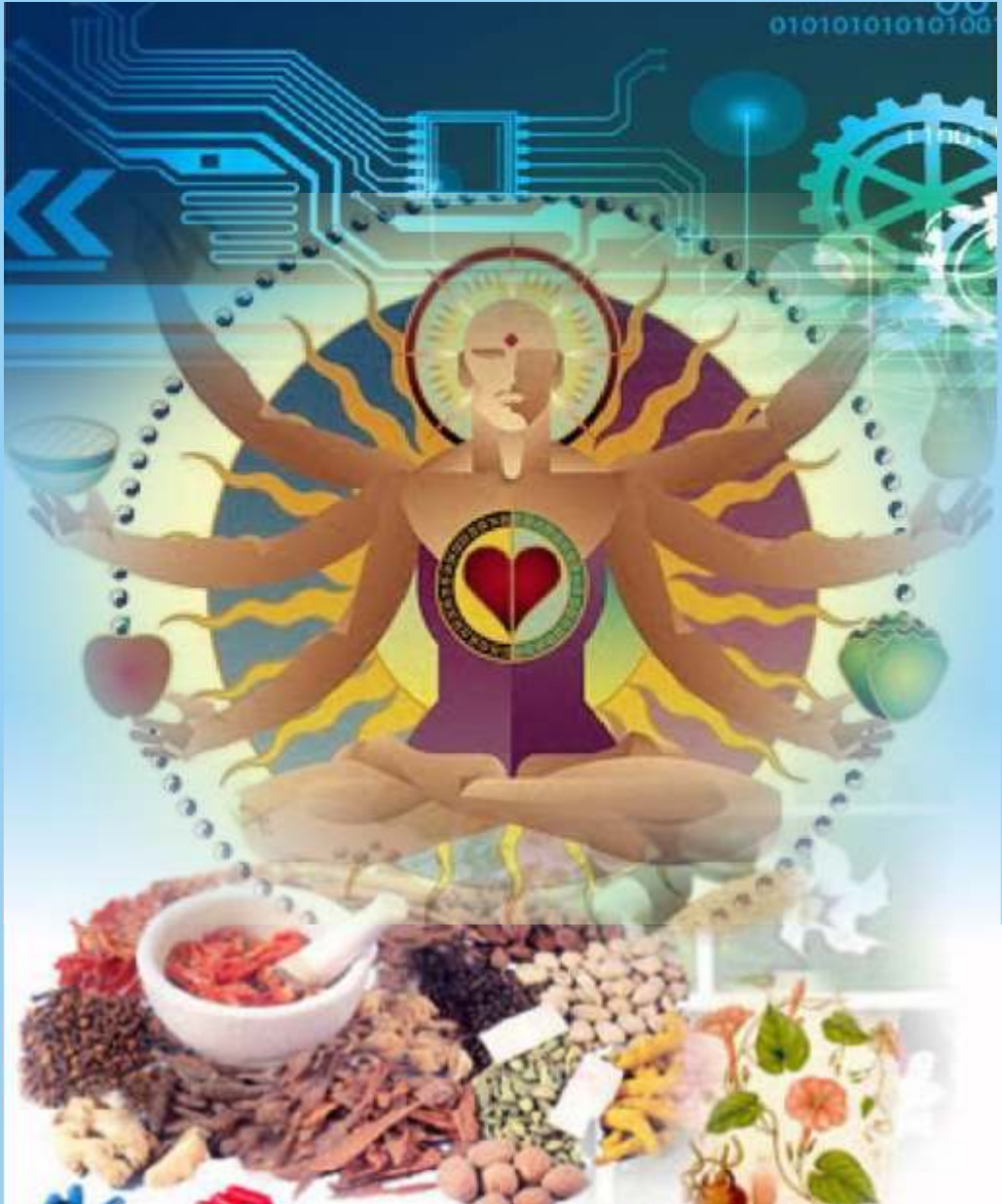


# DEERGHAYU International

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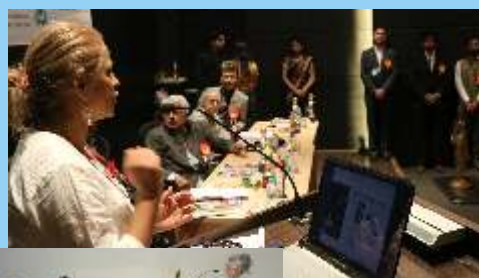


Dr. Atul Rakshe: Welcome speech



Prof. Dr. P. H. Kulkarni: Inaugural speech

## Scientific Sessions



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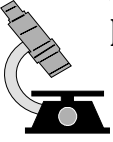
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Research : General



## Research with Help of Modern Scientific Instruments in Ayurvedic Science

Dr. Mrs. Indapurkar Kavita Vinayak MD, Ph.D. (Ayurved) P.D.F.I.I.M.

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As a researcher in Ayurveda we always have some questions in our mind , like Why to use Modern Instruments in ancient Ayurveda science?How to use? What to use?

To have answers of these questions we must do careful critical and unbiased study. Ayurveda is an ancient science. Definition of science is the knowledge gained by systematic study and the Scientist i.e. who is an expert in science applies the science in a scientific way i.e. careful and accurate way. Ayurveda is science of life. Ayurveda adds years to life and life to years.

In Sushrut Samhita Chikitsa sthan, Sushrut says that,

**“Satata Adhyanama Vadaha Paratantra ava lokanama  
Tadvidya Charyaseva Cha Buddhi Medhakaro Ganaha ||”**

Su.Chi. 28

Continuous study, exchange of thoughts, knowledge of other applied sciences supportive to Ayurveda and dialogue with guru are the means to enhance the intellect and understanding. One should always use the knowledge of other applied sciences to understand and to elaborate the Ayurvedic concepts.

In the present era of modern civilisation most of us have accepted the modern lifestyle. Revolution in the field of technology has changed the scenario in almost every field. Modern scientists used this technology to enrich medical science. This is one of the reasons of its global acceptance.

Ayurvedic scholars should provide the knowledge of Ayurveda in the form of language of modern science. There is a need of critical and unbiased study. Efforts should be taken to make it demonstrable and experimental.

The basic principles of Ayurveda are partially based on the *Pratyksha Praman*.

*Charak Samhita* says that,

**“Pratyksha Hi Alpam Analpam Apratyaksham Asti.||”**

Other *Pramanas* are also helpful in Ayurvedic Research methodology but with the help of modern instruments. We can make concepts of Ayurveda widely known and appreciable by scientist from world. For example we can use,

❖ **Microscope** :-



This magnifies the images. The histological structure is not imaginary now '*Anuman Praman*' can be converted to *Pratyksha*. The same is applicable to,

❖ **Stethoscope** :-



This magnifies the sounds. The Heart beats, Lung sounds, Peristalsis we can hear sounds clearly.

❖ **Sphigmomanometer (B.P. Apparatus)** :-

With the help of which we can have the idea of lateral pressure exerted by blood on vessel walls, *ECG*, *EEG*, *X ray*, *Sonography* all these are the diagnostic tools with the help of which we can diagnose and we can also compare the reports before and after treatment.

Instruments are the developments of modern science and everybody including Ayurveda can take help from these tools. Now a day it is becoming increasing important to furnish 'Quantitative' evidence for a descriptive matter i.e. to develop quantitative parameter.



Following are some examples of modern instruments which can be utilised for quantitative assessment

❖ **Harvard's Steps** : -



Harvard step test is one of the most important tests with the help of which quantitatively physical fitness i.e. Cardio pulmonary fitness can be measured which can be correlated with *Bala*.

❖ **Low Volume sampler** : -

In Ayurveda there are references about air pollution & the remedies on it. Study of air pollution can be done, with the help of modern scientific instrument low volume sampler.



❖ **Spirometer & Kymograph** : -



Effect of air pollution on functional capacity of Respiration system can be studied with the help of Spirometer& Kymograph.



### ❖ **Psycho galvanoscope :-**

Galvanic skin resistance is a quantitative parameter for a person's level of stress & anxiety with the help of GSR one can get a clear picture of the mental status of a person and it can be correlated with his prakruti. One research work was done under my guidance in connection with *Sharir Prakruti*.



### ❖ **Digital Moisture Monitor :-**

Moisture content refers to the percentage of water present in skin. Moisture content is a quantitative parameter to analyze the moisture of an individual.

It gives an idea of the nature of skin can be called as *Snighdhata* which is a physical attribute of a person.

### ❖ **Bone Density :-**

Bone Density can be judged with the help of Densitometry test. This can be quantitative parameter for *Sarta*.



### ❖ **Reaction Time Analyser :-**



Reaction time is the time between the stimulus and the reaction. Reaction time analyser is a sophisticated electronic instrument. It is capable of measuring reaction time in milliseconds.

We can say that the '*Gyan Grahan Prakriya*' i.e. '*Atma Manasa Samyujiyate Manaha Indriyena Indriyam Arthana*' can be recorded quantitatively with the help of this instrument.

My M.D. and Ph.D. students are working on these instruments. The instrument are basic research tools for quantitative parameters it is today's need to develop new objection parameters. This will be a great contribution to the science of medicine and ultimately to the society.



**Research : General**

## **Future of Ayurveda**

Lucia Tommasini Marriucci

Rome, Italy

Caraka (3.8.3) says :

‘A discerning person who wants to become a physician should start by selecting a text based on a consideration of his ability to cope with hard or easy tasks, the results he is after, the likely aftermath, the place and the time. After all, there are numerous physicians’ manuals in circulation in the world, so he should apply himself only to a text which is extremely famous, which is used by scholars, which covers a lot of topics, and is respected by qualified people. It has to be for pupils of all three levels of ability, and it should not be flawed by repetitiousness. It should be derived from the tradition of the saints. The sequence of its text, commentary, and summary should be well organized. It should be solidly based, and have no corrupt or missing words. It should be full of significance, its ideas should follow in sequence and it should give importance to determining the truth about things. Its ideas should be coherent, and its topics should not be haphazard. It should communicate its meaning rapidly, and it should have both definitions and examples. This type of text is like a flawless sun: it dispels darkness and throws light on everything.’

It is impossible to imagine a more apposite observation for the present day. It is surprising how current Caraka’s thinking is, like the repetitiveness of human behaviour. Modern day life probably has many things in common with life in the past with just one major difference: the speed of communication. If previously errors were identified and maybe corrected automatically, an error made today spreads quickly and a long time must pass before it will be forgotten.

Ayurveda is an open philosophy which comprises a vast, well-structured knowledge of the ways and means for living a long life. Longevity refers to the possible duration of life and to this end Ayurveda, considered as an upaveda, describes the elements which represent a human being, his/her makeup, how he/she should live, his/her position in relation to nature.

I would like to draw your attention to the fact that, due to cultural and social lifestyles,

in this day and age some aspects of Ayurveda risk being misinterpreted, even if they represent some of the fundamental and inalienable characteristics of this extensive, specialist body of knowledge.

Our most honourable teacher, Prof. P.H. Kulkarni ji, has taught us that Ayurveda has four key objectives :

**Dharma** (virtuous, moral, fair living)

**Artha** (fulfilment of the self through family, the material aspects connected to this fulfilment extend to work and material goods)

**Kama** (emotional and sensual fulfilment)

**Moksha** (liberation, abandonment, fulfilment of the self)

These are the four Purushartha, the most important goals or principles for spiritual fulfilment that we can only achieve through maintaining balance and having respect for our bodies and minds.

Talking about classical Ayurveda during a discussion, Cakrapanidatta once said:

The recommendations of medicine are not intended to help someone achieve virtue (dharma).

What are they for, then? They are aimed to achieve health.

Without health we cannot fulfill the Purushartha.

This summarises the dilemma proposed by Ayurveda and which is dramatically present today :

What does staying healthy mean, why do we lose health and what do we have to do to regain it.

In the modern age and beyond the borders of India, the information handed down by Caraka, Sushruta which makes up Ayurveda, have been placed by the WHO within the framework of traditional complementary medicine, which is **not taught** at university level in any European country.

The World Health Organization has a road map for the next 10 years (2014-2013) regarding the integration, academic teaching and supervision of these approaches in order to integrate these forms of medicine with the national health system.

What does Traditional Medicine and Complementary Medicine mean for the WHO?

It is important to understand what the words mean.

By 'traditional' the WHO means all those bodies of knowledge, theories and local experiences used to maintain health, to prevent and treat physical and mental illnesses.

The term 'complementary' indicates a series of health care practices which do not form part of the culture of conventional medicine in that specific country and which are therefore not integrated into the local health system of the country. These practices can therefore be defined traditional in relation to the country of origin and complementary when integrated in the national health system

Ayurveda and Chinese medicine belong to traditional medicines and are sometimes also called complementary when they are used outside the context of their country of origin (traditional).

The effort required to significantly raise awareness of traditional medicine is not always supported by individual countries either in Europe or the rest of the world.

The WHO is aware of the difficulties involved in the delicate work of cultural integration and has come up with a strategy:

- 1) building the knowledge base and formulating national policies;
- 2) strengthening safety, quality and effectiveness through regulation;
- 3) promoting universal health coverage by integrating T&CM services and self health care into national health systems.

The strategy is very clear but its application depends on the willingness of each country.

All countries in Europe have accepted Ayurveda as a traditional medicine and it is rarely considered as complementary. It has been culturally accepted and not integrated as complementary in the national health system..

There are no university courses anywhere in Europe which teach Ayurveda or Indian medical science in spite of the fact that some universities offer short taught masters on Ayurvedic concepts. The Third University of Rome has set up a taught masters on the subject held by Dr Daniela Giannandrea, student of Prof Kulkarni. However it is obvious that a possible integration of the various systems of medicine, including Ayurveda, will take a long time and require a different evaluation of what is currently called science and experimentation.

The courses set up by some groundbreaking universities in Europe are aimed at the field of nursing and in some cases of nutrition.

At naturopathy institutes in Europe, Ayurveda is taught as part of naturopathy studies and therefore as part of naturopathy concepts.

Ayurveda is not studied in any European university for an academic qualification. In Italy, Ayurveda is recognised by the Federation of the Order of Physicians but not by the national academic system therefore any qualification obtained by a doctor, if it is in line with the Benchmark of the WHO, will only be considered as part of one's personal store of knowledge.

The WHO has also drawn up a programme for non-medical ayurvedic operators. This programme has been specifically prepared for **nursing staff**, for **panchakarma therapists** and for **dietologists**. It involves approximately 1400 hours of study and practice.

Naturopathy, a sector which is recognised in Italy under legislative decree number 4/2013, has already been regulated for many years in Great Britain, Germany and France, and also includes the study of Ayurveda in the curriculum, within the context of knowledge of traditional medicines.

A new phenomenon known as Ayurveda Marishi has arrived in Italy and other countries all over the world and has attracted followers and doctors who make use of ayurvedic concepts called 'maharishi' in curing illness.

The focus is always on the illness, rarely on the person who is ill and the objective and subjective significance of the illness.

Even if only in a private capacity, the teaching given to doctors and that proposed by official European bodies makes reference to the Benchmark for training in Ayurveda drawn up by the WHO. This uniform approach allows appropriate communication between medical and non-medical practitioners.

While this uniform profile is applied in the training of the medical profession, this is not the case in the non-medical sector.

There are often discrepancies in the teaching approach. Often too much attention is given to the energy principles of Ayurveda, Vata, Pitta e Kapha, neglecting the significance of the energy principle and its action, as amply demonstrated today by quantum physics. The focus is always on the illness and rarely on the person who is ill. No importance is given to the objective and subjective significance of illness.

The panorama is extremely confused, with the risk of making the vedic message of Ayurveda unclear.

The complexity of Ayurveda is easily hidden by its apparent simplicity.

It is the science of becoming and this concept is nullified by the treatment of symptoms whether this is based on bacteria or dosha.

Traditionally Ayurveda has welcomed theories and practices as long as they fit in with Purushartha and the triad Avyakta, Mahat, Ahamkara.

Alongside the officialdom of the WHO which tries to protect the integrity of traditional medicines, I believe that it is necessary for the dissemination of this teaching to take account of the knowledge of the individual, a knowledge of the dual nature of matter (as proposed by quantum physics), of being and becoming.

