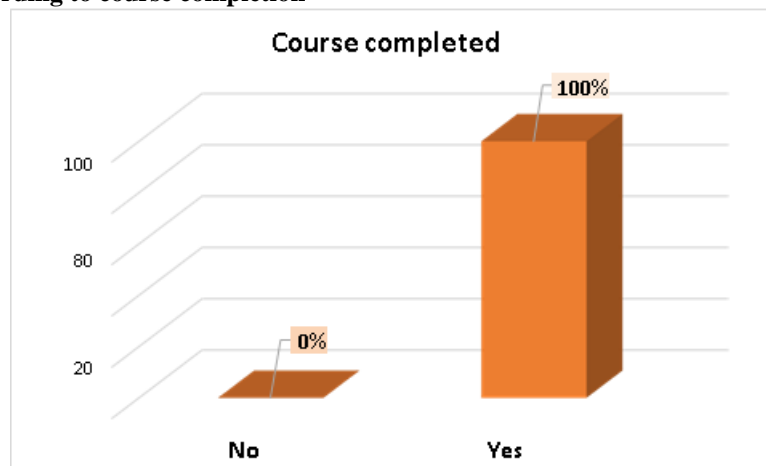
To assess the effect of therapy subjectively & objectively, all the sign and symptoms were given scoring depending upon their severity on the basis of subjective and objective parameters.

1	Marked Improvement	>75% relief in sign and symptoms
2	Moderate Improvement	51% - 75% relief in sign and symptoms
3	Mild Improvement	26% -50% relief in sign and symptoms
4	No improvement	<25% relief in sign and symptoms

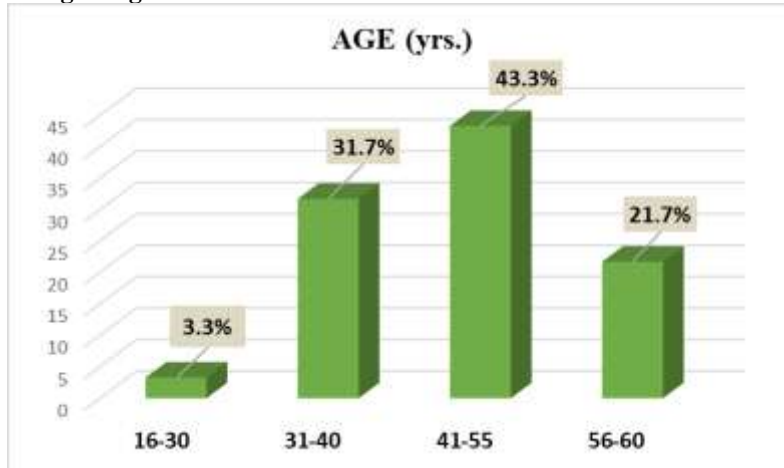
Lab Investigation

- X-RAY:- Lumbosacral region-on antero-posterior and lateral view if required.
- Routine hematological examination – CBC, ESR if required

- Biochemical examination – Blood Sugar (fasting / post-prandial / random) as required.
- ASO titre, CRP, RA factor as required.

OBSERVATION AND RESULT❖ **Distribution according to course completion**

The participants were categorized based on their completion of courses. Among the participants, all 60 individuals (100.0%), had successfully completed the course.

❖ **Distribution According to Age**

The distribution of individuals within different age groups sheds light on the demographic composition of the study population. The breakdown is as follows:

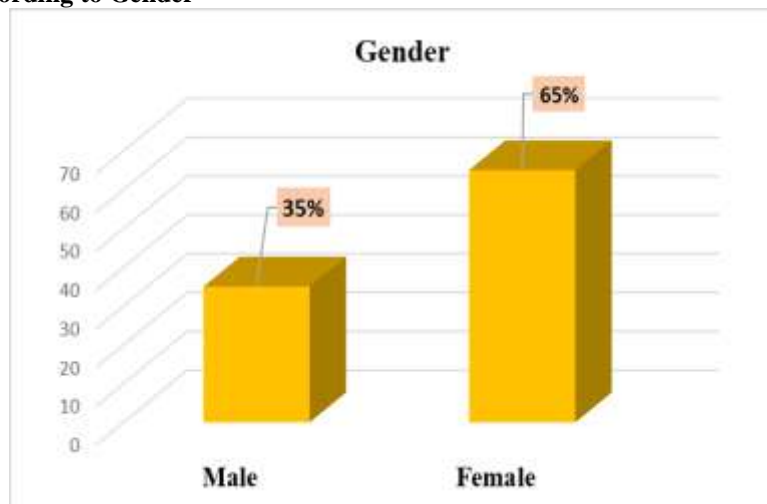
AGE 16-30 years: This age group encompasses 2 cases, constituting 3.3% of the total sample. These individuals represent the younger segment of the study population.

AGE 31-40 years: The age group of 31-40 years holds the highest count, with 19 cases, contributing to 31.7%

of the sample. This age range represents a significant portion of the study population.

AGE 41-55 years: Individuals aged 41-55 years comprise 26 cases, making up 43.3% of the total sample. This age group signifies a substantial portion of the participants.

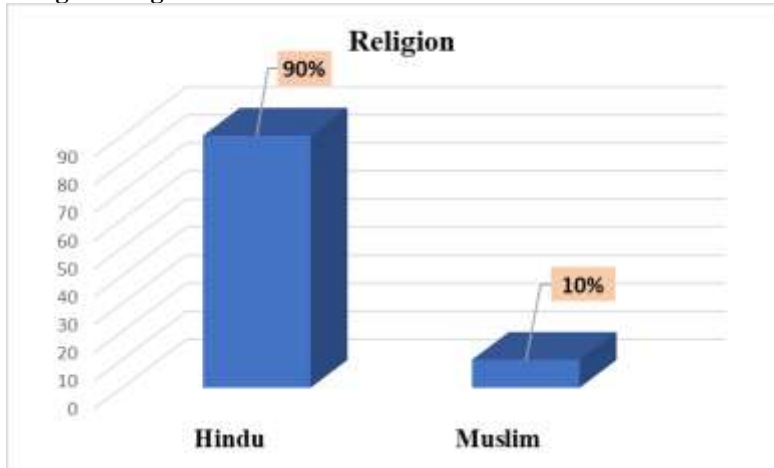
AGE 56-60 years: The 56-60 age range encompasses 13 cases, constituting 21.7% of the sample. These individuals represent the older segment within the study population.

❖ **Distribution According to Gender**

The gender distribution within the study cohort provides a glimpse into the representation of males and females. The data is categorized as follows:

Male: The study includes 21 male participants, accounting for 35.0% of the total sample. This group represents the male segment of the population under investigation.

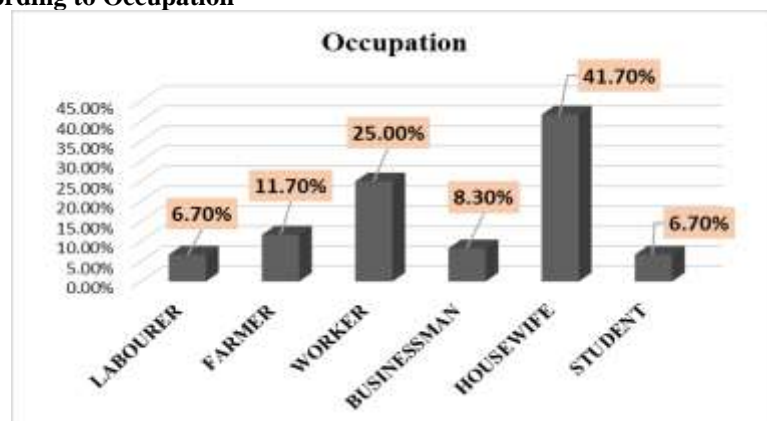
Female: The female contingent comprises 39 individuals, constituting 65.0% of the sample. This gender group forms the majority of the study population.