There must be respect for the complex message behind maintaining and regaining health, as pointed out by Caraka.

We must learn to speak to Vata, to Pitta, to Kapha.

We must learn to speak to the five bhuta, the three mala, the seven dhatu. We must lead the body to recognise its divine essence.

We cannot all be philosophers or saints but we should all study to understand the meaning of life.

We cannot only draw health treatments from Ayurveda. Caraka himself hopes that herbs which grow in the area where the sick person lives will be studied, and believes that the curative power of a treatment must be in harmony with the person who comes from that area. Nowadays industry produces medicines which are exported all over the world, eliminating key ingredients from the formulae to make it possible to sell or export them in accord with local health laws.

Maitreia says that treating with medicines is of little use because it has been seen that people who take medicines die, and others who do not, live. For this reason he holds that there is no point in treating illness with medicine. Atreya's response is more moderate: he says that whatever the outcome of the illness, medicine helps even if it does not heal.

Sometimes we talk about the allopathisation of Ayurveda when we want to correct a symptom by using medicine. This is the current trend but we are still in time to change it.

The situation in Italy today is not very different from other European countries and needs to be regulated. There are strong cultural, social and economic interests and these create conflicts and discrepancies with the founding principles of Ayurveda.

In order to protect and pass on the vast body of Ayurvedic knowledge, a programme should be created which is supported by Indian Academic Authorities.

This programme should indicate how an ancient text should be studied from a modern perspective.

We are losing contact with our identity, with the triad which we represent, body mind and spirit and we are focusing on the part of the body, or rather with the cry of alarm sent out by that part: the illness and the symptoms connected with it.

Every body is different from every other body, every individual has their own constitution, Sharir and Manas Prakruti, which is unique and unrepeatable.

Studying Prakruti we necessarily come into contact with the key principles of Ayurveda and their form and expression which are at the same time both concrete and dynamic.

Ayurveda was taught by Brahma, and as they have been handed down to us, ayurvedic principles existed long before the birth of man. Our main duty today is to know man and help him to return to his origins.

Many centuries ago, because of mankind's physical and mental suffering, Baradvaja went to ask Brahma for the means to cure humanity.

Today I ask the Indian Authorities who practise and live Ayurveda to indicate clearly the path we should follow in order to know and practice Ayurveda, spiritually as well as physically.

There should be a programme created by the Indian Authorities which safeguards tradition by indicating the subjects to be studied, the training and the specialisations to be applied in various European countries. This is not a question of influencing the idea of national culture, it must be achieved through an understanding which facilitates the flow of ideas and information and preserves the value of knowledge. It should be an honour for the various schools to align themselves with those principles which favour communication which respects tradition.

Ayurveda has stayed alive because it asks the individual to face up to his responsibilities as determined by matter, mind and spirit.

The survival of Ayurveda does not depend on medicines but on an understanding of what we are, and, through the word, the highest expression of energy, helping the individual to rediscover the means for applying Purusharta.

Research : Clinical



## “Clinical evaluation of Lajadi Choorna in Management of Pravahika”

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### Abstract:

*Pravahika* is a disease we encounter commonly during day to day practice. *Pravahika* badly hampers once daily activity. In this disease *Vata* and *Kapha* are badly vitiated. Due to busy life people are neglecting once health, food habits leading to various diseases like *Pravahika*. Though there are various medicines are available for *Pravahika*. They do not give satisfactory results.

In Bhaishjya Ratnavali , *Lajadi Choorna* is mentioned in the treatment of *Pravahika*. It contains *Laja*, *Yashtimadhu* (*Glycerrhiza glabra*), sugar and honey. By virtue of *Deepana-Pachana* and *Kaphaghna* property; *Laja* promotes function of *Pakwashaya* and subsides action of *Pravahana*, *Udarashool*, *Sakapha-mala* and *Styan-mala pravrutti*. *Yashtimadhu* has *Vataghna* property and *Madhu* has *Kaphagna* property. By this *samprapri-vighatana* of *Pravahika* occurs.

**Keywords:** *Pravahika*, *Lajadi choorna*,

### Introduction:

We are living in an advanced age. In this age everyone wish a great success, a luxurious life. For the sake of this everyone is trying hard to achieve owns various needs, comforts. Everyone have to work hard to get these. Due to modernization of the world man becomes like a machine and is working continuously for hours a day. All life patterns along with habits are changed totally causing hazardous effect on life.

Due to modernization industrialization both men and women are trying hard, Working in the various shifts .we have lost the time table of our life. No one is having time to spend with his own family. Parents have no time for their children; children are busy in their day to day school activities. There is no harmony between the family members. Because of such things we have lost the peace of mind. Many of us are not satisfied in their life though they are having lots of money. Changing food habits, eating junky foods, outside food eating habits are giving birth to the various types of health related

Acharya Charaka has mentioned *Aharvidhi-Visheshayatanam*<sup>1</sup> but we are not following this. This causes change in the *Samyavastha* of *Doshas* and creates various types diseases.



While working at Arogyashala Rugnalya I come across many patients suffering from problems related to *ANNAVAHA STROTAS* out of which about 20 % were of *Pravahika*<sup>2</sup>.

*Pravahika* is a disease which disturbs ones day to day activities. In our *Samhitas* it is mentioned that proper one soft motion daily is secrete of freshness and relaxness of the early morning. But in *Pravahika* these things are hampered *Pravahika* is characterized by *Sapravahan mal, Krite api akrit sandyata* e.t.c. In *pravahika agni* is hampered. As *agni* is disturbed *Pravahika* causes many other diseases so *Pravahika* is the root of many other diseases. Many of the people suffering from this. Modern science does not have the satisfactory answer on it.

I have chosen the *Pravahika* for study because of its importance mentioned above. Even though there is temporary solution on this that is not the satisfactory solution. So these things were persistently initiating me to study and to do something fruitful on this disease.

I have perceived the disease through the media of thesis very sincerely and fortunately. I have got very satisfactory results some hidden but important things are also exposed regarding disease.

**Aims and Objectives :** To study the efficacy of *Lajadi Choorna* in management of *Pravahika*.

**Material and methods:**

**Lajadi Choorna**<sup>3</sup>: *Lajadi Choorna* is made of four contents that includes

- 1) *Laja*
- 2) *Yashtimadhu(glycerriza glabra)*
- 3) *Sharkara*
- 4) *Shaudra(honey)*

*Anupan = Tandulodak*<sup>4</sup>

**KAL – Pragbhakta**<sup>5</sup>                      **MATRA-** 5 Grams, twice a day                      **DURATION** - 21 days  
**ANUPAN – tandulodak**                      **FOLLOW UP –** 7, 14, 21 days

While on other hand *Laghugangadhar Choorna*<sup>6</sup> was used as Control group

**KAL – Pragbhakta**                      **MATRA-** 5 Grams, twice a day                      **DURATION** -21 days  
**ANUPAN – koshna Jala**                      **FOLLOW UP –** 7,14,21 days

For clinical study, 60 patients attending outdoor and indoor from *Kayachikitsa* department were taken.

**CRITERIA FOR SELECTION OF PATIENTS:**

**A) INCLUSION CRITERIA:**

1. Age 15-60 years
2. Either sex
3. Patient having symptoms of *pravahika*

**B) EXCLUSIVE CRITERIA:**

1. Patient having bleeding piles
2. Known case of Ca rectum<sup>7</sup>
3. Patients having prolaps of rectum
4. Pregnant women & lactating mother .

Are excluded from the present study.

After selection of patient detailed history was taken.

Detailed examination carried out according to *Ayurved* and modern aspect according to the proforma given in subsequent pages. Final diagnosis carried out according to the various types of *Pravahika*.

Scoring of symptoms were as follows

Sr.no.	Sign & symptoms	Criteria	score
1	<i>Sa-pravahan malpravrutti</i>	Absent present	0 1
2	<i>Sakapha malpravrutti</i> (stool with mucous)	Absent Mild (little amt. of kapha) Moderate (near abt. equal) Severe (more amt. of kapha)	0 1 2 3
3	<i>Styan- malpravrutti</i> (sticky stool)	Absent Mild(easily wash from toilet after flush water) Moderate(cannot be easily flushed out) Severe (takes quite force to wash stool from toilet pot)	0 1 2 3
4	<i>Alpalpa malpravrutti</i>	No motion 1-2 mild 2-4 mod >4	0 1 2 3
5	<i>Krite-ape-akrit sandnyata</i>	Absent Mild Moderate Severe	0 1 2 3
6	<i>Udarshool</i> (Abdominal pain)	Absent Mild(pain which is bearable & can perform routine work) Mod. (mod pain not hampering routine work) Severe (severe pain hampering routine work)	0 1 2 3

**OBSERVATIONS AND RESULTS:**

Group A vs Group B at 5% level of significance

**1. Krite api akurut Sandyanta**

Days	$\chi^2_{cal}$	df	Table $\chi^2$ value	Relation	Result
D 7	3.74	2	5.99	$\chi^2_{cal} < \chi^2_{table}$	Not significant
D 14	21.192	2	5.99	$\chi^2_{cal} > \chi^2_{table}$	Significant
D 21	5.94	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant

**2. Styanata of Mala**

Days	$\chi^2_{cal}$	df	Table $\chi^2$ value	Relation	Result
D 7	15.68	2	5.99	$\chi^2_{cal} > \chi^2_{table}$	Significant
D 14	20.104	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant
D 21	20.866	2	5.99	$\chi^2_{cal} > \chi^2_{table}$	Significant

**3. Udarshool**

Days	$\chi^2_{cal}$	df	Table $\chi^2$ value	Relation	Result
D 7	0.658	1	3.84	$\chi^2_{cal} < \chi^2_{table}$	Not significant
D 14	1.92	1	3.84	$\chi^2_{cal} < \chi^2_{table}$	Not significant
D 21	2.962	1	3.84	$\chi^2_{cal} < \chi^2_{table}$	Not significant

**4. Alpapa Mal Pravrutti**

Days	$\chi^2_{cal}$	df	Table $\chi^2$ value	Relation	Result
D 7	2.162	1	3.84	$\chi^2_{cal} < \chi^2_{table}$	Not significant
D 14	5.066	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant
D 21	9.319	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant

**5. Sakapha Malpravrutti**

Days	$\chi^2_{cal}$	df	Table $\chi^2$ value	Relation	Result
D 7	0.483	1	3.84	$\chi^2_{cal} < \chi^2_{table}$	Not significant
D 14	24.308	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant
D 21	7.68	1	3.84	$\chi^2_{cal} > \chi^2_{table}$	Significant

**Saprvahan Malpravrutti**

	<b>Group A</b>	<b>Group B</b>
Run value	9	10
Positive Value	22	24
Negative Value	8	6
Lower Critical Value	7	6
Upper Critical Value	17	13
Result	$a < r < b$	$a < r < b$
	Significant	significant

**Total Effect of Therapy:**

<b>Relief</b>	<b>Upashay -anupshay</b>	<b>Group A</b>	<b>% Relief in A group</b>	<b>Group B</b>	<b>% Relief in B group</b>
75% and above	Uttam	24	80	0	0
50% to < 75%	Madhyam	6	20	11	36.66
25% to < 50%	Heena	0	00	18	60
0% to < 25%	Anupashay	0	00	1	3.33
	<b>Total</b>	<b>30</b>		<b>30</b>	

**Discussion:**

*Pravahika* is a disease in which *Vata and kapha* are badly vitiated. Aim of the present study was Clinical evaluation of *Lajadi Choorna* in management of *Pravahika*. In this study all the patients are studied thoroughly with each and every follow up. They are assessed by Statistical methods applied on subjective criteria like *Saprvahan Malpravrutti* (staining during defecation), *Sakapha Malpravrutti*, *Krite api akrit sandyata*, *Styan Malpravrutti*, *udarshool*.

Statistical analysis of efficacy of study drug *Lajadi Churna* and control group drug *Laghugangadhar Churna* in *Pravahika* was done by applying "Chi squire test" and "Run test".

In this present study total 60 patients of *Pravahika* were studied. Out of which 30 were of *Lajadi Choorna* which is an experimental group and 30 were of *Laghugangadhar Choorna* which is a control group

Clinical study of *Lajadi churna* was carried out by treating patients with *Lajadi churna*. *Lajadi Churna* is found beneficial in both types of *Pravahika i.e Nootan and jirna Pravahika*.

Present study showed significant result in *Saprvahan Malpravrutti*, *Sakapha malpravrutti*, *styan Malpravrutti*, *Krite api akrit sandyata*. Also satisfactory results were found in other

symptoms of *Pravahika like udarshool, Daurbalya*.

As compared to the contents of *Laghugangadhar Churna*, contents of *Lajadi churna* are less in number as well as they are easily available they are cost effective. *Lajadi Churna* have the main ingredient as *Laja* which helps as "*Balya*" and "*Prinan*" for the patient while on other hand *Laghugangadhar churna* do not have such contents.

Most of the cases of *pravahika* got very good results from *Lajadi Churna* except some exceptional cases.

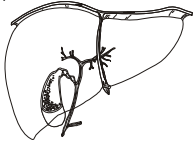
### Conclusion:

From the Clinical trials conducted for the study "Clinical evaluation of *Lajadi Churna* with *Laghugangadhar Churna* in management of *Pravahika*" following conclusion are drawn:

On the basis of Statistical test of significance, *Lajadi Churna* is more effective than *Laghugangadhar Churna* in reducing symptoms *Sappravahan Malpravrutti, Sakapha Malpravrutti, Styana Malpravrutti, Krite api akurut sandyanta*. Statistically no significant result observed in reducing *Udarshool*. Thus it can be conclude that *Lajadi Churna* is significantly effective in management of *Pravahika*.

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**Research : Clinical**

## **Efficacy of Vasadi Kashaya in Bahupitta Kamala**

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### **ABSTRACT :**

Kamala is one of the major causes of mortality and morbidity in developing countries. Kamala has been observed to be shifting from sub clinical infection to rapidly producing chronic liver disease, Hepatitis. Its prevalence is more in India.

The study was Single Randomised Open trial study. 30 patients were selected as per the inclusive criteria with symptoms of Bahupitta Kamala, like haridranetra, mutrapitata, mala pitata, haridratwak, haridranakha, haridramukha, daah, avipak, hatendriya, dourbalya, angasad, kshudhamandya etc. All the patients were administered with VasadiKashaya (dose 40 ml) twice a day with Madhu as anupan.

The investigations such as LFT, Urine – Routine and Microscopic, were carried out before and after treatment and special investigation like coagulogram, USG done as per requirement. The assessment of the subjective parameters was done on 0<sup>th</sup>, 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup>, 28<sup>th</sup> day.

The VasadiKashaya showed significant relief in lakshanas like haridranetra, mutra, mala, nakha, mukha, kshudhamandya, dourbalya, hatendriya, angasad and marked decrease in LFT level and brought elevated lakshanas of Bahupitta Kamala to the normal level after the treatment. Statistical analysis reveals that there was significant relief of symptoms (P < 0.05) at 5% level of significance and also reduction of LFT was significant (P < 0.05) at 5% level of significance.

During the study period there was no adverse effect of drug noticed. The VasadiKashaya is safe and effective in Bahupitta Kamala.

**Keyword :** VasadiKashaya, Bahupitta Kamala, Hepatitis/Jaundice. (No. of References : 12)

### **INTRODUCTION :**

Kamala Vyadhi is seen all over the world. In ayurveda many effective medicines are described for the Kamala Vyadhi. Charak implies the disease Kamala represents RaktaprodoshajaVikara (CharakChikitsa 28/9, 10).

Kamala which is caused by aggravated pitta may occur with or without panduroga. In modern era, spicy and bakery food, some bad habits such as tobacco chewing, alcohol consumption,

irregularity in food intake, late night sleep etc. aggravates pitta dosha. Mental stress, anger, fear, worry, fast life, work pressure, exertion give rise to pitta and vatprakopa and vitiates pitta. Consumption of contaminated food, water etc. causes Kamala. This modern lifestyle is main reason for pittaprakopa. These are hetu for Kamala vyadhi.