❖ **Distribution According to Religion**

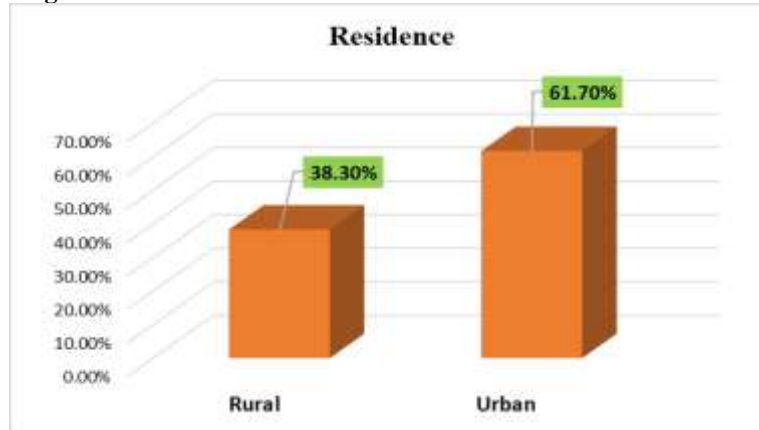
From above graph it is depicted that maximum patient belongs to Hindu religion i.e., 90% whereas 10% patients belong to Muslim religion.

❖ **Distribution According to Marital Status**

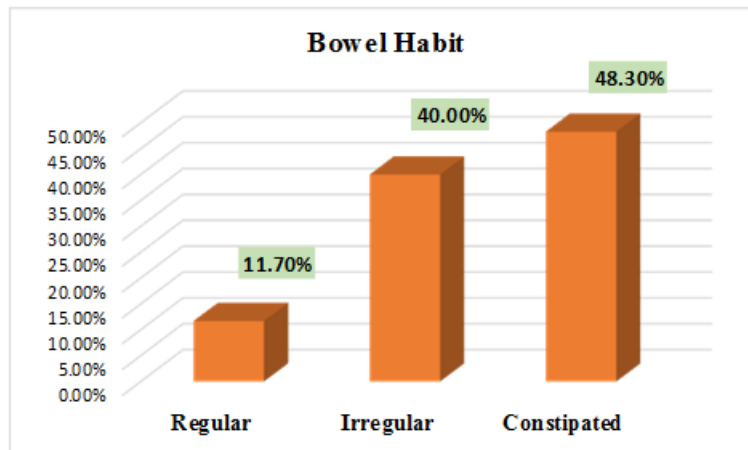
From the above graph it was observed that 86.7% patients were married and 13.3% were unmarried.

❖ **Distribution According to Occupation**

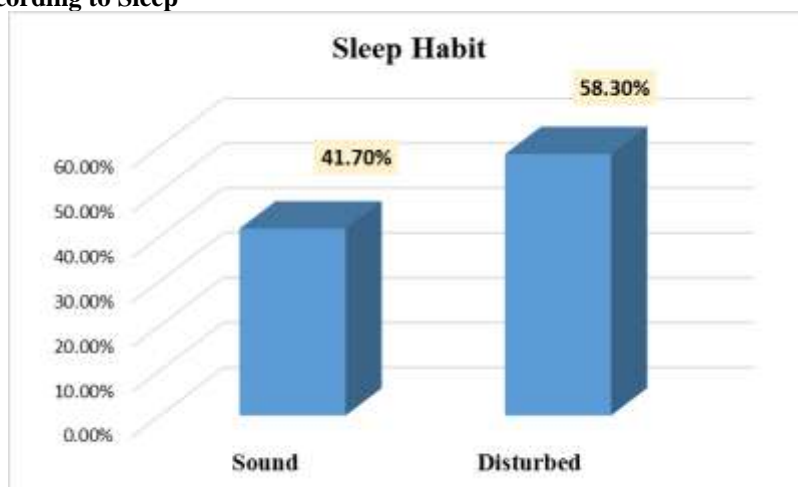
On the basis of occupation, it was observed that maximum patients were House wife i.e., 41.70%, 25% patients were engaged with job in Government or private sector, 11.7% were farmers, 6.70% did labor work, 8.3% were businessman and 6.7% were student.

❖ **Distribution according to Residence**

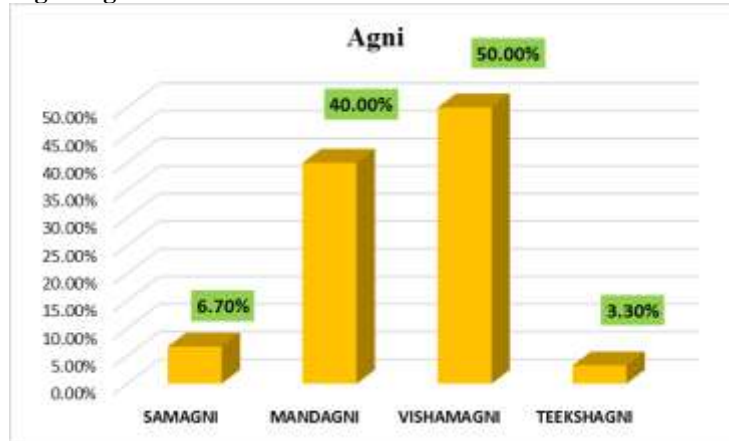
In present study maximum patients belong to urban residential area i.e., 61.70% % while that of rural residence was 38.3%.

❖ **Distribution According to Bowel Habit**

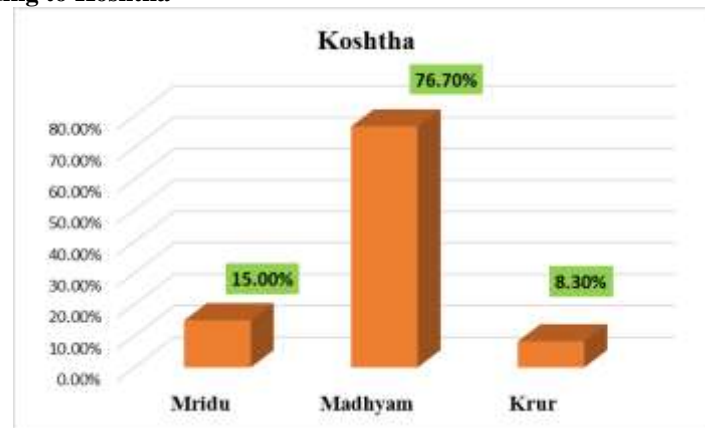
From the above graph maximum patients i.e. 48.3% had constipation and 40% had irregular bowel habit and 11.70% had regular bowel habit.

❖ **Distribution According to Sleep**

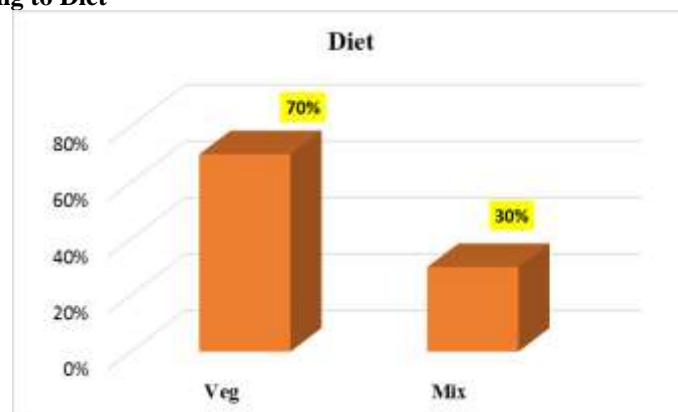
From the above graph we found that 5.3% of patients had disturbed sleep pattern while 41.7% had sound sleep.

❖ **Distribution According to Agni**

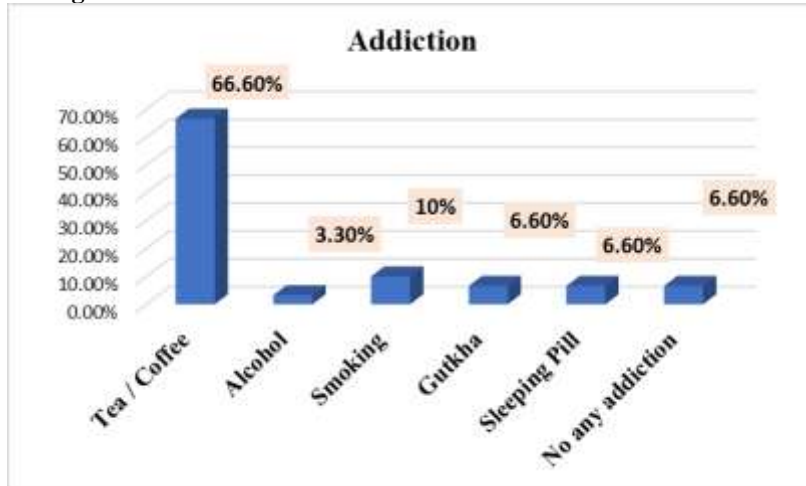
In this study, maximum patients 50% had vishamagni followed by 40% having mandagni, 6.70% had samagni and 3.30% had teekshnagni.

❖ **Distribution According to Koshtha**

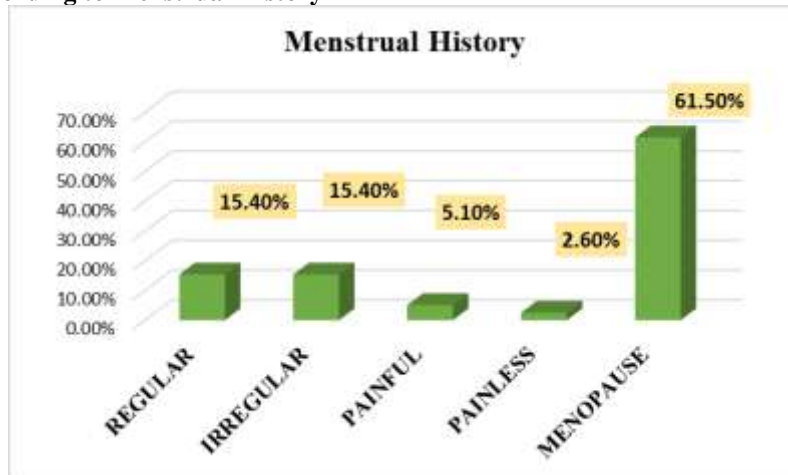
Above graph shows that maximum no. of patients ie 76.70% had madhyam koshtha and 15% had mridu koshtha and 8.30% had krur koshtha.

❖ **Distribution According to Diet**

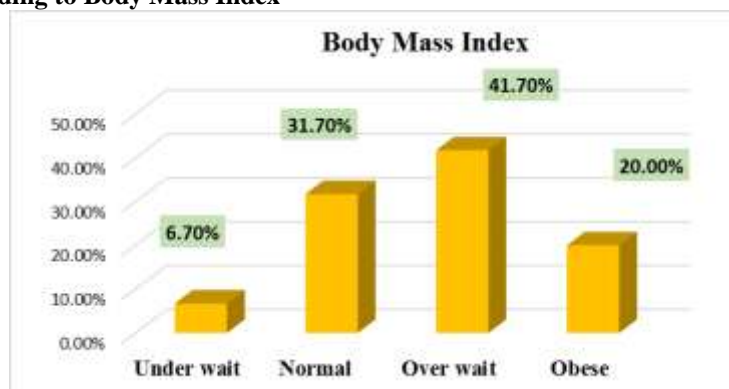
Above graph shows that maximum no. of patients ie. 70% consume vegetarian diet and 30% consume mixed diet.

❖ **Distribution According to Addiction**

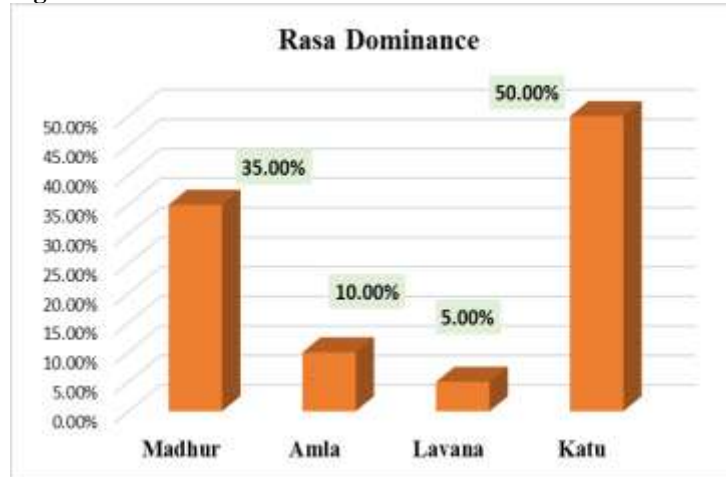
Above graph shows that maximum no. of patients i.e. 66.60% were addicted to tea/coffee, 3% to alcohol, 10% to smoking, 6.60% to gutkha and sleeping pill and 6.60% to no any addiction.

❖ **Distribution According to Menstrual History**

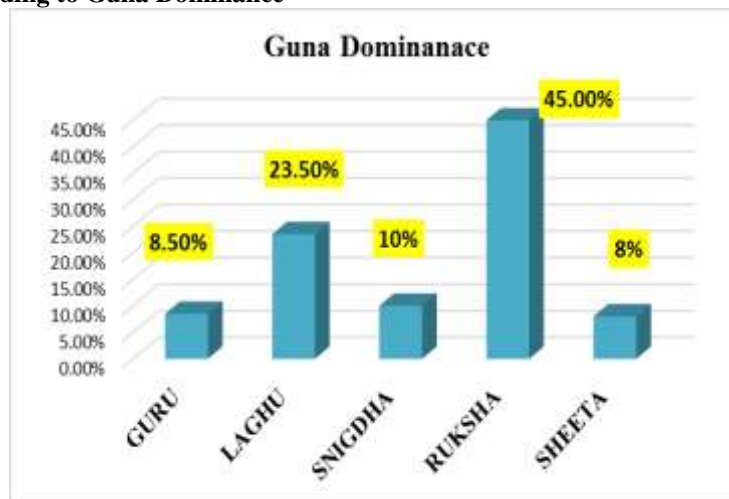
Above graph shows that maximum no. of female patients i.e. 61.50% were in post menopausal stage, 15.4% with irregular cycles and same percentage with regular cycles, 5.10% with painful menstruation.

❖ **Distribution According to Body Mass Index**

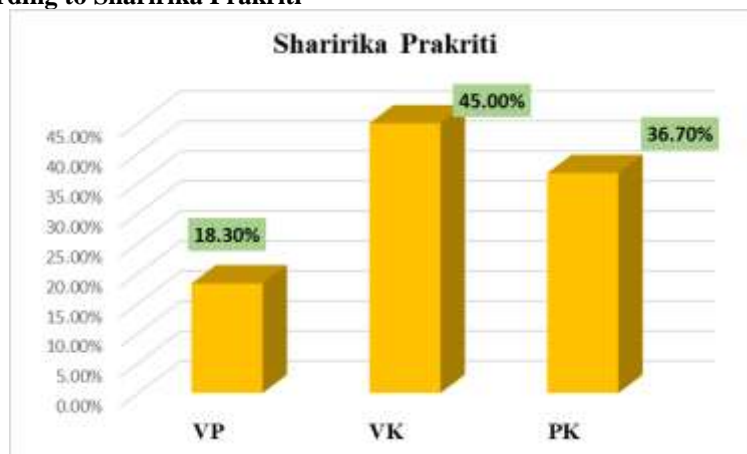
Above graph shows that maximum no. of patients i.e. 41.70% were overweight, 31.70% were normal and 20% were obese.

❖ **Distribution According to Rasa Dominance**

Above graph shows that maximum no. of patients ie 50% consume Katu rasa, 35% consume madhur rasa while 10% consume amla rasa and 5% consume lavana rasa.

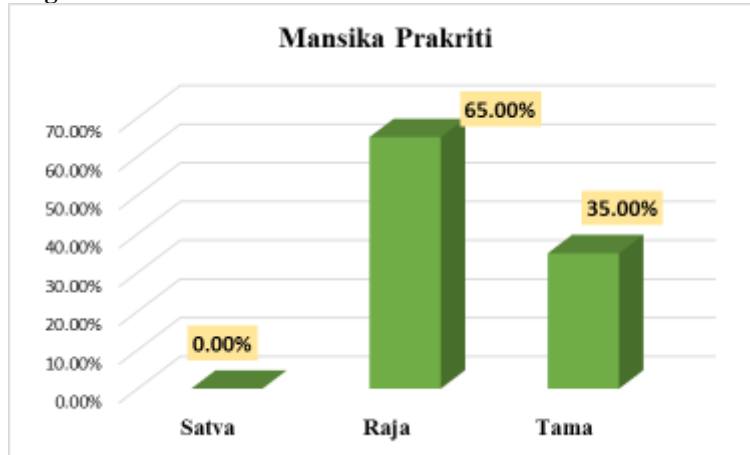
❖ **Distribution According to Guna Dominance**

Above graph shows that maximum no. of patients ie. 45% had Ruksha guna dominancy in their diet, 23.5% had laghu guna, 8.5% had guru guna, 8% had sheeta guna.