Pitta and Rakta bound with each other by Ashrayashrayisambandha. Pitta is mala of Rakta. So pittaprakopa gives rise to RaktapradoshajVikara Kamala. Yakrut is moolasthan for RaktavahaSrotas. Rakta-Dhatu gets formed in Yakruta and at the same time pitta in the form of mala is also formed simultaneously. Because of pitta prakopakaaharavihara, pitta gets formed in Yakrut in higher quantum. This pitta enters in koshta and causes dark yellowish stool formation.

Ayurveda acharyas explained Kamala and its bhedas as swatantra and paratantravyadhi to pandu roga and upadrava of other disease. It is commonly caused due to mithyaahara and vihara leading to dooshana of dhatus rasa and raktha all together. This dushti of Rasa and Raktavahastrotas jointly produces Kamala roga by affecting the raktavahastrotamoola, yakrut and pleeha. Yakrut in particular helps in pachanakriya and production of pitta, which it secretes into grahani. Pittaprakopakaaharvihara leads to pittaprakopa gives rise to Kamala vikara.

VasadiKashaya mentioned in BhaishajyaRatnavali has ingredients viz. Vasa, Guduchi, Nimba, Kiratatikta, and Katuki. These ingredients have specific action on Yakrut, all having tikta rasa as their main rasa. Tikta rasa is responsible for pitta shamak action. This action is responsible for Samprapti Bhang and results in vyadhimukti.

Hence synergic effect of these contents makes the drug more potent and useful in the treatment of Kamala. So to know the efficacy of VasadiKashaya in Bahupitta Kamala this study topic has been selected for research.

### **AIM AND OBJECTIVES :**

**AIM :** To study the efficacy of VasadiKashaya in Bahupitta Kamala by taking clinical trials.

### **OBJECTIVES :**

The study has been planned with the following objectives:

- Literary review of Kamala and Hepatitis according Ayurved and Modern view.
- Conceptual study of VasadiKashaya.
- Study of adverse/side effects of the trial drug, if any.

### **MATERIALS AND METHODS :**

#### **Drug Review :**

#### **VASADI KASHAYA (BhaishajyaRatnavali 12/23)**

Kashaya of Vasa, Guduchi, Nimba, Kiratatikta and Katuki taken with madhu cures Kamala, Pandu, Raktapitta, Halimak and Kaphadirogas.

**METHODOLOGY :**

- Materials were purchased from renowned pharmacy.
- Authentication and Standardization of drugs was done.

**TYPE OF STUDY :** Single Randomised Open Clinical trial

**PLACE OF WORK :** The clinical trial was carried out at OPD and IPD of Bharati Vidyapeeth University, Ayurved Hospital, Pune. Total 30 patients were selected randomly. Total 34 patients were screened of which 4 patients were dropped out from study because of irregular follow up.

**DRUG ADMINISTRATION**

Treatment to be given	Vasadi Kashaya
Dose	40 ml
Dose Schedule	Morning and Evening (Madyabhakta Kala)
Route of Administration	Oral
Anupana	Madhu
Treatment period	28 Days
Follow-up Days	0th, 7th, 14th, 21th, 28 <sup>th</sup>

**INCLUSION CRITERIA**

- Diagnosed Patients of Bahupitta Kamala will be selected as per signs and symptoms described in Ayurved Samhitas.
- Total Bilirubine below 9.
- Age group between 18 to 70 years.
- Patients are selected irrespective of gender and economical class.
- Patient who are willing to undergo treatment.

**EXCLUSION CRITERIA**

- Patients age below 18 or above 70 years
- Hepatic encephalopathy
- Patients with other complication like malignancy

**SUBJECTIVE PARAMETERS**

1. Haridra Netra, Mutra Pitata, Haridra Twak, Haridra Mukha, Haridra Nakha, Mala Pitata, Kshudhamandya, Aruchi, Daha will assessed as per Ayurvedic Parameters.
2. Hatendriya, Dourbalya, Angasad will observed by Visual Analog Scale.



**OBJECTIVE PARAMETERS**

1. LFT ( Liver Function Test )
  - Sr. Billirubin
  - Alkaline Phoshatase
  - SGOT
  - SGPT
2. Sr. Protein (Total, Albumin, Globulin)
3. Urine
  - Routine
  - Microscopic
  - Bile Salt
  - Bile pigment

**CLINICAL ASSESSMENT PARAMETERS**

SYMPTOMS	GRADATION
NIL	0
MILD	1
MODERATE	2
SEVERE	3

**OBSERVATIONS AND DISCUSSION**

Total 34 patient was enrolled for the study. Out of which 4 patient were dropped out because they failed to maintain regular follow up, also irregularity in taking medicine. The remaining 30 patients were completed.

**AGE-** Maximum patients were from age group 20-50 yrs (83%). This may be due to irregularity of diet or Asatmyaaahar-vihar due to their professional responsibilities.

**GENDER-** Mostly males are affected by this ailment. 25 (83%) patients were males and only 5 (13%) female patients were observed.

**PRAKRUTI** – 53% patients belonged to Vata- Pitta prakruti and 34% belonged to Pitta – Kaphaprakruti. This may be justified as the disease is a Pitta-Vata dominant vikruti.

**HABITS** -Study of addiction reveals that 50% of patients were found to be alcoholic, while non addicted were 37% and tobacco addicts were 13%. This high incidence of alcoholic suggest that alcohol is the leading cause for Kamala in India.

**KOSHHA**-Study of Koshta reveals that 50% of patients were of Madyam koshta, 37% patients were of KruraKoshta and 13% were of MruduKoshta.

### Summary of Subjective Parameter Analysis

Null Hypothesis is Rejected in all parameters. Thus, We accept the Alternate Hypothesis, i.e., The trial Drug is effective in reducing these all symptoms of Bahupitta Kamala.

**TABLE 1: SHOWING WILCOXON'S SIGNED RANK TEST SUMMARY OF SUBJECTIVE PARAMETERS**

Symptoms	Mean Rank	Sum of Ranks	z value (Wilcoxon Signed Rank Statistics)	p value (At the level of significance .05)	Decision
HaridraNetra	14.5	406	-4.72	.000	H <sub>0</sub> Rejected
MutraPitata	15.5	465	-4.875	.000	H <sub>0</sub> Rejected
HaridraTwak	12	276	-4.344	.000	H <sub>0</sub> Rejected
HaridraNakha	11.5	253	-4.690	.000	H <sub>0</sub> Rejected
HaridraMukha	11.5	253	-4.315	.000	H <sub>0</sub> Rejected
Mala Pitata	15.5	465	-4.873	.000	H <sub>0</sub> Rejected
Daah	7	91	-3.606	.000	H <sub>0</sub> Rejected
Avipak	15.5	465	-5.152	.000	H <sub>0</sub> Rejected
Kshudhamandya	15.5	465	-5.106	.000	H <sub>0</sub> Rejected
Aruchi	14.5	406	-5.292	.000	H <sub>0</sub> Rejected

**TABLE 2: SHOWING 't' TEST SUMMARY OF SUBJECTIVE PARAMETERS**

Symptoms	Mean	Std. Deviation	Std. Error	t value	p value (At the level of significance .05)	Decision
Hatendriya	0.467	0.507	0.277	0.093	.000	H <sub>0</sub> Rejected
Dourbalya	0.467	0.507	0.277	0.093	.000	H <sub>0</sub> Rejected
Angasad	1.7	0.664	0.121	14.84	.000	H <sub>0</sub> Rejected

#### HaridraNetra (Yellowish eyes)-

The symptom HaridraNetra showed remarkable results during the study. In all patients, there was significant improvement. HaridraNetra might have reduced due to katu, tikta rasa, sheetavirya. Here, Pittashamak, Rasktshodhak action of the drug acted. ( $p < 0.05$ ).

#### MutraPitata (Yellowish urine)-

The study suggests that, in all the 30 patients, there was highly significant improvement seen at  $p < 0.05$ . MutraPitata may have reduced due to katu, tikta rasa, sheetavirya property along with Pittashamak, Rasktshodhak action.

**HaridraTwak** (Yellowish skin) -

The symptom HaridraTwak showed remarkable results during the study. In all patients , there was significant improvement. HaridraTwak might have reduced due to katu, tikta rasa, sheetavirya. Here, Pittashamak, Rasktshodhak action of the drug acted. . ( $p < 0.05$ ).

**HaridraNakha** (Yellowish nails) –

The study suggests that, in all the 30 patients, there was highly significant improvement seen at  $p < 0.05$ . HaridraNakha may have reduced due to katu, tikta rasa, sheetavirya property alongwith Pittashamak, Rasktshodhak action.

**HaridraMukha** (Yellowish Face) –

The symptom HaridraMukha showed remarkable results during the study. In all patients , there was significant improvement. HaridraMukha might have reduced due to katu, tikta rasa, sheetavirya. Here, Pittashamak, Rasktshodhak action of the drug acted. . ( $p < 0.05$ ).

**Mala Piatata** (Yellowish stool) -

The study suggests that, in all the 30 patients, there was highly significant improvement seen at  $p < 0.05$ . Mala Pitata may have reduced due to katu, tikta rasa, sheetavirya property alongwith Pittashamak, Rasktshodhak action.

**Daah** (Irritation) -

The symptom Daah showed remarkable results during the study. In all patients , there was significant improvement. Daah might have reduced due to katu, tikta rasa, sheetavirya of Guduchi. Here, Pittashamak, Rasktshodhak action of the drug acted. ( $p < 0.05$ ).

**Avipak** (Indigestion) -

The symptom Avipak showed remarkable results during the study. In all patients, there was significant improvement. Avipak might have reduced due to katu, tikta rasa along with Deepana, amapachana and srotoshodhana action. Pittashamak, Amapachak and agnivarthak action of drug acted on these symptoms. ( $p < 0.05$ ).

**Kshudhamandya** (Decreased hunger) -

The study suggests that, in all the 30 patients, there was highly significant improvement seen at  $p < 0.05$ . Kshudhamandya may have reduced due to katu, tikta rasa alongwith Deepana, amapachana and srotoshodhana action which causes immediate agnideepti. Pittashamak and agnivarthak action of drug acted on these symptoms.

**Aruchi** (Aversion to food) -

The study suggests that , in all the 30 patients, there was highly significant improvement seen at  $p < 0.05$ . Aruchi may have reduced due to katu, tikta rasa property alongwith Deepana, amapachana and srotoshodhana action which causes immediate agnideepti.

**Hatendriya (Impaired senses) -**

The effect of VasadiKashaya on Hatendriya was significant( $P<0.05$ ). Hatendriyamay have reduced due to guru, snigdha guna, madhurvipaka of Guduchi. Rasayana action of drug acted on these symptoms.

**Dourbalya (Weakness) –**

The effect of VasadiKashaya on Dourbalya was significant( $P<0.05$ ). Dourbalya reduced due to guru, snigdha guna, madhurvipaka of Guduchi. Rasayana and agnivaradhak action of drug acted on these symptoms.

**Angasad (Bodyache) -**

The study suggests that, in all the 30 patients, there was highly significant improvement seen at  $p<0.05$ . Angasad reduced due to guru, snigdha guna, madhurvipaka of Guduchi. Rasayana and agnivarthak action of drug acted on these symptoms.

**Summary of analysis of Objective Parameters -**

Null Hypothesis is Rejected in 10 out of 11 parameters. Thus, We accept the Alternate Hypothesis, i.e., The trial Drug is effective in reducing these 10 parameter of Bahupitta Kamala.

Null Hypothesis is Accepted in 1 out 11 parameters, namely, SGOT. We must reject the alternate hypothesis, i.e., the trial drug is NOT effective in reducing this parameter, SGOT levels even though decreased.

There was positive change seen in Sr. Protein value. The effect of VasadiKashaya on Sr. Proteins was significant  $0.119(P>0.05)$ . That means  $H_0$  accepted shows increase in Sr. Protein value. Patients were found to have increase level of Sr. albumin  $0.216(P>0.05)$  and Globulin  $0.119(P>0.05)$ , which is significant.

**TABLE 3 : SHOWING 't' TEST SUMMARY OF OBJECTIVE PARAMETERS**

Symptoms	Mean	Std. Deviation	Std. Error	t value	p value (At the level of significance .05)	Decision
Bilirubin(Total)	2.9946667	2.2288759	.4069352	7.359	.000	$H_0$ Rejected
Direct	2.0046667	1.6538852	.3019567	6.639	.000	$H_0$ Rejected
Indirect	.9566667	1.2479427	.2278421	4.199	.000	$H_0$ Rejected
Alk. Phosph.	246.2933	485.8034	88.6952	2.777	.010	$H_0$ Rejected
SGPT	207.100	508.642	92.865	2.230	.034	$H_0$ Rejected
SGOT	314.967	883.098	161.231	1.954	.060	$H_0$ Accepted

Sr. Proteins	-.2533	.8645	.1578	-1.605	.119	H <sub>0</sub> Accepted
Albumine	-.1700000	.2119694	.0387001	-4.393	.000	H <sub>0</sub> Accepted
Globuline	-.1066667	.7917390	.1445511	-.738	.466	H <sub>0</sub> Accepted
Urine Bile Salt	0.8	0.61	0.111	7.18	.000	H <sub>0</sub> Rejected
Urine Bile Pig.	2.8	0.75	0.137	19.73	.000	H <sub>0</sub> Rejected

### BILIRUBIN -

In the study, In all 30 patients, there was positive change in Bilirubin(Direct & Indirect). Mean score of Bilirubin(Total) significantly reduced from 4.16 to 1.41. Mean score of Direct Bilirubin significantly reduced from 2.4 to 0.6 and Mean score of Indirect Bilirubin significantly reduced from 1.7 to 0.8. The effect of VasadiKashaya on Bilirubin (Direct & Indirect) was significant( $P<0.05$ ).

Sr. Bilirubin (Total) shows decrease after 1<sup>st</sup> follow up along with decreased Icterus in 28 patients. In remaining 2 patients, there was an increase in levels at 1<sup>st</sup> follow up then gradually started to decrease giving significant result.

Direct Bilirubin shown good results as compared to indirect levels. Both results shows significant reduction in levels.

This result is because of Dhatvagnivardhak action of VasadiKashaya.

### LIVER ENZYMES -

In all 30 patients, there was positive change in Liver Enzymes also. Mean score of SGPT significantly reduced from 369 to 44. Mean score of SGOT significantly reduced from 131 to 38 and Mean score of Alkaline Phosphatase significantly reduced from 376 to 132.

The effect of VasadiKashaya on Liver Enzymes was significant ( $P<0.05$ ) except SGOT. SGOT levels even though decreased, test shows insignificant result in this case.

Liver Enzymes (Alkaline Phosphatase, SGOT, SGPT) seen significantly reduced in 1<sup>st</sup> follow up period mostly.

### SERUM PROTEINS -

There was positive change seen in Sr. Protein value. Mean score of Sr. Protein significantly increased from 6.74 to 6.85. Mean score of Albumin significantly increased from 3.43 to 3.58 and Mean score of Globulin significantly increased from 3.27 to 3.37.

The effect of VasadiKashaya on Sr. Proteins was significant 0.119( $P>0.05$ ). That means Ho accepted shows increase in Sr. Protein value. Patients were found to have increase level of Sr. albumin 0.216( $P>0.05$ ) and Globulin 0.119( $P>0.05$ ), which is significant.

This effect was due to VasadiKashaya on liver function. This also helps in improvement of general condition and immunity of the patients.

**URINE BILESALT & BILE PIGMENT -**

Mean score of Urine Bile Salt significantly reduced from 0.42 to 0 and Mean score of Urine Bile Pigment significantly reduced from 0.42 to 0. The effect of VasadiKashaya on Urine Bile salt & pigment was significant 0.00( $P < 0.05$ ).

Urine bile salt and bile pigment was not present in all cases. But the drug shows positive results in cases in which it was present.

**RESULTS -**

VasadiKashaya mentioned in BhaishajyaRatnavali has ingredients viz. Vasa, Guduchi, Nimba, Kiratatikta, and Katuki. These ingredients have specific action on Yakrut, all having tikta rasa as their main rasa. Tikta rasa is responsible for pitta shamak action.