❖ **Distribution According to Sharirika Prakriti**

Above graph shows that maximum patients ie. 45% were of Vata-Kaphaja Prakriti, 36.7% were of Pitta-Kaphaja Prakriti and 18.30% were Vata-Pittaja Prakriti.

❖ **Distribution According to Mansika Prakriti**



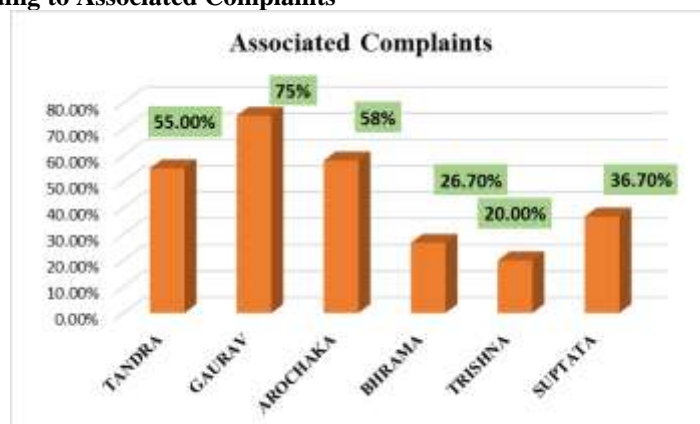
Above graph shows that 65% had rajasika manas prakriti, 35% had tamasika prakriti.

❖ **Distribution According to Chief Complaints**

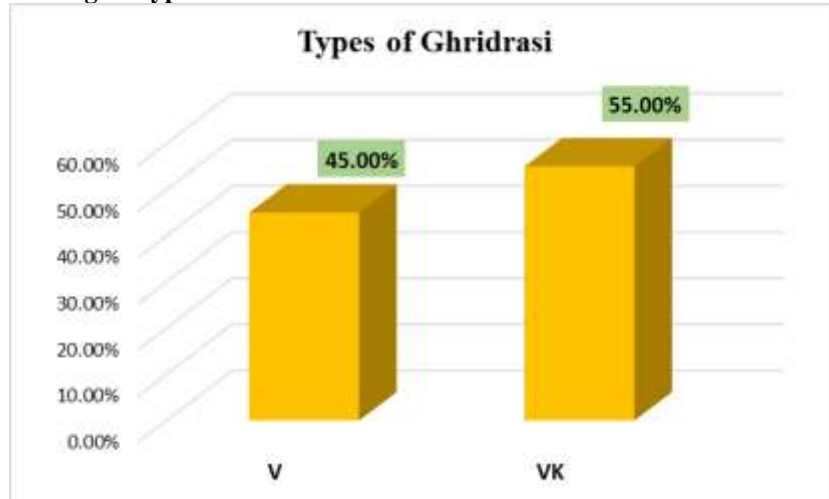


Above graph shows that 100% of patients had complaints of ruk and saktishepanigraha, 90% had stambha, 53.3% had spandana and 50% had toda as chief complaints.

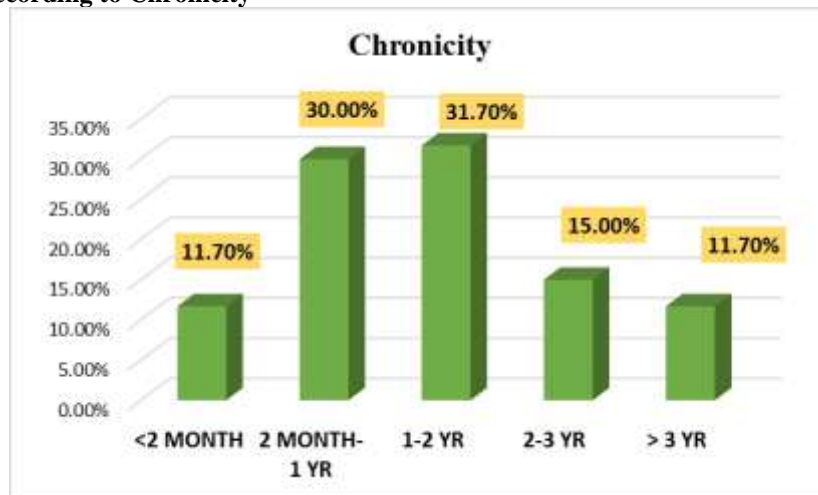
❖ **Distribution According to Associated Complaints**



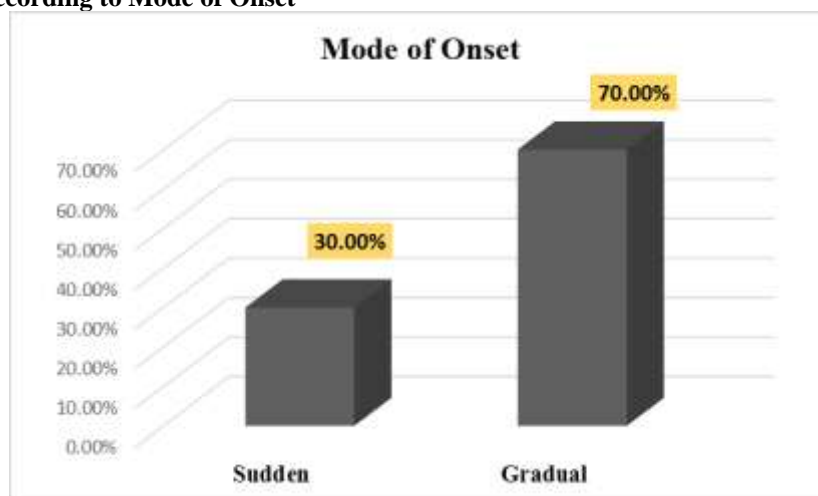
Above graph shows that 75% had gaurava, 58% had Arochaka, 55% had Tandra, 36.70% had Suptata, 26.7% had Bhrama and 20% had Trishna.

❖ **Distribution According to Type of Gridhrasi**

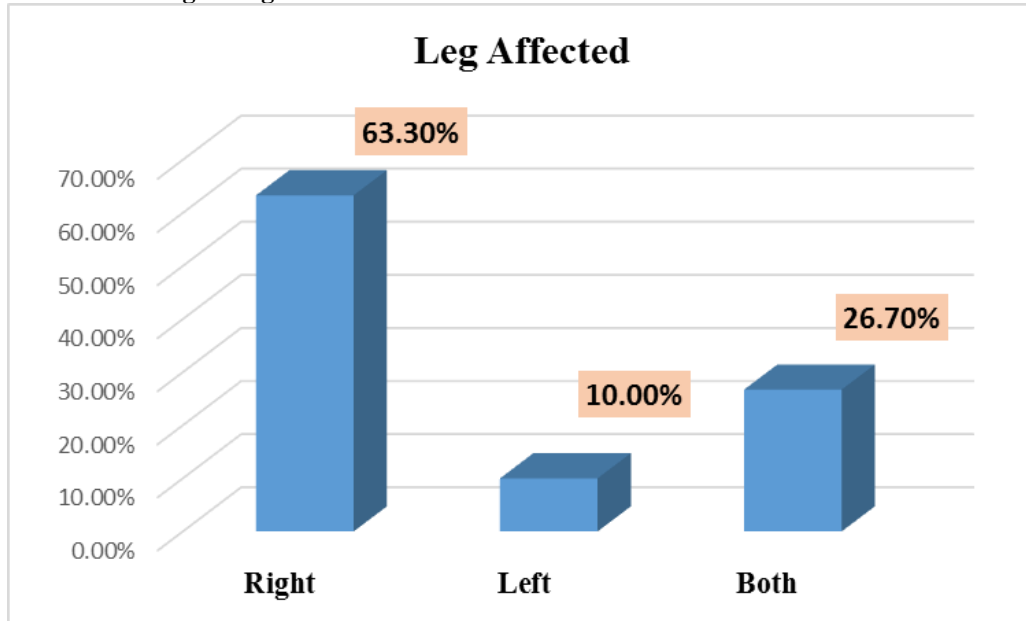
Above graph shows that 55% had VK type of Gridhrasi and 45% had V type of Gridhrasi.