Patient got relief these symptoms –

- Aruchi, Kshudhamandya, Daah, Dourblya, Angasad in first follow up. Pittashamak, raktashodhak and agnivarthak action of drug acted on these symptoms.
- Mala pitata, Mutrapitata gradually started decreasing from second week onwards due to Pittashamak, Raktashodhak properties.
- Haridranetra, Haridratwak, HaridranakhHaridramukha also seen good results gradually due to Yakrutottejak, Pittashamak, Raktashodhak action of drug.
- Sr. Bilirubin (Total) shows decrease after 1<sup>st</sup> follow up along with decreased Icterus in 28 patients. In remaining 2 patients, there was an increase in levels at 1<sup>st</sup> follow up then gradually started to decrease giving significant result.
- Direct Bilirubin shown good results as compared to indirect levels. Both results shows significant reduction in levels.
- Liver Enzymes (Alkaline Phosphatase, SGOT, SGPT) seen significantly reduced in 1<sup>st</sup> follow up period.
- SGOT levels even though decreased, test shows insignificant result in this case.
- Sr. Protein value increased. Patients were found to have increase level of total proteins (Sr. albumin, which is significant). This also helps in improvement of general condition and immunity of the patients.
- Urine bile salt and bile pigment was not present in all cases. But the drug shows positive results in cases in which it was present.
- Sr. Bilirubin, Alkaline Phosphatase, SGOT, SGPT decreased and Sr. Protein increased due to VasadiKashaya acts as Agnivardhak, Dhatwagnivardhak and Rasayan properties.
- All the symptoms of kamala relived and LFT shows good results and cure the Bahupitta Kamala.

**CONCLUSION**

- Addicted (Alcoholic), middle aged patients are more prone to Bahupitta Kamala.
- VasadiKashaya is Pittashamak, Yakrutottejak, Agnivardhak, Dhatvagnivardhak, Raktashodhak.

- **The VasadiKashaya was effective in normalizing Liver Function Test and cure the Bahupitta Kamala.**
- **Clinical evidence proves that VasadiKashaya.improves metabolic liver functions by immuno - stimulation or immuno - modulation along with protein synthesis.**
- Overall response of the clinical study suggests the strong Hepato-protective property of the VasadiKashaya.
- No adverse and toxic effect observed in any patient during study.

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Research : Clinical

## “Comparative Clinical Evaluation of Panchnimba Choorna (Mixture of powder of *Azadirachta Indica*, *Argyrea Speciosa* and *Hordemum Vulgare*) & Bibhitak Choorna (Powder of *Terminalia Belerica*) in Urdhwag Amlapitta”

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**ABSTRACT** : Modern era's changing life style along with changing food culture leading to many diseases. *Amlapitta* is one of the most common disease seen in the society. In the ancient text books of *Ayurveda* it is described that irregular food and life style habits are the main causative factors for the disease. *Amlapitta* is common presentation which is characterized by belching, vomiting, sour and bitter taste, indigestion and headache.

**Aims and Objectives** : 1) To compare the clinical evaluation of *Panchnimba Choorna* with *Bibhitak Choorna* in *Urdhwag Amlapitta*.

2 a) To evaluate efficacy of *Panchnimba Choorna* in management of *Urdhwag Amlapitta*.

2 b) To study the *Amlapitta vyadhi* in detail with Ayurved and Modern aspects.

**Method** : A Comparative clinical study done on 60 patients of both sexes, between age group of 20 to 60 randomly selected in two groups – A and B. *Panchnimba Choorna* was administered to group A and *Bibhitak Choorna* was administered to group B. Assessment was done after completion of therapy.

**Result** : Significant improvement in group A was observed in all parameters like *Avipaka*, *Amlodgara*, *Tiktodgara*, *Hritkanthadaha*, *Shirashoola*, *Praseka*, *Chhardi*, *Aruchi*, *Gaurav* and *Klama*.

**KEYWORDS**: *Urdhwaga Amlapitta*, *Panchnimba Choorna*, *Avipaka*, *Amlodgara*, *Hritkanthadaha*

### INTRODUCTION :

Changing mode of life is ultimately resulting in many disease, one of such is *Urdhwaga Amlapitta*. *Ayurveda* stands apart from the rest of medical faculties with its holistic & all encompassing approach to disease management of *Nidan panchak* enables this science.

*Amlapitta* is composed of two words *Amla* + *Pitta*. The term *Amla* refers to a particular type of taste equated with sour taste which causes excessive salivary secretion. *Pitta* is a bodily chemical substance which is mainly responsible for the maintenance of the process of digestion, transformation and transmutation. Also it is said that *Amla* is a natural property of *Pitta* along with *katurasa* according to *Charak*<sup>2</sup> (Ch. Su. 1/60), whereas *Sushruta* has stated *katu* as its



original *rasa* and has mentioned that when *Pitta* becomes *vidagdha*, it changes into *amla*<sup>3</sup> (Su.su. 21/1). Also some quotations explain that *nirama Pitta* is *tikta* and *saampitta* is *Amla* in *rasa*.

The number of patients coming to the physicians with the complaints of *Amlapitta*, especially *Urdhwaga Amlapitta* is increasing day by day. But due to mandatory fast lifestyle in the present era, it is not possible for everyone to follow the rules of *Swasthavritta* (*Dinacharya, Rutucharya*). Also the chronic uses of various antacids recommended by modern system of medicine have adverse effects like indigestion, constipation and kidney disorders. To treat such patients with the simplest method, without the compulsion of changing their routine, is our aim. Thus it was decided to study the effect of *Ayurvedic* formulation "*Panchnimba choorna*" which is stated in *Bharat Bhaishyajya Ratnakar* in *Urdhwaga Amlapitta*.<sup>4</sup>

## AIMS AND OBJECTIVES

### ❖ *Aim*

*To compare the clinical evaluation of Panchnimba Choorna with Bibhitak Choorna in Urdhwag Amlapitta.*

### ❖ *Objectives*

- 1) *To evaluate efficacy of Panchnimba Choorna in management of Urdhwag Amlapitta.*
- 2) *To study the Amlapitta vyadhi in detail with Ayurvedic and Modern aspects*

## STUDY DESIGN :-

**Place of work** - Selection of patients was carried out at *Kayachikitsa* Department OPD.

## Clinical Study :-

- 1) Total 66 patients of '*Urdhwaga Amlapitta*' were selected randomly; out of them 6 dropped out, 60 patients were divided randomly in two groups. Each group was of 30 patients.
- 2) The treatment were given as follows-

**Study Group** – *Panchnimba Choorna*.<sup>5</sup> (*Mixture of powder of one part of Azadirachta Indica, two parts of Argyreia Speciosa and ten parts of Saktu. It is powder of roasted Hordemum Vulgare.*)

**Control Group**–*Bibhitak choorna.* (*Powder of Terminalia Belerica*)

## Follow up -

- 1) Follow up of each patient was taken on every 7<sup>th</sup> day, 14<sup>th</sup> day and 21<sup>th</sup> day.
- 2) Observations had been carried out during each follow up and the data collected at the end of research work was subjected to statistical analysis.

□ MATERIALS AND METHODS :

<b>Drug</b>	<i>Panchnimba Choorna</i>	<i>Bibhitak choorna</i>
<b>Route of Administration</b>	Oral	Oral
<b>Dose</b>	5gm <i>choorna</i> , Two times a day mixed with Sharkara	5gm Two times a day
<b>Kala</b>	<i>Pragbhakta kala(before food)</i>	Pragbhakta kala (before food)
<b>Anupana</b>	Honey	Koshnajala
<b>Duration</b>	21 days	21 days
<b>Follow up</b>	After every 7 days	After every 7 days

**SELECTION CRITERIA -**

**Inclusion Criteria:**

- 1) Age limit from 20 to 60 years. Irrespective of gender, religion, socio- economic status, marital status.
- 2) Patients were selected complaining of symptoms of *Urdhwaga Amlapitta*.

**Exclusion criteria-**

- 1) Patient below 20 years and above 60 years.
- 2) Pregnant women.
- 3) Patient with severe vomiting and diarrhea and those who can't take medicine orally.
- 4) *Urdhwaga Amlapitta* along with other chronic diseases and associated complications.
- 5) Moderate and high grade fever

**ASSESSMENT CRITERIA:**

Sr.No.	Sign & Symptoms	Criteria	Score
1.	Avipaka	Symptoms persistant throughout the day.	3
		Symptoms at the time of meal only.	2
		Occasional symptoms	1
		Absent	0
2.	Tiktodgara	Symptoms persistant throughout the day.	3
		Symptoms at the time of meal only.	2
		Occasional symptoms	1
		Absent	0

3.	Amlodgara	Symptoms persistant throughout the day. Symptoms at the time of meal only. Occasional symptoms Absent	3 2 1 0
4.	Hrutkanthadaha	Symptoms persistant throughout the day. Symptoms at the time of meal only. Occasional symptoms Absent	3 2 1 0
5.	Shirashoola	Symptoms persistant throughout the day. Persistent for few hrs(4-6) but can work properly Occasional symptoms Absent	3 2 1 0
6.	Praseka	Symptoms persistant throughout the day. Persistent for few hrs(4-6) but can work properly Occasional symptoms Absent	3 2 1 0
7.	Chhardi	More than five episodes per day 2-5 episodes per day Occasional symptoms Absent	3 2 1 0
8.	Aruchi	Dislike for food totally. 2-5 episodes per day Occasional symptoms Absent	3 2 1 0
9.	Gaurav	Symptoms persistant throughout the day. Symptoms at the time of meal only. Occasional symptoms Absent	3 2 1 0
10.	Klam	Symptoms persistant throughout the day. Symptoms at the time of meal only. Occasional symptoms Absent	3 2 1 0

**Observation and Results**

No.	Criteria	$c^2_{cal}$	df	Table $c^2$ value	Probability	Result
1	Avipaka	5.276	1	3.84	P<0.05	Significant
2	Tiktodgara	6.58	2	5.99	P < 0.05	Significant
3	Amlodgara	7.84	2	5.99	P<0.05	Significant
4	Hrutkanthadaha	10.58	1	3.84	P<0.05	Significant
5	Shirashoola	22.42	3	7.81	P<0.05	Significant
6	Praseka	2.954	1	3.84	P > 0.05	Not significant
7	Chhardi	10	2	5.99	P<0.05	Significant
8	Aruchi	13.3	2	3.84	P<0.05	Significant
9	Gaurav	7.96	2	5.99	P<0.05	Significant
10	Klama	6.908	2	5.99	P < 0.05	Significant

**❖ Avipaka :-**

The Chi-square test shows that there is a significant relief in the symptom *Chhardi* in patients of both the groups.

The study group and the control group both has showed faster relief in the symptom Avipaka i.e. 85%. In both the group, the relief in the symptom from the first day of clinical trial is significant.

**❖ Tiktodgara :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study completely was 86.95% while in the control group it was 72.91 % completely.

**❖ Amlodgara :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 93.33% while in the control group it was 73.16% completely.

**❖ Hritkanthadaha :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 91.58% while in the control group it was 79.06% completely.

**❖ Shirashool :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 87.77% , while in the control group it was 23.33% completely.

**❖ Utklesh/Prasek :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 96 % completely, while in the control group it was 81.48% completely.

**❖ Chhardi :-**

The study group showed more relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study completely was 86.50 % , while in the control group it was 57.76% completely.

**❖ Aruchi :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 89.99% completely, while in the control group it was 56.66% completely.

**❖ Gaurav :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 81.55% completely, while in the control group it was 66.56% completely.

**❖ Klama :-**

The study group showed faster relief in the symptom than the control group. In the study group, the relief in the symptom from the first day of clinical trial till the end of study was 78.94% completely, while in the control group it was 64.40% completely.

**DISCUSSION :-**

Aim of the study was “Comparative Clinical Evaluation Of *Panchnimba Choorna with Bibhitak Choorna in Urdhwag Amlapittata*.

*Amlapitta is the disease of Annavaha Strotas. In this disease “Pitta-dosha” is mainly vitiated<sup>6</sup> The main treatment of dushit pitta dosha is Tikta rasa, Madhur vipaka and Sheeta virya. This type of combination drug like Panchnimba Choorna directly acts on pitta dosha*

*Panchnimba Choorna has showed best results on cardinal symptoms of Amlapitta i.e. Avipaka, Tiktodgara, Amlodagara, Hritkanthadaha, Shirashoola Utklesh, Chhardi, Aruchi, Gaurav, Klama.*

The content of *Panchnimba Choorna* are *Nimba, Vruddhadaruka and Saktu (Flour of Yava)*.

Among these *Nimba* and *Saktu* are *Rukshya* in guna. Increased *Dravata* of vitiated *Pittadosha* in *Amlapitta vyadhi* is decreased by *Rukshya Guna* of *Nimba* and *Saktu*. And *Tikta Rasa* of *Panchnimba Choorna* is useful in *Pittashamana* and *Agnidpana Karma*. Hence this drug showed markable effect in decreasing symptoms of *Amlapitta*.

*Nimba*<sup>7</sup> also possess *Rakta-prasadaka-varadhaka*, *Kushthagna* and *Kandughna* properties which helps in subsiding the *upadravas* like *Kandu* and *Mandala*.

According to all observations it is observed that those patients which had chronicity in the symptoms of *Amlapitta* showed better results than other patients.

In some symptoms like *Avipaka*, *Tiktodgara*, *Amlodgara*, *Hritkanthadaha* and *Utklesha Bibhitak Choorna* has also shown better results. *Panchnimba Choorna* is completely newer, cheaper and easily available drug.

In modern science Acid Peptic diseases are correlated with *Amlapitta vyadhi*. For the treatment of hyperacidity many drugs are available. But all these drugs when used in long term has many side effects like diarrhea, Vit B12 deficiency, lowers the absorption of calcium, kidney damage, esophageal or stomach cancer, etc.

Therefore Ayurvedic texts suggested some Herbal formulations which has least side effects and decreases hyperacidity related symptoms in natural ways. This drugs not only decreases acid level but also act on root cause of disease by improving *Jadharagni*.

It is seen that the percentage of Females (i.e. 66.63%) is more than males. So they are more prone to the symptoms as they have more responsibilities and workload.

*Pittavataja*, *Pittakaphaj* and *Vatapittaj prakrutis* are more prone to the disease *Amlapitta*, as this is *Pittapradhan Vyadhi*.

Those patients having *Mandagni* are more prone to the disease, as it is *Aamashayothyia vyadhi*.

It is seen that *Vegvidharan* and *Diwaswap* are prominent *viharatmaka hetus*. And *Amlapitta vyadhi* is very common in this generation due to faulty dietary habits and stressful lifestyle.

During this study I have found very good properties of drug *Yava* which is beneficial in Vit B12 deficiency.

## CONCLUSION :-

From the statistical analysis, it is concluded that the *Panchnimba Choorna* is more effective than *Bibhitak Choorna*. *Panchnimba Choorna* has more effect on symptoms *Chhardi*, *Tikta Amla Udgar*, *Kantha daha*, *Hruddaha*, *Kukshidaha*, *Hastapadadaha*, *Anushnyam-Ushna Sparsha*, *Aruchi*, *Utklesh/Hrullas*, *Avipaka* except *Shirashool*.

During treatment both the drugs are free from side effects.

Statistically it has been proved that *Panchnimba Choorna* is one of the drug of choice for the treatment of *Amlapitta Vyadhi*.

This study should be conduct on large number of patients to analyse the results on large scale. And also, if this study conducted with *Shodhana Karma*, it will definitely show complete relief from *Amlapitta Vyadhi*.

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Experiment :



## **“Study of Indriyadhruk Function of Pranavayu with its Prime Location**

### **Murdha With Special Reference to Examination of Deep Tendon Reflexes (D. T. R.)”**

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#### **ABSTRACT -**

In Ayurvedic compendia, there are different opinions regarding Prime location of Pranavayu among them some references indicates - the Prime location of Pranavayu which is Murdha means brain, is located in “Shir”(head).

Day by day, incidence of Cerebro Vascular Accidents (CVA) & head injury are increased due to fast lifestyle & increase in population. Brain injury causes paralysis i.e. impaired indriyadhruk function.

Main purpose of this topic was to prove basic concepts of Physiology with the help of modern parameters such as DTR & CT Scan report & with Ayurvedic scale also. DTR is useful for assessment of involuntary movement while with the help of CT Scan the exact location of injured brain is confirmed which helped to decide Prime location of Pranavayu.

Hence, this topic is definitely useful for better understanding basic concept of Ayurveda, prognosis of disease, for deciding course of treatment & also to understand response of patient to the treatment. Diagnosed patients of CVA & Head injury with intact upper and lower limbs of age group – 15 to 70 were examined after primary management in the hospital.

**KEY WORDS-** Prime location of Prana vayu, Murdha, DTR, Indriyadhruk function

**Total Number of Referances- 19**

#### **INTRODUCTION -**

Vata, Pitta and Kapha dosha are the basic body constituents which controls all physiological activities of body. Balanced state of dosha is responsible for health while imbalanced state of dosha leads to disease. Out of three doshas, Vata is the most important one as it is the only movable dosha. Prana,, Udana,, Vyana, Samana and Apana are the five types of vata doashas.

in Chikitsasthana Acharya Charaka has explained, Shira ( Head ) is the Prime location of Pranavayu. Acharya Vagbhata has explained in Sutrastana, the functions of Pranavayu. Acharya Sharangdharaha explained immense importance of Vatadosha among Tridoshas. Thus, the knowledge of basic body constitution i.e. Pranavayu has important role in Sharirakriya as well as in kayachikitsa.

In Sharirakriya, applicable view of all basic fundamentals is studied. Ayurveda helps to



understand the principles which ultimately applicable to other sciences also. So before going to treat the patient, it is very important to study status of doshas, with the help of SharirKriya Vidnyan i. e. Ayurvedic Physiology which deals with normal functions of the body. In this project, with the help of pathology i.e. vikrutavastha of dosha, prakrutavastha of dosha is explained.

Each type of dosha performs specific function in every individual, but functions may get deranged due to defect in prime location of particular type of dosha. Functions of Pranavayu are very much vital, without which one cannot be able to survive. Pranavayu controls Buddhi (intellect), Hridaydhruka (Cardiac activity), Indriyadhruka (sensory & motor functions), Chittadhruk (mind), Shthivan (spitting), Kshavathu (sneezing), Udgar (belching), Nishwas (inspiration) & Annapravesh (deglutition).

According to Sankhya, Indriya means Dnyanendriya, Karmendriya & mana (mind). In this project, the concentration has been given on Indriyadhruk function of pranavayu. Arms, legs, anal sphincter, genitals & tongue are 5 karmendriyas out of which functions of arms & legs has been assessed by examining Deep Tendon Reflexes.

Ayurveda has also understood importance of head and its control over entire body but in a different manner from modern science. But it doesn't mean that they ignored the physiology inside head therefore head is designated to be the chief location of Pranavayu, which protects life.

The Ayurvedic line of treatment in "Pakshaghata" (Paralysis) is 'Basti' as well as 'Nasya'. Why 'Nasya Chikitsa' is recommended in the patients of "Pakshaghata" is understood with the help of this project on the basis of Prime location of Pranavayu which is Murdha means brain. So the topic has been selected.

#### **AIM :**

To study the Indriyadhruk function of Pranavayu in traumatic head injury and CVA with the help of Deep Tendon Reflexes (DTR) to rule out prime location of Pranavayu, murdha i.e. brain.

#### **OBJECTIVES :**

##### **Primary objective-**

1. To observe the Indriyadhruk function of Pranavayu in the patients of traumatic head injury & CVA (cerebral hemorrhage, cerebral thrombosis, embolism) with DTR examination.

##### **Secondary objectives -**

1. To review the Ayurvedic compendia for prime location and functions of Pranavayu.
2. To confirm the prime location of Pranavayu which is murdha means all parts of brain inside cranial cavity.
3. To develop Ayurvedic scale for the assessment of functions of karmendriya.

#### **4. Material & Methods -**

**Material-** Clinical Hammer

CT scan report

**No. of patients -**

Sixty diagnosed patients of CVA & Head injury.

Separate case paper along with consent form has been attached.

Patients were examined after Primary management in the hospital.

**INCLUSION CRITERIA -**

1. Age group – 15 to 70.
2. Sex- either sex.
3. Patients with traumatic head injury & CVA (Cerebral haemorrhage, thrombosis, embolism) with intact upper and lower limbs.

**EXCLUSION CRITERIA -**

1. Person suffering from any acute or chronic illness.
2. Patient suffering from serious heart or pulmonary diseases.
3. Congenital anomalies.
4. Consequences of any infection in CNS  
eg. Meningitis, Encephalitis, GBS, Poliomyelitis, etc.

**ASSESSMENT CRITERIA :**

Indriyadhruk function of pranavayu was observed in the patients of traumatic head injury & CVA. **Computerised Tomography scan** reports (**CT scan**) of Primary motor cortex (area 4) & sub cortical area were collected. Clinical hammer was used for examination of Deep Tendon Reflexes (DTR) to assess Indriyadhruk function of Pranavayu. These are-1. Bicep jerk 2. Supinators jerk 3. Tricep jerk 4. Knee jerk 5. Ankle jerk 6. Jaw jerk.

Patient's reflexes were examined in supine position with the help of Clinical hammer.

**Examination of DTR**

Sr. no.	Reflexes	Method of Eliciting Reflexes	Response
1	Biceps Jerk	Tapping Bicep Tendon	Flexion of Forearm
2	Supinator Jerk	Tapping Supinator Tendon just above the wrist	Jerking up & Supination of Forearm
3	Triceps Jerk	Tapping Tricep Tendon	Extension of Forearm
4	Knee Jerk	Tapping Patellar Tendon	Jerking forward of leg
5	Ankle Jerk	Tapping Tendoachillis	Planter flexion of foot
6	Jaw Jerk	Tapping middle of the chin with slightly opened mouth	Closure of mouth

To check the deep tendon reflexes using impulses from a reflex hammer, stretch the muscle

and tendon. The limbs should be in a relaxed and **symmetric** position, since these factors can influence reflex amplitude. As in muscle strength testing, it is important to compare each reflex immediately with its contralateral counterpart so that any asymmetries can be detected.

**Grades of tendon reflexes are as follows –**

- |   |            |
|---|------------|
| 0 | Absent     |
| 1 | Present    |
| 2 | Brisk      |
| 3 | Very brisk |
| 4 | Clonus     |

Normal gradation for total DTR examination is equal to 11. If reflexes get Exaggerated, the total DTR gradation is greater than 11. Exaggerated Reflexes of DTR shows Upper Motor Neuron (UMN) defect in cerebral hemisphere (that is impaired Indriyadhruk function of pranavayu.)

The subcortical area of brain controls the motor functions. If subcortical area of brain is affected by CVA or head injury, the motor functions are also affected which are clinically diagnosed by Deep Tendon Reflexes because DTR is the clinical tool for examination of motor functions of limbs. By which integrity of motor functions is assessed.

CT Scan & MRI are supportive & confirmative tools to rule out which area of brain is affected by CVA or head injury. There are also some other parameters to assess the functions of Pranavayu but only Deep Tendon Reflexes has been selected considering the scope of this study.

**Ayurvedic methodology for assessment of Grahana & Dharana karma of Hasta & Gamana karma of Pada -**

**Interrogation Method -**

**For Grahana & Dharana karma of hasta -**

	<b>Rt</b>	<b>Lt</b>
1) Can patient grasp object such as finger when they can place in the palm, especially with thumb & index finger?	Yes/no	Yes/no
2) Can patient fold arm at elbow joint?	Yes/no	Yes/no
3) Can patient extend the folded arm?	Yes/no	Yes/no

**For Gamana karma of Pada-**

1) Can patient able to walk?	Yes/no	
2) Can patient lift feet from bed at least 45 degree?	Yes/no	Yes/no
3) Can patient bend leg at knee joint?	Yes/no	Yes/no
4) Can patient extend the folded leg?	Yes/no	Yes/no

Observations were noted.

In Interrogation Method, that is in Ayurvedic questionnaire scale, the answers are in the form

of yes or no. For analyzation of this scale, grade 1 is given for answer 'Yes' and 0 grade is given for answer 'No'. According to this scale, the total normal gradation is equal to 13. Total gradation Less than 13 means impaired Indriyadhruk function.

### Discussion

As per the aim & objectives mentioned in the beginning of this project, the Deep Tendon Reflexes & Ayurvedic scale was determined for qualitative assessment of functions of Pranavayu. Correlation between the Prime location of Pranavayu means Murdha & brain was also studied.

Vatadosha has Prime importance among the Tridoshas. Out of five types of Vatadosha, Pranavayu is the main type & its Prime location is Murdha means all parts of brain.

For this project, Hypothesis was "The prime location of Pranavayu is Murdha means brain". According to Brihattrayi, Hasta, Pada Indriyadharana is one of the functions of Pranavayu. If there is some injury in brain or CVA, the function of Pranavayu i.e. Grahana & Dharana karma of Hasta & gamana karma of Pada get hampered. According to Ayurvedic compendia Prime location of Pranavayu is Murdha.

In this study, the modern parameter i.e. DTR assessment is used in the patients of CVA & head injury & it has been compared with Ayurvedic scale regarding Grahana & Dharana karma of Hasta & Gamana karma of Pada in the same patients. Normal grade of DTR is 11. Exaggerated reflexes show grade of DTR > 11. Exaggerated reflexes are observed in the patients of CVA & Head injury. In the Ayurvedic scale, Questionnaire was formed. Answers are in the form of Yes or No. Grade 1 is given to the answer Yes & grade 0 is given to the answer No.

There are total 7 questions regarding assessment of Hasta & Pada Indriyadhruk function of Pranavayu.

Normal total grade for Ayurvedic Questionnaire scale is 13. Grade < 13 shows impaired Indriyadhruk function in the patients of CVA & Head injury.

After completing the project various facts were noticed. If brain get hampered due to CVA or Head injury, the Deep Tendon Reflexes get exaggerated i.e. grade of DTR is > 11 & impaired Indriyadhruk function was observed because grade of Ayurvedic Questionnaire scale was < 13.

It shows that if brain gets hampered, the Indriyadhruk function of Pranavayu also gets hampered which means Prime location of Pranavayu is brain. According to ayurvedic literature, "Shir" is the "Sthana" of Murdha. It shows that Prime location of Pranavayu is Murdha means all parts of brain.

With the help of Pathophysiology of patients of CVA & Head Injury, this work proves that the Prime location of Pranavayu is Murdha means Brain. Because Hasta & Pada karmendriya dharana is one of the functions of Pranavayu. If Murdha (Brain) is hampered due to CVA or Head Injury, this function of Pranavayu also get hampered though there was no any defect in heart or other parts of body, Hasta & Pada Karmendriyavikruti was seen.

That means if there is any defect in the Prime location of Pranavayu i.e. Murdha (Brain), the normal functions of Pranavayu get hampered.

In this project, work was concentrated only on Hasta & Pada Indriyadhruk functions of Pranavayu which were assessed with the help of Deep Tendon Reflexes Examination & Ayurvedic Questionary scale. Observations were noted.

### CONCLUSION-

- Prime location of Pranavayu is Murdha which is located in head (Shir).
- Hampered Functions of CVA & Head Injury shows strong Connection between Murdha & all parts of Brain.
- There is relation between DTR examination & Ayurvedic scale of Indriyadhruk function examination.
- The Ayurvedic line of treatment in "Pakshaghata" (Paralysis) is 'Basti' as well as 'Nasya'. Why 'Nasya Chikitsa' is recommended in the patients of "Pakshaghata" is understood because Prime location of Pranavayu is Murdha means brain.
- In the patients of "Pakshaghata" (paralysis) & in other vatavyadhi, this study is definitely helpful to decide course of treatment & prognosis of disease. It is definitely useful for ayurvedic scholars & practitioners for better understanding of the basic physiological concepts of ayurveda.

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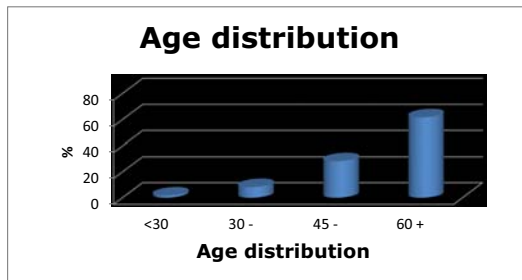
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#### RESEARCH ARTICLE Tables-

**Table No. 1-**

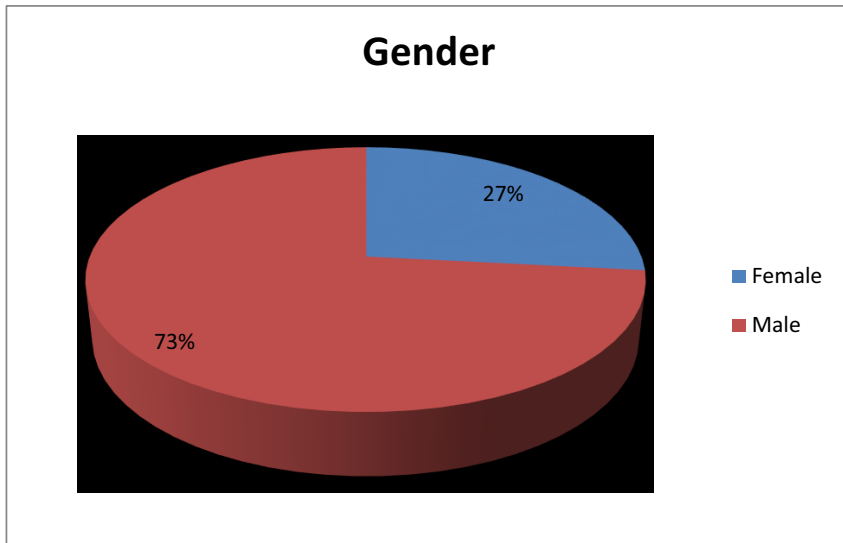
Age in yrs	No. of cases	%
<30	1	1.7
30 -44	5	8.3
45 -59	17	28.3
60 +	37	61.7
Total	60	100



This table shows the distribution of patients according to age. For this study total 60 diagnosed patients of CVA were selected out of which, hampered Indriyadhruk function was seen in 61.7% of old age group, 28.3 % of 45-59 age group, 8.3% of 30-44 age group, 1.3% of less than 30 age group. Impaired Indriyadhruk function of Pranavayu was more observed in old age because old people often have limited regenerative abilities & they are more prone to disease than Youngers.

**Table No. 2-**

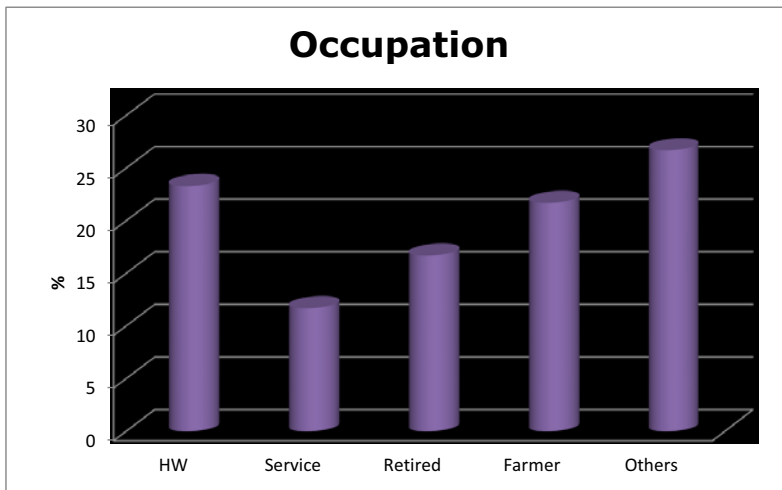
Gender	No. of cases	%
Female	16	26.7
Male	44	73.3
Total	60	100



This table shows the distribution of patients according to gender, includes 44 (73.3%) Male & 16 (26.7%) Female. Impaired Indriyadhruk function of Pranavayu was more observed in male than female may be due to stressful lifestyle, addiction of tobacco chewing, smoking, alcohol consumption etc, the brain get hampered.