❖ **Distribution According to Chronicity**

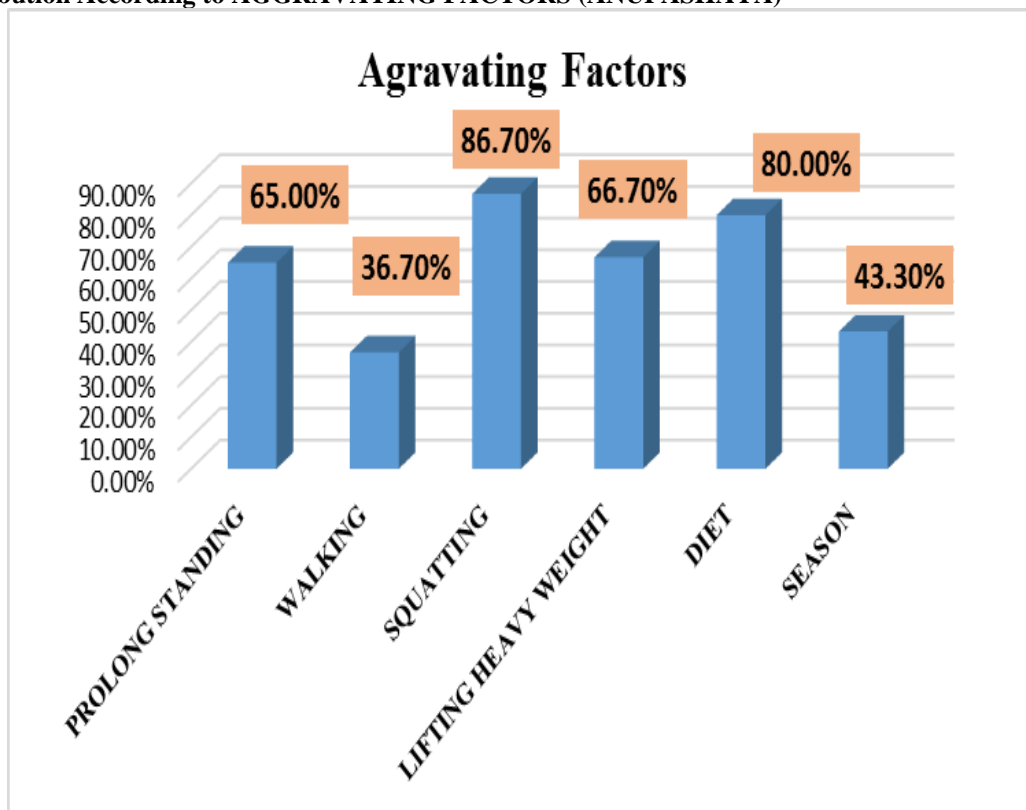
Above graph shows that 31.7% had chronicity of 1-2 yr, 30% had 2month-1 yr, 15% had 2-3 yr, 11.70% had >3 yr chronicity.

❖ **Distribution According to Mode of Onset**

Above graph shows maximum ie. 70% had gradual onset and 30% had sudden onset.

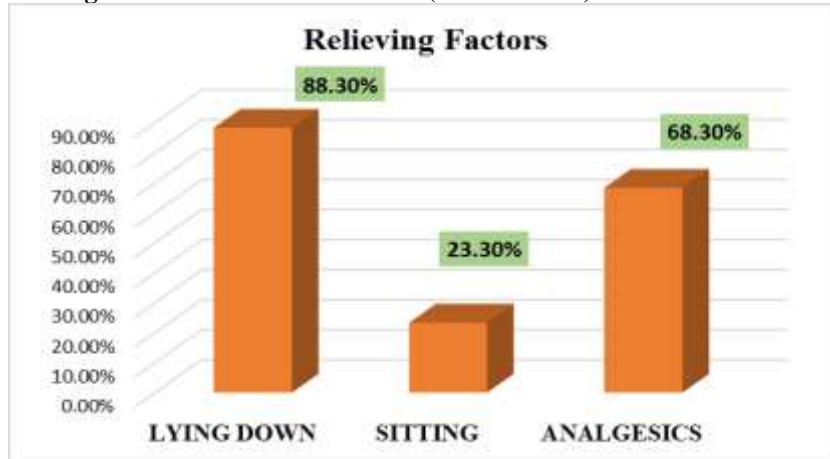
❖ **Distribution According to Leg Affected**

Above graph shows that maximum patients i.e. 63.3% had their right leg affected more, 26.7% had their left leg affected while in 10% both the legs were affected.

❖ **Distribution According to AGGRAVATING FACTORS (ANUPASHAYA)**

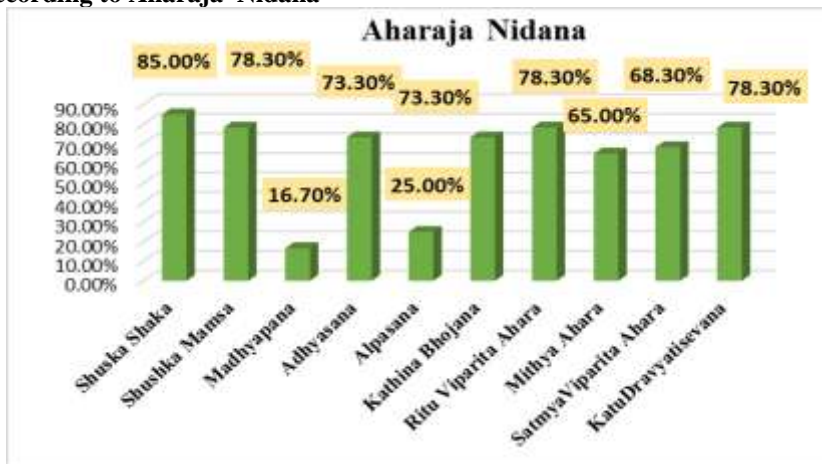
Above graph shows that in squatting position 86.7% patients get their pain aggravated, in 80% diet was the aggravating factor, in 65% prolong standing, in 66.7% lifting heavy weight, in 43.3% seasonal variation and in 36.70% walking is the aggravating factor.

❖ **Distribution According to RELIEVING FACTORS (UPASHAYA)**



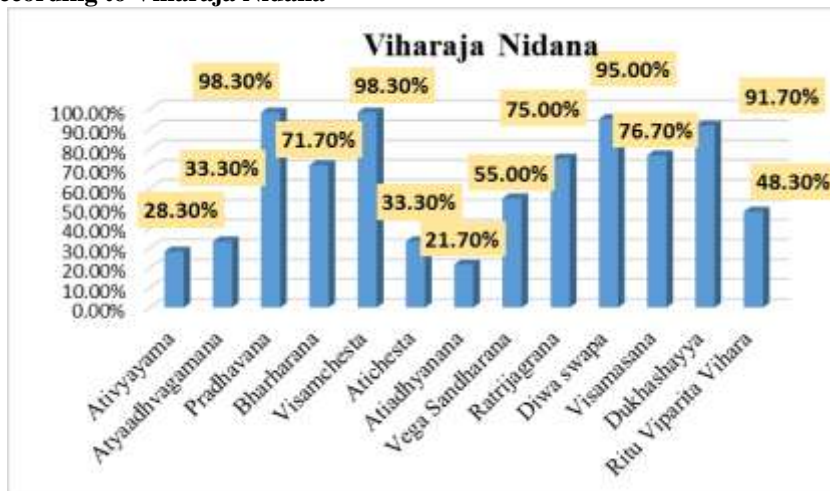
Above graph shows that in 83.3% patients lying down was relieving factor, in 68.3% patients analgesics were their relieving factor and in 23.3% sitting helped them.

❖ **Distribution According to Aharaja Nidana**



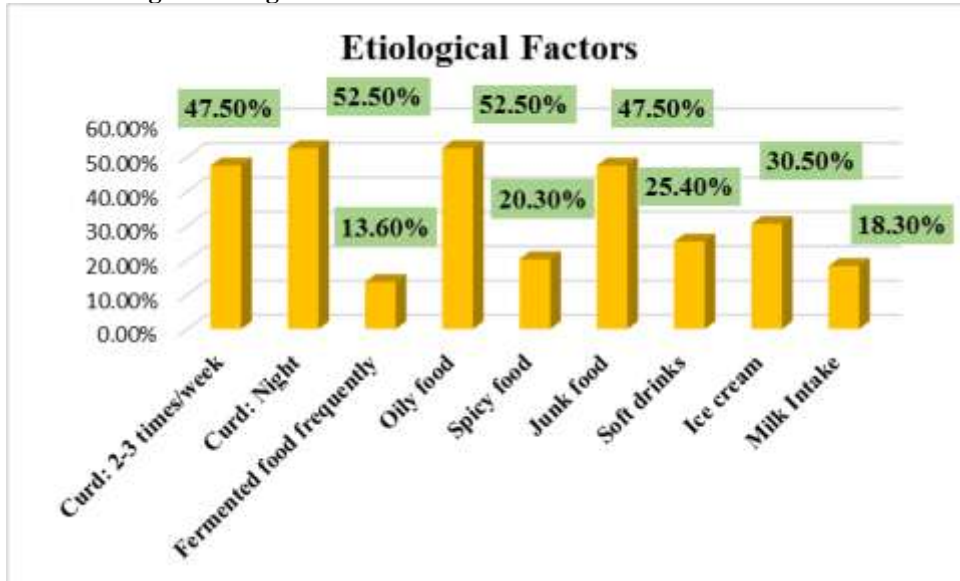
Above graph shows maximum consumption of shushka shakai ie in 85% cases,shushka mamsa and ritu viparita ahara in 78% cases and also katu dravya atisevana.