**Table No. 3-**

Occupation	No. of cases	%
HW	14	23.3
Service	7	11.7
Retired	10	16.7
Farmer	13	21.7
Others	16	26.7
Total	60	100

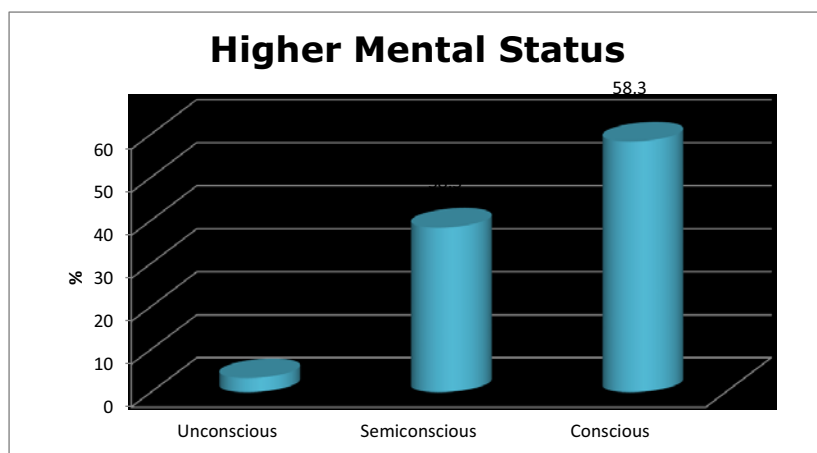


This table shows the distribution of patients according to occupation. Out of which housewives were 14 (23.3%), the patients who are in service were 7 (11.7%), the patients who were retired from service are 10 (16.7%), Farmers were 13 (21.3%) and others were 16 (26.7%). Occurrence of Impaired Indriyadhruk function is more in Housewives & Farmers may be due to heavy work, less awareness regarding diseases & negligence.



**Table No. 4-**

HMS	No. of cases	%
Unconscious	2	3.3
Semiconscious	23	38.3
Conscious	35	58.3
Total	60	100

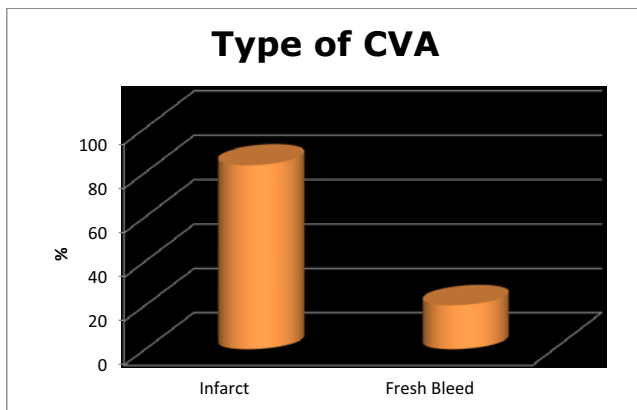


This table shows the distribution of patients according to Higher Mental Status.

Out of 60 patients, conscious patients were 35(58.3%), Semiconscious were 23(38.3%) & Unconscious were 2 (3.3%).

**Table No. 5-**

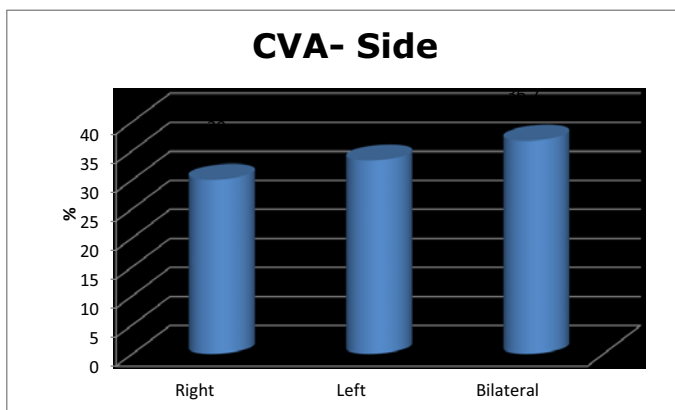
Type of CVA	No. of cases	%
Infarct Present	50	83.3
Fresh Bleed	12	20.0



This table shows the distribution of patients according to Type of CVA. Out of 60 patients, (83.3%) patients had Infarct & (20%) patients had IC bleed.

**Table No. 6-**

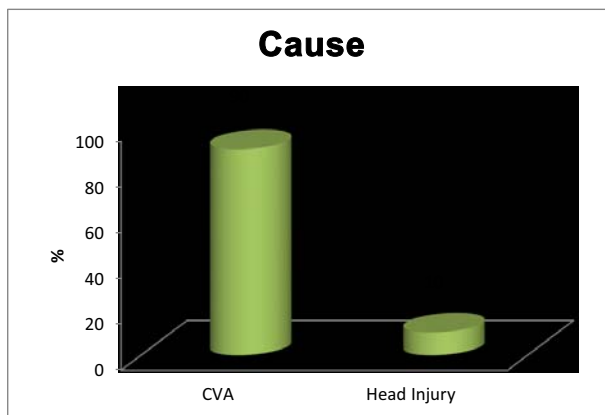
CVA- Side	No. of cases	%
Right	18	30
Left	20	33.3
Bilateral	22	36.7



This table shows the distribution of patients according to CVA – side  
 Out of 60 patients, 30% patients had lesion at Right side, 33.3% patients had lesion at Left side & 36.7% patients had lesion at bilateral side.

**Table No. 7-**

Cause	No. of cases	%
CVA	54	90
Head Injury	6	10



This table shows the distribution of patients according to Cause of Impaired Indriyadhruk function 54 (90%) Patients had CVA & 6 (10%) Patients had Head Injury.

Experiment :



## Role of *Guda* and *Sharkara* in Ayurvedic Formulations

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### ABSTRACT :

*Guda*(jaggery) and *Sharkara*(Sugar) are used in medicine as well as in cooking. Traditionally, they are known preservative. Both are of *Madhura rasatmak*, so acceptance of it in any age group is easy. They are used in making of *Avaleha*, *guti-vati*, *churna* and *aasav-arishta*. They act as preservative, they show solubility in any media, they are binder and natural fermenting agent. So, they play an important role in ayurvedic formulations.

Key words - Asav-Arishta, ayurvedic formulations, *Guda*, *Sharkara*.

Reference no.- 07

### INTRODUCTION :

*Rasa* (taste) is considered as one of the important pharmaco- dynamic principle. Ayurvedic classics mentions six *rasa*. *Rasa* is assessed by tongue only. Now, present study is restricted to *Guda* and *Sharkara* which are included in *madhura rasa*. Each and every individual would require one major taste in diet that is sweet. Sweet and *Guda-Sharkara* are just synonyms of each other. *Guda* and *Sharkara* are one of the *Ikshu vikara*, described in *Samhita* and *Nighantu* with its properties.

### REVIEW OF LITERATURE :

*Ashtanga Sangraha*<sup>2</sup>, Describes *Madhuraskanda* in which class of Sugar cane is included (A.S.Su.18/20),

It is stated that *Sharkara* is shreshthtam in *ikshu vikara*(A.S.Su.6/90)

In *Charak Samhita*<sup>1</sup>, they are described in class of sugar cane. It is described as (*Ch. Su. 27/240*)

### TYPES OF *GUDA* AND *SHARKARA* :

*Guda* is of three classes, *Kshudra guda dhauta guda and swalapamala guda* , Again, *guda* is divided into *nava guda* and *purana guda*.When *Sharkara* is prepared from *guda* then it is known as *Guda sharkara*. When it is made from *yavas* then, it is known as *Yasa Sharkara*. *Sharkara* is prepared from *madhu*, then it is *Madhu Sharkara*. (*CH. SU.27/241-242*).

**SYNONYMS :**

Guda-Gud, Gulam, Gula.

Sharkara- Sikta, Sita, Khanda, Mishri.

**METHODS OF PREPARATIONS<sup>3</sup> :****Guda :**

It is prepared by the juice of sugarcane. When sugar juice is heated till it becomes thick and some what hard then it is termed as *Guda*.

According to Ch. Su. 27/239, before the formation of jaggery, the sugarcane juice undergoes three stages-

- 1) *Chaturbhaga-vasheshita*- 1/4 remain,
- 2) *Tribhaga-vashishta*- 1/2 remain,
- 3) *Ardhabhaga-vashishta*-1/2 remain.

These three varieties are called "*kshudra guda*", and they are light for digestion in their ascending order.

**Dhauta Guda :**

The finally formed *Guda* is clean and of good quality is called *Dhauta Guda*. It is used for medicinal purpose as well as dietetic purpose.

**Sharkara :**

After, the initial boiling, in the case of sugar, this syrup is treated with charcoal (preferably bone charcoal) to absorb unwanted particles and to give a clear, transparent solution. This solution, once it is condensed and crystallized, results in the commonly known form of sugar.

**Properties of Guda :**

*Rasa - Madhura,*

*Vipaka - Madhura,*

*Virya - Ushana.*

*Deepana, Pachana, Anulomana, Vrishya, Mutra - Raktashodhaka, increses Medadhatu, Kapha and Krimi, Pittaghna, Vatashamaka & its efficacy increases after one year. (Su. Su. 45/161)*

**Properties of Dhauta Guda :**

*Dhauta guda is shelshmakara, srushta- mutrakar. (A.S.Su. 6/161)*

**Properties of nava guda and purana guda :**

Newly prepared jaggery is *kapha, Swasa-kasakrita, krimikar*. Properties of *purana guda*-it is *laghu, anabhishtyandi, vatapittaghna, madhura, vrishya, rakta prasadana*.

**Chemical composition of Guda :**

The good quality of jaggery contains moisture 3.6%, protein 4%, mineral water 6%, calcium 80mg/100gm, phosphorus 40mg/100mg, and iron 11mg/100gm. It also contains carotene, vitamin A, amine 0.02mg.

**Properties of *Sharkara* :**

It is stated that *Sharkara* is *shreshthtam* in *ikshu vikara*.(A.S.Su.6/90)

*Rasa - Madhura,*  
*Vipaka - Madhura,*  
*Virya - Shita.*

*Matsyakhandika, Khanda* (Sugar Candy) and *Sharkara* (Sugar) are all progressively better refined and cooler in relation to Dhuta guda. *Sharkara* represents the best refined stage of juice. *Dahashamak, trisdhnashamak, chardi- murchahara, pittaghna*. It is also coldest of all varieties.(A.S.Su.6/82)

Functional Properties of Sugar<sup>4,6</sup>.

- Taste,
- Flavors,
- Caramelization,
- Texture,
- Appearance,
- Maillard reaction,
- Solubility,
- Boiling Point,
- Preservation,
- Fermentation.

**Taste** : Sweetness is generally the most recognized functional properties of *Sharkara*.

**Flavors** : Sugar is an important contributor to flavor due to its aroma. Sugar has the unique ability to heighten flavors or depress perception of other flavors, so used to enlighten bitter taste.

**Caramelization** : Caramelization is browning reaction that results from the chemical changes associated with melting sugar results in a deep brown color, which is used in syrup.

**Texture** : Sugar is an important contributor to the way we perceive the texture of formulations. In candy, making controlling the rate and extent of sugar crystallization provides a vast array of texture.

**Appearance** : sugar is responsible for the yellow-brown colors devolve through caramelization.

**Maillard Reaction** : results from chemical interactions between sugar and proteins at high heat. An amino group from a protein combines with reducing sugar to produce brown color.

**Solubility** : Sugar is highly soluble in water. A high level of solubility is essential beverages to provide sweetness and to increase viscosity to create desirable mouth feel. Its solubility is also important in the preparations of jams, jellies, and syrups and to impart the desired level of sweetness and to aid in preservation.

**Boiling point :** The concentrations of sugar in a solution affects the boiling point by raising it. This specific concentration of the supersaturated sugar syrup is achieved at specific boiling point, determines the consistency of final products.

**Preservation :** It inhibits microbiological growth and subsequent spoilage. Having the ability to absorb water, sugar withdraws moisture from microorganisms. As, a result, microorganisms become dehydrated and cannot multiply.

**Fermentation :** Sugar is a raw material for production of ethanol. The extent to which the fermentation reaction is allowed to proceed (degree to which sugar is fermented). contributes to the alcohol content and sweetness of wine and the flavor of beer.

#### Difference in between Jaggery and Sugar-

	Jaggery	Sugar
Color	Ranging from golden yellow to golden brown, depending upon the extent to which it was cooked.	Bright white color
Texture	Semi-solid, softer.	Solid, hard and crystalline
Composition	Pre-dominantly Sucrose (C <sub>12</sub> H <sub>22</sub> O <sub>12</sub> ) with traces of mineral salts, iron and some fiber.	Only Sucrose(C <sub>12</sub> H <sub>22</sub> O <sub>12</sub> )

#### USES OF GUDA AND SHARKARA -

In *Charak Samhita*<sup>1</sup>, it is mentioned,

They are used for preparations of various etables. As per, *Ashtang samgraha*, they are used for *rasayan* therapy as its rejuvenation properties of Mathura rasa. Mainly, used in *vata* and *pitta vikara* (*Ch.Su. 27/270*) In *kashyap samhita*, *madhu sarakara yoga* are mentioned.

#### Aasav- Arishta :

*Guda* and *Sharkara* are used in preparation of *aasav-arishta*. *Asav-arishta* contains self-generated alcohol. While, preparing *Asav-arishta* with the help of natural yeast, *Guda* and *Sharkara* are converted into alcohol. The alcohol thus generated acts as preservative and thus facilitate the extraction of active principles contained in it. It is preserved for many years. Eg. *Dashamoolarishtam*, *Ashokarishta*, *Kumaryasav*, *Kanakasav*.

**Sharkar :** *Sharkar kalpana* is briefly described in *Siddhabhaishaja manimala*. Here, two parts of jaggery / sugar is added to one part of *kwatha/swarasa/hima* is added and heated on mandagni till it gets proper paka and cooling. It is filtered and mainly used for children due to its sweetness. The sugar concentration in this preparation will be 66.7% it also acts as a preservative. eg. *Parushaka Sharkar*, *Banspa Sharkar*,

**Syrup :** *Guda* and *Sharkara* are used in syrup as valued its solubility. *Guti-vati-modak- Guda* and *Sharkara* are good binding agent. They also add immense medical value to the tablets. E.g *Saubhagyasunthi modak*, *Sitamandura*.

**Panchavidha Kashaya Kalpana** : In some herbal water decoction, Guda and *Sharakara* are added to enlighten bitter taste. They increase Shelf- life period and bio-availability of herbal decoctions.

**Churna** : To enlighten bitter taste or nauseous taste of herbal substances. E.g. *Sitopaladi Churna*, *Samasharkara Churna*. *Sharkara* is an aromatic blends used to open the upper air passages. It gets absorbed into body and provide nutrition and energy to digest the mucous condition.

**Khanda** : *Sharkara* due to its granular formulations properties used in many formulations. E.g. *Shatavari kapla*, *Haridra khanda*.

**Avaleha** : it is a type of semisolid preparation which is prepared by adding Jaggery and sugar, and are boiled with a prescribed drug, decoction of drug or its juice to get a semi solid preparation known as *Avaleha*. e.g. *Vasavaleha*, *kantakari avaleha*, *Chyavanprasha*

**Anupana** : *Guda* and *Sharkara* are used as *Anupana* to enlighten the nauseous taste of herbal substances.

### Ayurvedic Formulations

	Ayurvedic Formulations
Liquid dosage form	1) <i>Aasav-Arishta-Dashamoolarishtam</i> , <i>Ashokarishta</i> , <i>Kumaryasav</i> , <i>Kanakasav</i> . 2) Syup- <i>Raktansoo Syrup</i> . <i>Sharkar Kalpana- Banspa Sharkar</i> , <i>Parushaka Sharkara</i> 3) <i>Kashayam- Pathyaksha dhatryadi Kashayam</i> .
Semi-sold dosage form	1) <i>Avaleha - Chyavanprasha, Kantakariavleha, Vasavaleha</i> .
Solid dosage form	1) <i>Guti – Vati - Pranadagutika</i> , <i>Vyoshadi Vatakam</i> , <i>Saubhagyasunthi modak</i> , <i>Sitamandura</i> . 2) <i>Khanda - Shatavari Kalpa, Haridra Khanda</i> , <i>Narikela Khanda</i> , <i>Haridra khanda</i> . 3) <i>Churna- Sitopaladi Churna, Taleesadi Churna</i> , <i>Samsharkara churna</i> , <i>Swadishtavirechana churna</i>

### Standardization of Ayurvedic Formulations related to *Sharkara*5-

- Total Sugar,
- Determination of Reduced Sugar,
- Determination of Sucrose.