❖ **Distribution According to Viharaja Nidana**



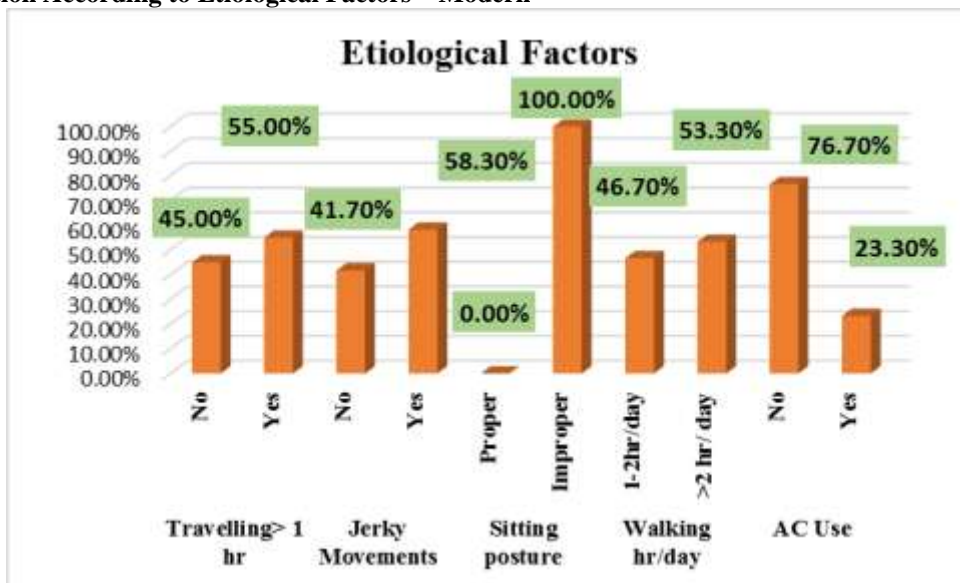
In this study maximum patients ie 98.3% patients follow pradhavan, vishamchesta, diwaswapa, 91.7% use dukhshaiya, more than 70% do ratrijagrana, bharharana, visamasana.

❖ Distribution According to Etiological Factors



In this study maximum patients 52.5% consume curd at night and oily food, 47.5% consume junk food.

❖ Distribution According to Etiological Factors – Modern



Above graph shows maximum patients i.e. 100% follow improper sitting posture.

EFFECT OF AABHADI CHURNA IN SUBJECTIVE PARAMETER (IN PERCENTAGE)

Parameter	BT	AT	%	Improvement
SPHIKAPURVA RUKA	2.83	1.05	63	Moderate
STAMBHA	2.58	1.23	52.32	Moderate
TODA	2.33	1.10	52.79	Mild
TANDRA	1.97	1.07	45.67	Mild
GAURAV	1.95	0.93	52.31	Mild
AROCHAKA	1.73	0.75	56.65	Moderate
SPANDANA	1.78	0.63	1.69	No

In subjective parameter, a maximum percentage i.e., (63%) moderate improvement was observed in ruka, (56.65%) marked improvement was observed in Arochaka (52.32%) moderate improvement was observed in stambha, (52.79%) mild improvement was

observed in toda, (45.67%) mild improvement was observed in Tandra, (53.31%) mild improvement was observed in Gaurav and, (56.65%) mild improvement was observed in spandana.

EFFECT OF AABHADI CHURNA ON OBJECTIVE PARAMETER

Parameter	BT	AT	%	Improvement
GAIT	1.32	0.47	60.60	Moderate
SLR	1.82	0.62	51.65	Mild
REFLEX (Knee Jerk)	1.77	0.56	20	No improvement
GRAHA SCORE (Hastapadasana)	1.82	0.44	2.70	No improvement
XRAY FINDING	2.10	1.07	0.00	No improvement

In objective parameter, a maximum percentage improvement i.e., (60.6%) was observed in Gait, (51.65%) mild improvement was observed in SLR and

no improvement was observed in Reflex, Graha and Xray findings with 20%, 2.70% and 0.00% improvement respectively.

RESULT❖ **Effect of Aabhadi Churna on Subjective Parameters**

Subjective Parameters	Before treatment		After treatment		% change	Wilcoxon test		Significance
	Mean	SD	Mean	SD		z-value	p-value	
SPHIKAPURVA RUK	2.83	0.72	1.05	0.67	62.90	-6.99	<0.05	S
STAMBHA	2.58	0.65	1.23	0.68	52.32	-6.64	<0.05	S
TODA (PIERCING PAIN)	2.33	0.57	1.73	0.63	52.79	-5.68	<0.05	S
TANDRA	1.97	0.69	1.60	0.64	45.67	-4.50	<0.05	S
GAURAVA (HEAVINESS)	1.95	0.72	1.53	0.72	52.31	-4.81	<0.05	S
AROCHAKA	1.73	0.45	1.28	0.45	56.65	-5.19	<0.05	S
SPANDANA (TINGLING SENSATION)	1.78	0.61	1.75	0.63	1.69	-1.41	0.157	NS

✚ **Sphikapurva Ruka:** The total effect of therapy showed significant result with p value (<0.05) and z value -6.99.

✚ **Stambha:** The total effect of therapy showed significant result with p value (<0.05) and z value -6.64.

✚ **Toda:** The total effect of therapy showed significant result with p value (<0.05) and z value -5.68.

✚ **Tandra:** The total effect of therapy showed significant result with p value (<0.05) and z value -4.50.

✚ **Gaurava:** The total effect of therapy showed significant result with p value (<0.05) and z value -4.81.

✚ **Arochaka:** The total effect of therapy showed significant result with p value (<0.05) and z value -5.19.

✚ **Spandana:** The total effect of therapy showed significant result with p value (<0.05) and z value -1.41.

Effect of Aabhadi Churna on Objective Parameters

Objective Parameters	Before treatment		After treatment		% change	Wilcoxon test		Significance
	Mean	SD	Mean	SD		z-value	p-value	
GAIT	1.32	0.47	0.52	0.54	60.60	-5.78	<0.05	S
SLR	1.82	0.62	0.88	0.67	51.65	-5.71	<0.05	S
REFLEX (Knee Jerk)	1.77	0.56	1.45	0.58	20	-1.41	0.157	NS
GRAHA SCORE (Hastapadasana)	1.85	0.44	1.80	0.48	2.70	-1.73	0.083	NS
XRAY Score	2.10	1.07	2.10	1.07	0.00	0.00	1.00	NS

✚ **Gait:** The total effect of therapy showed significant result with p value (<0.05) and z value -5.78.

✚ **SLR:** The total effect of therapy showed significant result with p value (<0.05) and z value -5.71.

✚ **Reflex:** The total effect of therapy showed non-significant result with p value 0.157 and z value -1.41

✚ **Graha:** The total effect of therapy showed non-significant result with p value 0.083 and z value -1.73.

✚ **X-Ray:** The total effect of therapy showed non-significant result with p value 1.00 and z value 0.00.

Effect of Aabhadi Churna on Lab Investigations

TOTAL PATIENTS	N	Mean	Std. Dev.	Wilcoxon test		Significance	
				z-value	P-value		
Hb	BT	60	11.19	1.47	-1.73	0.08	NS
	AT	60	11.20	1.47			
RBCs	BT	60	5.00	0.47	-1.865	0.06	NS
	AT	60	5.03	0.44			
TLC	BT	60	8747.83	2038.37	-0.46	0.65	NS
	AT	60	8764.33	1616.21			
Neutrophils	BT	60	60.77	11.24	-2.090	0.04	NS
	AT	60	62.38	9.33			
Eosinophils	BT	60	1.30	0.72	-0.33	0.74	NS
	AT	60	1.31	0.74			
Basophils	BT	60	0.47	0.50	0.00	1.00	NS
	AT	60	0.47	0.50			
Monocytes	BT	60	2.37	0.74	0.00	1.00	NS
	AT	60	2.37	0.74			
Lymphocytes	BT	60	50.72	9.15	-1.07	0.28	NS
	AT	60	50.27	7.57			
ESR	BT	60	14.22	2.97	-1.66	0.09	NS
	AT	60	14.43	3.03			
RBS	BT	60	114.85	11.74	-1.03	0.30	NS
	AT	60	108.37	26.35			

*N- no. of samples, B.T.- Before Treatment, A.T.- After Treatment, S.D.- Standard Deviation, 'P' value -Probability of Observations S-significance of obtained p-value.

- ❖ **Neutrophils-** The mean score before the treatment was 60.77 which increased to 62.38 after the treatment. The total effect of therapy provided statistically non-significant (p=0.04).
- ❖ **Lymphocytes** The mean score before the treatment was 50.72 which reduced to 50.27 after the treatment. The total effect of therapy provided statistically non-significant (p=0.28).
- ❖ **Eosinophils** The mean score before the treatment was 1.30 which increased to 1.31 after the treatment. The total effect of therapy provided statistically non-significant (p=0.74).
- ❖ **Monocyte** The mean score before the treatment was 2.37 which reduced to 2.36 after the treatment. The total effect of therapy provided statistically non-significant (p=1.00).
- ❖ **Basophils** The mean score before the treatment was 0.47 which remained same as 0.47 after the treatment. The total effect of therapy provided statistically non-significant (p=1.00).
- ❖ **HB** The mean score before the treatment was 11.19 which increased to 11.20 after the treatment. The total effect of therapy provided statistically non-significant (p=0.08).
- ❖ **TLCMM3** The mean score before the treatment was 8747.83 which increased to 8764.33 after the treatment. The total effect of therapy provided statistically non-significant (p=0.65).
- ❖ **ESR** The mean score before the treatment was 14.22 which reduced to 14.11. The total effect of therapy provided statistically significant (p=0.09).
- ❖ **RBS** The mean score before the treatment was 114.85 which reduced to 108.37 after the treatment. The total effect of therapy provided statistically non-significant (p=0.30).

OVERALL EFFECT

On studying the Upshayatmaka parikshhan through wilcoxon test, it was found that the effect of the Aabhadi Churna showed significant improvement on patients.

The aim of my research work was to study the Upshayatamaka Parikshhan of Aabhadi Churna on Gridhrasi. From the research work it was found that trial drug was effective on subjective parameters in all subjects and showed significant improvement.

DISCUSSION

The Discussion phase of the study focuses on the research question, aim, and objectives by discussing the significance, importance, relevance, and analysis of the psychotherapeutic influence on the chosen problem through observations and results.

- **Age:** The age group of 41 to 55 years, or the fourth and fifth decade of life, has been associated with a higher incidence of gridhrasi. This is Vata Prakopaka Kala, and modern science indicates that the intervertebral disc's degree of hydration gradually declines with age, triggering a cycle of degeneration that causes disc issues and gridhrasi. The similar incidence was discovered in the age range of 31 to 40 years, which is consistent with the idea that this illness may also develop in young adults due to their increased exposure to powerful biological forces and demanding job. Therefore, sciatica is more common in young and middle-aged persons, which is supported by the results of the current study.
- **Gender:** In the current study, female patients made up the majority (65%), followed by male patients (35%). The highest prevalence was seen in women,

likely because they perform more physically demanding tasks such as lifting, bending, and prolonged nonneutral postures, which increase the risk of sciatica. Similarly, sciatica is known to be more common in men who work physically demanding occupations, particularly those that require frequent lifting and postural stress.

- **Religion:** In this study maximum number of subjects i.e., 54 subjects (90%) were Hindu while 06 subjects (10%) were Muslim. The religion doesn't seem to have any significant relationship with the disease Gridhrasi. So, geographical proportion of Hindus in the city may be the reason for its higher incidence in Hindu.
- **Marital Status:** Maximum 86.7% of patients were married in this study. Till this age most of the individuals get married in India. Due to small sample size of the study, it is difficult to relate as a risk factor for Gridhrasi.
- **Occupation:** In this study, maximum patients i.e., 41.7% were house wives. In the study patients' sample, in the region of the study the major females are house wives, habitual working for prolonged time standing & work in improper posture without rest which can be considered as provoking factor for Gridhrasi.
- **Residence:** Maximum i.e., 61.7% patients were from urban area due to location of study site in urban area. Due to faulty lifestyle, negligence of body care, and due to improper posture can be considered as a trigger point in pathogenesis.
- **Bowel Habit:** Most of the patients i.e. 48.3% were having constipation and 40% patients were having an irregular bowel habit, which suggests that constipation is the important cause of the disease.
- **Sleep:** In this study, maximum number of patients i.e. 58.3% were having disturbed sleep while 41.70% patients were having good sleep. It reflects the association of Kapha with Vata in this disease.
- **Agni:** Maximum patients had visamagni (50%) followed by mandagni (40%), suggesting impaired digestion which is due to predominance of vata kapha dosa which further results in dhatuksaya due to improper nutrition.
- **Koshtha:** Maximum numbers of patients (76.7%) were having madhyama koshtha, followed by 15% mridu koshtha and 8.3% having mridu koshtha suggesting the dominance of vata dosha and kapha dosha.
- **Diet:** Maximum number of patients i.e. 70% were vegetarians while remaining 30% patients were taking mixed diet. This is because of this hospital is located in Hindu locality and Hindus are vegetarians in this area.
- **Addiction:** Maximum i.e. 66.6% patients were found to be addicted to tea. Modern science states that tea is a cause of slowing down the digestion. Hence excessive and continuous use of tea may produce *āma*, *vibandha* and provocation of *vāta doṣa* in susceptible individuals while 10% were addicted to

smoking, 3.3% were addicted to alcohol and 6.6% patients were having addiction to tobacco. These are mainly of KashayaRasa predominance and help in vitiating Vata and also nicotine also increases Vata.

- **Menstrual History:** Menstruation is one of the functions of Apana Vayu, which is found vitiated. Most of the female patients were in menopausal stage 61.5%. After the menopause, chances of occurrence of the disease increase as they lose bone density due to less absorption of calcium and ultimately osteoporotic changes and thus the problem of Gridhrasi arises.
- **BMI:** Maximum i.e. 41.7% patients were obese. Obesity increases the stress on the spine, so excess body weight may contribute to the spinal changes that trigger sciatica.
- **Rasa Dominance:** Majority of patients i.e. 50% were taking Katu rasa dominant diet followed by 35% were taking Madhura rasa dominant diet. Excessive Katu Rasa sevana provokes Vata. Also Excessive Madhura Rasa Sevana provokes Kapha. Above data suggest involvement of Vata and Kapha Dosha in disease Samprapti.
- **Guna Dominance:** Majority of patients i.e. 45% were taking Ruksha guna diet followed by 23.5% of patients followed by Laghu guna. Excessive use of Ruksha, laghu sheet & snigdha ahara would lead to vata prakopa and dhatusaya i.e. play a major role of manifestation of Gridhrasi.
- **Sharirika and Mansika Prakriti:** All the patients studied were of dwandwaja doshic constitution. The highest no. of patients were having vata kapha prakriti (45%) followed by vata pitta prakriti (18.3%). Observing this we can say that there is dominance of vata dosha in majority of the patients which may predispose them for a vatavyadhi Gridhrasi. In terms of manasik prakriti rajasic prakriti dominated the scenario (65%) Raja is the guna which is common to mana and vata and hence may be one of the factors in aetiology of the disease.
- **Chief Complaints and Associated Complaints:** In the present study, the symptoms Ruka were found in 100% patients, Stambha was seen in 58.3% patients, Spandana in 53.3% of patients, Toda in 50% of patients and Sakthishepanigraha in 100% of patients. Ruka means continuous pain present. Toda means needle pricking sensation feels in the distribution of sciatic nerve. Gaurav, Aruchi and Tandra were present in 55%, 50% and 31.7% of the patients respectively. Bhrama, Trishna and Suptata in 26.7%, 20% and 36.7% of patients. Above data shows that maximum presence of Vata-Kaphaja type of symptoms and followed by Vataja type of symptoms. Here, predominance of Vata-Kapha is again being proved in present study. SLR test was used as objective parameter in diagnosis of severity of disease and also as parameter for assessment of effect of therapy.