### DISCUSSIONS :

Acceptability of *Guda* and *Sharkara* in formulations are more common. They are used in *Aasav- arishta* by using natural yeast. It is converted into alcohol. Jaggry/Sugar is valued in



cough syrup for its solubility. They also function as diluent, to control the concentration of active ingredients in tablets and as binder to hold ingredients together. In addition, tablets are often covered with sugar coating in order to protect the exterior from chipping.

Sugar also functions in the "time release" capability of preparation that is made up of layers of active and inactive ingredients. Sugar crystals are used as a base for depositing active ingredients alternate, allowing the use of more than one active ingredient and provide in the ability to control the sequence and time for release of medications.

### CONCLUSIONS :

Adding sugar to a formulation increase the osmotic pressure, thereby reducing the opportunities for micro-organisms to grow. By creating the most unfavorable combinations of such as pH value, water activity and temperature for microorganisms. It reduces the amount of preservative. *Sharkara* can play an important role in the process which is called As 'Hurdle Technology'. *Guda* and *Sharkara* help to increase shelf life, potency and greater palatability along with its application in modern technology.

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**Review :**

## **Applicability of Satkaryavada & Asatkaryavada in Ayurveda**

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**Abstract :**

Ayurveda has evolved with the inputs from the then existing philosophical thoughts and has modified so as to suit its purpose. Satkaryavada (Theory of Existence) and Asatkaryavada (Theory of Non-existence) are two basic philosophical theories explain the concept of causality. The concept of causality is the base of the diagnosis and management of diseases in accordance to Ayurveda principles. Therefore these two principles have been used to understand the Ayurveda concepts of Prakruti Sama Samaveta and Vikruti Vishama Samaveta. The Prakruti Sama Samaveta and Vikruti Vishama Samaveta form the foundation of diagnosis and treatment principle of Ayurveda.

(No. of References - 45)

**Key words:** Asatkaryavada, Ayurveda, Cause and Effect Theory, Philosophy, Prakruti Sama Samaveta, Satkaryavada, Vikruti Vishama Samaveta

**Introduction :**

Science is a systematic enterprise (activity) which builds and organizes the knowledge into a form of testable explanations and predictions about the universe. These explanations and predictions are the foundations of the basic sciences which have the subsequent use in the applied sciences. The same idea is supported by Sushruta who states that one who wants to comprehend the science completely needs to take the help of the basic sciences which existed during the times when Ayurveda was evolving. Hence, it becomes essential to know the basic principles for the thorough understanding of Ayurveda and henceforth know its application. One such fundamental principle which forms the foundation of Ayurveda is Karyakaranavada (Cause and Effect Theory) with its two complementary views— Satkaryavada and Asatkaryavada. This basic principle helps us to know the method adopted by the preceptors of Ayurveda in framing this science. The retrospective study of this method may be useful in understanding the text, helps to further explore the areas of research in Ayurveda. This article is thus, an attempt to comprehend the Cause and Effect theory (Satkarya and Asatkarya Vada) in the concept of Vyadhi (Disease) Nidana and Chikitsa.

**Review**

Vada is a theory put forth using different tools like Pramana (Source of knowledge), Tarka

(Logic) etc. and is the one which is not against an established concept. Karyakaranavada is one such fundamental principle which explains about the Kārya (Effect) and Karana (Cause). Karana has been defined as the pre-existing, definitive cause necessary for the production of Kārya. Karana is of three types Samavayi (Intimate cause), Asamavayi (Non-intimate cause) and Nimitta (Instrumental cause). Samavayi Karana is one which has Samavaya relationship with both Kārya and Karana and exists throughout the process of Kārya utpatti (5), Viz. Tantus (Threads) are the Samavayi Karana for Vastra (Cloth) (6). Asamavayi Karana is the one which produces Kārya with the Samavaya Sambandha either with Karana or with the Kārya viz. Tantu Samyoga (Conjunction) is Asamavayi Karana for Vastra (7).

Apart from the above two any instrumental cause responsible for the production of Kārya comes under Nimittakāraṇa. Viz. In Vastra Nirmāna (Production) – loom, weaver etc. are the Nimittakarana (8). Kārya is the one which the Karta (Doer) intends to obtain and aims his activities to accomplish the same (9). Any tool that help in the production are termed as Karana (10). Doshas (Humors) are the Samavayi kāraṇa for Rogotpatti, Dushti (Vitiation) of Doshā and Samyoga with Dhatu (Tissue) is Asamavayi Karana and Nidānas (Etiological factors) are the Nimitta Kāraṇas. This Kārya Karana Vada has two views as follows.

- Satkaryavada
- Asatkaryavada

#### **Satkaryavada :**

The word Sat indicates existence as per Amarakosha. Satkaryavada is proposed by Sankhya Darshana (Philosophy) and supported by Yoga Darshana, Bhagavat Geeta and Upanishad. Satkaryavada propagates presence of Kārya in the Karana even before the process of Kāryotpatti. Kārya is the transformed (Parinama) form of the Karana which cannot be perceived before its production as it is subtle in nature (12). In this Vada Samavayi Karana has been given importance (11). There are 5 analogies 13 to prove Satkaryavada namely:

1. Asadakaranat – One which does not exist in the Karana cannot be brought into existence.
2. Upadanagrahanat – To produce anything we should supply the material cause
3. Sarvasambhavaabhatat – Only definite cause will yield definite Kārya
4. Saktasyashakyakaranat – Even an efficient person cannot convert an in-efficient cause into Kārya. Only an efficient cause will give rise to effect.
5. Kāranabhatat – Karana when evolved is transformed into Kārya like a bud, when evolved becomes a flower.

#### **Asatkaryavada :**

This Vada is postulated by Vaiseshika Darshana and is supported by Nyaya and Bauddha Darshana (14). According to this Vada, Kārya does not exist in Karana and is proclaimed as a new product (15). As Kārya Utpatti is purely a new phenomenon, the term Arambhavada (16) is used.

Here, Karta (Doer) and other Nimitta Kāranas (Instrumental causes) are considered essential for a Kārya. Viz. If seed alone is the cause for plant then if it is not sown, it cannot produce the plant. Further Asatkaryavada have been proved with 5 analogies 17 namely:

1. Buddhi Bheda - Individually Kārya and Karana are perceived as two different objects.
2. Sajna Bheda -The above two are designated with different names.
3. Kārya Bheda -They are assigned with different purposes.
4. Akara Bheda -They are identified with different forms.
5. Sankhya Bheda -They are differentiated with difference in their number. On close observations of these two theories, it appears that both are not contradictory, but compliments each other. When the Samavayi kārana is considered as a prime cause for Kārya, then Satkaryavada holds good. When Nimitta kārana is considered as a prime cause for Kārya, Asatkaryavada holds good.

### **Application of Satkaryavada and Asatkaryavada in Vyadhi Nidana and Chikitsa :**

Satkarya and Asatkarya Vada are accepted in Ayurveda with a modification for its application in the field of Chikitsa (Treatment). Purusha (Person) is the Adhikarana (Subject) in Ayurveda who interacts with the Loka (world) (18) as he is influenced by everything that surrounds him. Both the Purusha and the Loka are composed of Panchamahabhutas (Five basic elements). So any variation in the Panchabhautik composition in the body elements leads to Vyadhi and replenishment of these Panchamahabhutas is regarded as Chikitsa (19). It is this interaction of Mahabhutas (in terms of Rasa/Taste) of the Loka with the Mahabhutas (in the form of Doshas) in the Purusha which forms the base for Chikitsa (20). So, it is necessary to have knowledge about the effect of Rasa and Dosha for understanding Vyadhi and its Chikitsa. But practically Dravya (Drugs) is considered as a combination of many Rasas while Vyadhi is also manifested by the combination of Dosha. Hence, one has to understand relations of Rasa-Dravya and Dosha-Vikara individually and also their mutual interaction (21). The interactions between the above relations of Rasa-Dravya and Dosha-Vikara have been explained by the principles of Prakruti Sama Samaveta and Vikruti Vishama Samaveta (22).

According to Prakrutisamasamaveta concept, the interaction between Rasas in a Dravya or Doshas in a Vyadhi results in an effect which is similar to the individual Rasa and Dosha constituting them, respectively (23). Therefore, the effect of Dravya can be known by analyzing the effect of individual Rasa forming the Dravya and the effect of Vyadhi can be understood by analyzing the effect of individual Doshas forming the Vyadhi. Eg: Godhuma (Wheat flour) which has Madhur (Sweet) Rasa, Guru (Heaviness) Guna (Attribute), and Madhura Vipaka (metabolic end-effect) will have Vātahara (Depletion of Vata) Karma (Action) (24). So, in this concept the effect is already pre-existing in its cause, therefore it goes in accordance with the concept of Satkaryavada. In a Vyadhi formed by two (Samsarga) or three (Sannipata) Doshas will show similar Laxanas (Symptoms) of the Doshas constituting them, hence they have not been explained in the texts of Ayurveda giving a hint that they should be presumed as per the Doshas involved. According to Vikrutivishamasamaveta concept, the interaction

between Rasas in a Dravya or Doshas in a Vyadhi results in an effect which is totally new and not similar to the individual Rasa and Dosha, respectively. Therefore this new and unpredicted effect cannot be inferred from the cause (25). Eg: Brihat Panchamulahas Ushna (Hotness) Virya even though it has Kashaya (Astringent) Tikta (Bitter) Rasa (26). The unpredicted effect is explained with the following reasons:

1. Doshas and Vyadhi: Even though Doshas are the Samavayi Karana of Vyadhi, however due to the following three reasons, the effect (Laxana of the disease) does not occur in line with the cause (Dosha) (27).
  - a) The individual Doshas forming Vyadhi may suppress one another (Parasparena Upahatanam).
  - b) Difference in the proportions of the vitiation in the Dosha (Nana Pramananam).
  - c) Due to nature of combination of Dosha with different Dhatu (AnyaiscaVikalpanairvikalpitanam).

And hence, wherever the Laxanas of Samsarga and Sannipata Vyadhis are mentioned it is clear that they follow the rule of Vikrutivishamasamaveta concept.

2. Rasa and Dravya: Rasas are the Samavayi Karana of Dravya, however due to the following three reasons the effect (action of Dravya) does not occur in line with the causative Rasa (28).
  - a) The individual Rasas in a Dravya may suppress one another (Parasparena Upahatanam).
  - b) Difference in proportions of Rasa (Nana Pramananam).
  - c) Due to nature of various Samskaras (processing) like Svarasa etc (Anyaisca Vikalpanairvikalpitanam).

So, Vikrutivishamasamaveta concept is based on Asatkaryavada and here the effect of the Dravya and Vyadhi have to be analyzed as a whole and not by its constituents (29).

These two basic concepts of Ayurveda have their roots in Satkarya and Asatkarya Vada and are used for Vyadhi Nidana and Chikitsa. Nidanapanchakas are the diagnostic tools which form the base of Vyadhi Nidana.

### 1. Nidana (Etiological factors) :

Nidana, the first among the Nidanapanchakas (Five diagnostic tools) can be categorized into two (30), i.e. Dosha Nidana and Vyadhi Nidana. Dosha Nidana is that cause which is a kin to the Dosha in respect to its Gunas and hence, causes of the corresponding Dosha. This corroborates with Prakritisamasamaveta concept and hence follows Satkaryavada. Viz. Pittala Ahara causes Pittaja Pandu (Anemia) (31). However, Vyadhi Hetus (causes) are those atypical causes leading to a disease which do not have similarity with respect to Dosha involved. They fall into the category of Vikrutivishamasamaveta and hence follow Asatkaryavada. Viz. Mrudbhakshana (eating mud) causing Mrudbhakshana Pandu (32). So, Dosha Nidana can be analysed and not the Vyadhi Nidana.

**2. Purvarupa (Premonitory symptoms) :**

Purvarupas can be grouped under two categories, those which project the Dosha involved in Vyadhiutpatti. Viz. Nayanordahan (Burning sensation in the eyes) in Pittaja Jwara (Fever) (33) and those which do not manifest in line with the Doshas involved like Darshanam Anudakānām Udaka Sthānānām (in dreams seeing emptiness in the water reservoirs) in Rājayakshma (34).

**3. Laxana (Symptoms) :**

They are categorized into Dosha Laxana and Vyadhi Laxana. Dosha Laxana is one which follows the Dosha involved in the Vyadhi and hence follows the rule of Prakrutisamasamaveta and Satkaryavada. Viz. Kashayasyata (Astringent taste in the mouth) in Vatajwara (35). Vyadhi Laxana is a peculiar Laxana respective to Vyadhi which cannot be explained on the basis of the Dosha involved which falls into the category of Vikrutivishamasamaveta and hence Asatkaryavada. Viz. Kinchit

Vibaddha-Kincit Drava Malam (Sometimes hard and sometimes loose stools) in Grahani (Malabsorption syndrome) (36).

**4. Upasaya (Explorative Therapy) :**

Hetu, Vyadhi and Ubhaya Viparita follow Prakrutisamasamaveta (Satkaryavada) and Hetu, Vyadhi and Ubhaya Viparita Arthakari follows Vikrutivishamasamaveta (Asatkaryavada). So for Satkaryavada, Mamsarasa (Meat juice) in Vatajwara (37) is example for Hetu Viparita, Stambhana Masura (type of anti-diarrheal Pulse) etc. Ahara in Atisara (Diarrhea) (38) is example for Vyadhi.

Viparita and Ushna Jwaragni Yavagu (hot and anti-pyretic gruel) in Seetha Jwara (39) is example for Ubhaya Viparita. For Asatkaryavada, Vidahi Annam in Pacyamana Pitta Pradhana Sotha (40) is example for Hetu Viparita Arthakari, Virekakaarakam Ksheeram (purgative milk) in Atisara (41) is example for Vyadhi Viparita Arthakari and Madakaraka Madya in Madyapaanotha Madatyaya (Usage of intoxicating alcohol against alcoholism caused by consumption of alcohol) (42) is example for Ubhaya Viparita Arthakari.

**5. Chikitsa :**

Chikitsa has been broadly classified as Hetu-VyadhiViparita which is Prakrutisamasamaveta (Satkaryavada) and Hetu VyadhiViparita Arthakari which is Vikrutivishamasamaveta (Asatkaryavada) (43). For Satkaryavada, Sramsana (mild purgative) in Snigdghoshnenodita Paittika Gulma (44) is example for HetuViparita, Silajatu in Madhumeha (Diabetes Mellitus) (45) is example for VyadhiViparita and for Asatkaryavada, Madyapana in Madatyaya (46) is example for HetuViparita Arthakari, and Haritaki Prayoga in Atisara (purgative Haritaki in Diarrhea) (47) is example for VyadhiViparita Arthakari.

**Conclusion :**

Ayurveda has evolved with inputs from the philosophical thoughts existing during the time of its development. Satkaryavada and Asatkaryavada are one such principle which forms the

framework of Ayurveda. Satkarya and Asatkarya Vada are not contradictory theories instead are complementary to each other. These theories have been used in Ayurveda with a modification, so as to suit the purpose of treatment. Prakruti Sama Samaveta and Vikruti Vishama Samaveta are the two basic concept which follow Satkaryavada and Asatkaryavada, respectively. These two concepts forms the basis of diagnostic and therapeutic principle in Ayurveda.

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**Review :**

## Khavaigunya Vichar

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**ABSTRACT -**

Ayurveda, Indian system of medicine is popular and well known globally. Basic reason is the fundamental principles of ayurveda have proved their time tested importance. Finding hetu is There is prime importance to pathogenesis of disease i.e. samprapti process in Ayurveda. Basic of good health is swasthavruttikar ahara is called "Ahar Sampat". Dhatuguna viguna ahara-vihara and doshaguna saman ahara-vihara is cause for vyadhi utpatti, which is basic fundamental of ayurveda. Vaigunya in sharir dhatus developed due to dhatu-viguna ahara-vihar and it results in Sthanavaigunya. Sthanavaigunya is main factor in vyadhiutpatti. Thus, knowledge of Sthanavaigunya is having prophylactic (preventive) as well as curative perspective.