- **Type of Gridhrasi:** In this study, maximum number of patients i.e. 55% Vata-Kaphaja type of Gridhrasi followed by Vata type i.e. 45%. As Vata is the main factor involved in Samprapti of Gridhrasi. This shows the association of Kapha with Vata in many patients.
- **Chronicity:** In Survey study, 30% patients were having 2 month-1year chronicity followed by 31.2% patients was having chronicity of 1 – 2 years. This shows that patients neglect the disease in initial phase and seek medical advice after complication develops. Also chronicity is inversely proportional to the prognosis of the disease i.e. if chronicity is fewer prognoses are good.
- **Mode of Onset:** Out of 60 patients gradual onset was found in 70% patients while sudden onset was found in 30% patients. Gradual onset of disease depicts that age and postural defects with continuity of Nidana sevana are more prominent factors in causation of Grudhrasi. Sudden onset of disease suggests Swanidana Prakopa of Vata or may be due to severe work related trauma.
- **Leg Affected:** Right leg was affected in 63.3% patients, whereas left leg was affected in 10% patients, while both legs were affected in y 26.7% patients. No conclusion can be drawn.
- **Anupashaya:** Prolong standing, walking, Squatting, lifting weight etc. was seen in maximum number of patients as aggravating factors. Above said posture put more strain on the spine and increase pressure on the vertebrae and discs result in disc degeneration, low back pain and sciatica.
- **Upashaya:** Lying down position in 88.3% was observed as relieving factor in maximum Patients. 23.3% patients reported sitting posture as their relieving factor .This posture relaxes the muscle of lumber-sacral area and the strain on lumbar spine is relieved for some time so, that patient feels better.And some patients also reported of taking analgesics for relieving pain.
- **Aharaja Nidana:** In Aharaja Nidana, maximum numbers of patients i.e. 85% were having Shushka Shaka , 78.3% were taking Shushka Mamsa and Katu dravya atisevana, 73.3% were taking Kathina bhojana and wee following Adhyasana, 68.3% were taking Satmya viparita ahara, 65% were taking Mithya Ahara, 25% were taking alpasana and 16.7% were doing madhyapana. These all are responsible for Vata Prakopa and degeneration. 52.5% were consuming curd at night and 47.5% were consuming curd at any time of day, 47.5% were taking junk foods, 20.3% of them were taking spicy food and 30.5% were taking fermented food which somewhere vitiates the dosha and dushya and causes development of the disease.
- **Viharaja Nidana:** Vishamchesta and Pradhavana in 98.3%, Diwaswapa in 95%, 91.7% were using Dukhshaiya, Visamasana in 76% of patients, Ratrijagrana in 75% of patients leading to vata prakopa and thus contributing in pathogenesis of disease, Vegasandharana in 55% of patients, Ritu viparita ahara in 48.3% of patients.
- **Etiological Factors:** In todays perspective we observe that 55% were travelling for more than 1 hr, 58.3% were travelling with jerky movements which leads to progression of sciatica and thus causing back pain, 100% of them had improper sitting posture which is also one of the precipitating factor for the disease. These are known risk factors for spine problems because it put strain on ligaments and disturbs stability of intervertebral joints.
- **Subjective Parameters**
 - 62.9% improvement was found in this parameter which showed significant improvement in all patients of Gridhrasi. This may be due to Vatashamaka and Vedanasthapana property of the drug. As the drug has also shown peripheral analgesic activity, this result can be achieved.
 - 52.32% improvement was observed in this parameter which showed significant result and it can be due to Laghu, Ushna and Vatakaphashamaka property of the drug. Rasna and Guduchi have the Anti-inflammatory properties which help to restore the restricted movement of leg.
 - 25.75% improvement was observed in this parameter. Trial drug Aabhadi churna showed significant improvement on this parameter. Toda is symptom of Upastambhit Vayu so it could be relieved by Dipana, Pachana, Vatanulomana as well as Kaphashamaka property of drug ie Sauf,Vidhara and Ajmoda posses these property and thus help in relieving Toda.
 - 18.37% improvement was observed in this parameter. Trial drug Aabhadi churna showed mild improvement in this symptom. This symptom is mainly due to kapha prakopa hence the drug having kapha shamaka properties may have corrected the vitiation of kapha and relieved the symptoms.
 - 21.54% improvement was observed in this parameter.Trial drug Aabhadi churna showed mild improvement in this symptom. This symptom is mainly due to kapha prakopa hence the drug having kapha shamaka properties may have corrected the vitiation of kapha and relieved the symptoms.
 - 26.01% improvement was observed in this parameter.Trial drug Aabhadi churna showed significant improvement in this symptom. This symptom is mainly due to kapha prakopa hence the drug having kapha shamaka properties may have corrected the vitiation of kapha and relieved the symptoms.
 - 69% improvement was observed in this parameter which shows that trial drug Aabhadi churna has shown no effect on this parameter. This shows that trial drug does not show effect on dosha situated in gambhira dhatu thus non significant result on this parameter.

➤ Objective Parameter

- 60% improvement was observed in this parameter. Gait is disturbed mainly due to pain and thus if pain is relieved, hence the gait is also improved. So patient showed significant improvement in this parameter.
- This is the most important clinical test for diagnosis of Sciatica. It also has prognostic value. Our forefathers knew the importance of this test in Gridhrasi and described it as 'sakthiutkshepanigraha'. 51.65% improvement was observed in this parameter. Trial drug Aabhadi churna had significant result on SLR. The combination has shoologhna and shothaghna properties. These help to reduce the pidana of Gridhrasi nadi. Vataghna property reduces shoola and makes lifting of leg more easier.
- 20% improvement was observed in this parameter which shows that trial drug Aabhadi churna had no significant effect on this parameter. Drug effect on this parameter is non significant.
- 2.70% change was observed in this parameter. Trial drug does not have any significant effect on this parameter.
- After treatment not any remarkable or significant changes were reported in all the Radiological parameters. The X-ray findings of degenerative changes like osteophytes, reduced disc space, Schmorl's nodes, lumbar canal stenosis, spondylolysis and spondylolisthesis remained unchanged after treatment. This is because of the Changes in Gambhira Dhatu are permanent and need very long treatment for reversals and if and when possible.

CONCLUSION

The most prevalent illness in people between the ages of middle age and old age is called gridhrasi. One of the significant Vata Vyadhis, Gridhrasi is primarily brought by a vitiated Vata Dosa. Such a Ruja Pradhana Vatavyadhi is Gridhrasi. Gridhrasi is a Krucchrasadya illness that is challenging to treat due to its nature. The fact that treated patients still experience identical symptoms after treatment is evidence that Gridhrasi is a challenging condition to address. Sciatica and Gridhrasi illness are connected. The symptoms brought on by sciatic nerve inflammation are referred to as sciatica. Aabhadi Churna, a trial medicine that is more advantageous for Vatavyadhis, is a potent combination of Vedana-Sthapana, Sotha-Hara, Deepan, Pachana, Shoolprashaman, Sheetprasamana, and Anulomaka Dravyas. Shatavari, Vridhadaruka, and Guduchi. From this study we concluded that Trial drug showed effect on subjective parameters with improvement in ruka, toda and sakthiutkshepanigraha but did not effected the objective parameters. From the study it is concluded that the nidana found in today's scenario, Vata prakopaka ahara ie Kashaya rasa pradhan dravya or Ruksha guna pradhana dravya and Vihara ie Atibharharana,

Atichalana, Vishamasana etc are similar to the nidana described in our samhitas and thus it shows that all the nidana are fulfilling the criteria as described in our samhitas.

The drug Aabhadi Churna can be effective in Grudhrasi especially in Vata Kaphaja type this drug having the properties such as Dipana, Pachana, Vatanulomana and Vedanasthapana. Complete relief was not found in any of the patients. Overall effect of therapy suggests mild to moderate improvement in maximum subjects. Satisfactory results are obtained in patients of Gridhrasi vis-à-vis Sciatica, therefore it can be concluded that the given treatment proves to be an effective remedy for Gridhrasi.

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