**TOTAL REFERENCE NO- 16**

**KEY WORDS** – sthanvaigunya, strotovaigunya, khavaigunya, sthansamshraya,

**INTRODUCTION –**

Case :- One couple came to OPD, they were from lower economic status and came for treatment as not having relief by Modern medicine.

Husband is having complaint of sandhigatvat and that of his wife is having Kasa. Lets get discuss this case.

Gender	Male :- 70 yr , Wt:- 60kg	Female :- 65 yr , Wt:- 50kg
Married	30 yrs back	30 yrs back
Living	Solapur	Solapur
Work	Farmer	Housewife
k/c/o	No HTN/ DM	No DM/HTN
C/c	Both knee joint pain, and Swelling	Productive cough, breathlessness,
L/E	Swelling+, temp: normal	RS: bilateral crepts+
	Sandhigatvat	Kasa

Although both were

- 1) Living in similar desh(Jangal),
- 2) Same period of time,
- 3) Same environment
- 4) Same dosh predominance (according to age i.e. vat)
- 5) aahar vihar was same

but husband developed sandhigatvat and wife was suffering from kasa which was important finding, after brief history we came to know that both were having different Khavaigunya so developed different vyadhi.

a. As he was farmer by profession he has to work whole day in field so he was doing ativyayam always and landed up in sandhigat vat.

i. Khavaigunya (impairment in system) - was janu-sandhi as had aghataj history due to fall down- 6-5years back.

ii. Hetu(cause) - Ati sheet (cold) vihar sewan.

iii. Sthansamshraya (deposition of the dosha into a weakened or defective area of the body)- janu sandhi (knee joint)

Samprapti → Vat prokop due to ativyayam, vayonusar and sheet vihar sewan→kharata, parushata, rukshata at janusandhi→vayupuran→ sandhigat vat (osteoarthritis) and

b. Wife was doing household work, in front of Chulha so she always having respiratory problems.

i. Khavaigunya (Impairment in systems)– was Pranava srota as she had habit of tapkir nasal snuff since 15-20 years.

ii. Hetu (cause)- working in front of chulla.

iii. Sthanshamshraya(deposition of the dosha into a weakened or defective area of the body) - Pranava srotas.

Samprapti → hetusewan→ Pranava srotas raukshata, sankoch→vat prakop→ srotorodh→ parana prakruta gati avarodh→ kasa.

In above case discussion it is clear that both were having different sthanvaigunya (Impairment in systems) as hetu sevan (cause)was different so suffering from different vyadhi.. Dhatuguna viguna ahara-vihara and doshaguna saman ahara-vihara is cause for vyadhi utpatti, is basic fundamental of ayurveda.Sthanvaigunya which is having special importans in vyadhi utpatti because samprapti of any vyadhi differes according to Vigunata developed in different dushyas. So let's discuss this Sthanvaigunya.

**Khavaigunya or Sthanvaigunya :- Nirukti :-**

- **Kha** = aakash or Sthan = Sharirastha antra, hrudaya, yakruta, pliha, vrukka etc awayava formed from rasa-raktadi dhatu.
- **Vaigunya**= vigunata (abhav).

**Kha + Vaigunya = Vigunata at site of srotas = Impairment in systems**

**Defination** :- “A weak or defective space within a tissue or organ where a pathological condition is likely to begin. It is typically caused by past injury, illness, trauma, or familial genetic patterns; khavaigunyas are especially vulnerable to frequent or chronic imbalance because they tend to attract ama and excesses in the doshas.”

In vikruti vidyan there is very much importants for vyadhi samprapti (pathogenesis). As vyadhi is by the prossess of dosh - dushys samoorcchana but all in that vyadhi ghatak are also important for vyadhi samprapti. (Vyadhi ghatak :- Khavaigunya, agnimandya, aam, dosha and dushya). So khavaigunya (impairment in system) is very important in samprapti process(pathogenesis).

### **Samprapti and khavaigunya :**

As explained by shushrutacharya,in samprapti process, prakupit doshas can cause any vyadhi in sharir only, if there is khavaigunya is present.(1)

There is prime importance to pathogenesis of disease i.e. samprapti process in Ayurveda. Disease can be caused by wrong lifestyle, diet, environmental factors, or emotions. There are four stages of imbalance before disease manifests with readily identifiable symptoms. Overdoing of a certain type of activity will cause the bodily dosha, to undergo sanchaya (accumulation). Repeat overdoing will lead to prakopa, or aggravation of the accumulated dosha. Continued wrongdoing will cause the third stage of samprapti, which is known as prasara, or spread. Improper action, or even underdoing of a required activity, will cause sthana samsraya, or the deposition of the dosha into Khavaigunya (a weakened or defective area of the body.)

Basic of good health is swasthavruttkar ahara is called “Ahar Sampat”. Dhatuguna viguna ahara-vihara and doshaguna saman ahara-vihara is cause for vyadhi utpatti, is basic fundamental of ayurveda. Dhatu Viguna ahara-vihar(diet & life style) is cause for dhatuvaigunya. Sthanavaigunya(Impairment in systems) developed from dhatuvaigunya due to aahar vaigunya.

### **Sthansahraya and khavaigunya :**

In vyadhi utpatti, Strotovaigunya(depletion of tissue) is necessary, because until and unless there is khavaigunya(Impairment in systems) there will not be sthansanshraya and there will not be a vyadhi utpatti.(2)

### **Doshas and khavaigunya :**

The favorable condition for prakupit dosha for vyadhi nirmiti is khavaigunya. As if doshas are in prakupit awastha and there is no khavaigunya then there will not be any vyadhi utpatti because vyadhi kshmatwa is good in this case, so prakupit doshas cannot cause srotodushti.(3)

Example:- In above case as that leady working continuously in front of chulha, because of that smoke she developed sthanvaigunya in pranvahsrotas and she had kasa and fortunately that of her husaband not suffering from same problem but had sandhigatvat (osteoarthritis.)

**Vyadhi utpatti :-**

Praspanan (Throbbing) is first guna of vayu and there is continuous praspanan in sharir. Vishamata in this Praspanan i.e. gati causes vyadhi utpatti. Vaigunya in anustrotas (small channels) causes dosha sanchaya (accumulation of dosha) and then sthandushti.

**Strotovaigunya** ⇨ **Strotodushti** ⇨ **Dhatodushti** ⇨ **Vyadhiutpatti**

So, that means first there is strovaigunya which in turn leads dhatu dusthi and then vyadhi utpatti.(4)

**Hetus for khavaigunya :-**

A cause of khavaigunya may be unresolved, deep-seated, self-conscious emotions, such as fear, anger, grief, or sadness. In our daily life and relationships, any emotion that is not resolved completely becomes crystallized and these crystals of unresolved emotions accumulate in the deep connective tissue, creating khavaigunya. Cellular ama can also cause a defective space. When the cell membrane is covered by ama or toxins, there is no communication between two cells, so the cells become isolated. An isolated cell is a lonely cell and a lonely cell loses its self-esteem. When a person loses self-esteem, it means the cells are clogged with ama.

So hetus for this khaavaigunya are as follows :-

- 1) Agantu hetu / Aghataj hetu
- 2) Purvotpanna vyadhi as a hetu
- 3) Kulaj hetu
- 4) Sahaj hetu
- 5) Mithya ahar vihar

**1) Aagantu hetu :- ( External cause)**

Due to guna vishamya of mahabhutas (Atiushna, atisheeta etc. gunas) there is vaigunya in sharir dhatu. Vishadravyas garavish causes dhatunash and vyadhis due to these hetus are called Adibhautik vyadhi/ Sanghatbalpravrutta vyadhi.(5)

Example: – a) Kuchala – Majja dhatu vikruti

b) Tikshna amla and kshar – mansa dhatu ksharan

c) Cottan threads, dust particals- Pranavaha srotas vikruti.

Sanghat means "Aghat". Sometimes, due to aghataj hetu there may develop sthanvaigunya and which is cause for vyadhi. External trauma (Aaghata) vitiates vata dosha and causes Raktadhatu dushti and Vitiation of Mansa dhatu (Mansadhatu dushti).

Example – fall from a height in childhood – injury to knee joint – Sandhishool ( sever in hemant rutu).

**2) Purvotpanna vyadhi :- (Past illness)**

In case of any disease, Ayurveda describes the role of 'Kha-vaigunya' (impairment in system), which is some sort of lacunae in the Dushya (Tissues). It provides seat for vitiated doshas and helps in formation of disease. Kha-vaigunya (Impairment in systems) is a 'Adhithana' (Site) of any disease. Poorva-Vyadhi (Past illness) is one of the causes of Kha-vaigunya (Impairment in systems). If poorvotpanna vyadhi not treated properly it causes sthanvaigunya in that strotas and it is likely to happen that vyadhi again or develop new vyadhi again.

Example – (6)

- i. Kshaya vyadhi developed after
- ii. KasaUdar after Kamala.
- iii. Kamala after Pandu.

**3) Kulaja hetu :- (Hereditary cause)**

The formation of body parts is primarily attributed to both the parents. The sharir (body) is formed with sribeej (Ovum) and Punbeej (sperm) sanyog with atma (Soul). Shukra and Aartav dushti is responsible for sthanvaigunya in garbha, and it is cause for kulaj vyadhi(7) and these are called Adibalpravrutta vyadhi.

Example – (8)

- i. Arsha (9)
- ii. Kushtha (10)
- iii. Prameha (11)

Researches have shown that Carcinoma of Breast, Ovary, Oesophagus, Cervix, Lungs, Colon, Leukemia, Tongue and Prostate show high incidence of hereditary factors.

**4) Mithya aahar vihar :-**

Mithya aahar (improper diet) which is virudha to prakruti, karan, sanyog (mixture), rashi (quantity), desh(place), kala(time) etc ashto-aharvidi visheshayatan. Mithya Vihar (improper life style) is ayatha bala prayog(extra use of power than capacity), ativyayam (extreme exercise), ratrijagran (night duty) etc (12). Apathya aahar(improper diet) causes improper dathuposhkansha which is poshkansha for next dhatu. This improper dhatuposhkansha(nourishment) and improper vihar (life style) are not giving poshan to dhatus which causes viginata in dhatusthan.

Example :- Ama – leads to agnimandya. All diseases are from mandagni.

**5) Sahaja hetu :- (congenital abnormalities) -** Sometimes there is vaigunya at birth only. Apathya aahar vihar done by garbhini (pregnant mother) leads to khavaigunya (impairment in system) in garbha (Child). These hetus causes vyadhi which are known as Janmabalpravrutta vyadhi (congenital abnormalities).(13).

Example - Hrudaya vikruti.

**Strotodushti samanya Hetus :-**

Rasa-raktadi dhatu sama-gunatmaka ahara gives poshan(nourishment) to sharir and if dhatu poshakasha intake decreased, there is vaigunya in sharir dhatu (14)

Example .- less intake of wheat, milk, nveg etc. mansaposhkansh causes vaigunya of mansa dhatu.

- 1) Dosh saman gunatmaka aahar(diet) and vihar(life style) causes doshaprakop. These prakupita doshas causes dhatus dushti and sthanavaigunya due to this dhatu dushti.
- 2) Dosh viguna gunatmaka ahar vihar causes apachit (undigested), asara (under nourished), Durbala (weak), viguna (improper) dhatus due to vikruta dhatu poshan dhatu. Sthanavaigunya due to these dhatus along with doshas causes strotodushti and dushta srotas and sthanvaigunya causes sthanshanshrya awastha.

**Strotodushti samanya lakshan :-**

Strotodushti lakshanas (symptoms) are seen due to prakupita doshas causes sthanshanshrya in viguna srotas (strotovaigunya) by dosha dushya samoorcchana.

Atipravrutti, sanga, siragranthi, vimargagamanare 4lakshanas(symptoms).(15)

a) Atipravrutti :- It includes atiutpatti(over production) or vahan(circulation), ati pramantah bahirgaman (excretion) of bhavapadarthas (dosha, dhatu or mala) of particular strotas.

- 1) Ati pramantah utpatti (over production)causes ativahan (circulation)
- 2) Sometimes proper utpatti(production) but vahan(circulation) more fast.

Example. – Prameha – ati paramantah mutra pravrutti (polyuria)

Atisar – ati dravamala pravrutti (lose motion)

b) Sang :- Strotas sang or rodha(awarodha) due to ama, kapha, shalya, upalepa due to stotovaigunya.

Example. – Jwara, amavat – due to strotorodha of ama.

Ruddhpatha kamala, tamaka shwas- strotorodh due to kapha.

c) Siragranthi :- All samprapti which reduces awakasha (hallowness) in strotas (system), awayav (organ), vahakmarg(channels) are collectively knows siragranthi. Granthi formed in Galamarga(oesophagus), kanthanadi (trachea), artava vahini(fallopian tube) etc.

d) Vimargagaman :- Due to strotorodha, bhavapadarthas of strotas can't move and so there is vimargagaman. Atipravrutti, sang, siragranthi any of these can cause Vimargagaman.

Eg.- jwara and ruddhpatha kamala- shakhagat pitta

Raktapitta – vimaraga-gaman of rasa, rakta and pitta

When there is strotodushti there is awarodh for ras-raktadi samhanan (circulation) and prakruta karma of dhatus like preenan, jeewan are hampered and causes klesha of sharir. So chikista of this sthnsvaigunya is nidan parivarjan, doshapratyanika or vyadhipratyanika and to avoid reoccurrence rasayan chikista.

### Chikista :-

- Atipravrutti – sthanbhana, rukshana, Langhan if vatavrudhi and dhatukshaya due to atipravrutti then dhatubalyakara,vatashamak.
- Sang – chikista according to cause as fallows,
  - A) ama – langhan, pachan, deepan and ama-vilayan.
  - B) kapha in rudhaphatkamala- Ushna, tikshna, kapha vilayanatmak,
  - C) Upalepa - Lekhan.
  - D) Shalya – Shalyanirharan karma.

If rodha due to strotovaigunya then Rasayan etc chikista with shashtrakarma.

- Siragranthi – Antahparimarjan and bahiparimarjan chikitsa, shashtrakarma.

One example according to morden science mentioned here. In Morden science also we found sthanvaigunya is factor for development of disease. Stoke, MI which are now a days leading cause for death in adults but pathogenesis for this is actually started many years ago. (16)

### Atherosclerosis -

(Atherogenesis- Production of plaque)

#### **Atherogenesis in humans typically occurs over the many years, usually many decades.**

Growth of atherosclerotic plaque probably does not occur in smooth, linear Fashion but discontinuously with periods of relative quiescence punctuated by rapid evaluation. After a generally prolonged “silent” period, atherosclerosis may become clinically manifest. The clinical expression of atherosclerosis may be chronic.

Example - As in development of stable, effort induced angina pectoralis, alternative Dramatic acute clinical event such as Myocardial Infarction (MI), stroke or sudden cardiac death.

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Review :



## A Conceptual Study of Ashchyotana in Netra Roga

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### ABSTRACT

Ayurveda says that Dosha dushti (vitiation of Dosha), single or that of all three leads to Netra Roga (Eye diseases). Kriyakalpas (therapeutic procedures) are the procedures used to treat the Netraroga. Ashchyotana (specific method to put medications in eye) is one among 7 Kriya Kalpa which gives nourishment to the eyeball and cures the vikaras (diseases) of Netra. It is foremost method of treatment.

Thus it has preventive as well as curative effects. In the process of Ashchyotana, the formulated Drava (liquid substance) is put in the eye. It is the easier, cheap and simplest method for local treatment. Even the Eye drop formulations that we use nowadays are modified form of Ashchyotana.

Key words – Ayurveda, Netraroga, Kriyakalpa, Ashchyotana, Dosha-shaman

(Total references – 6.)

### Introduction -

Eyesight enables human being to view this Beautiful world. It is said that even the richest person, who is blind can't enjoy the life fully. So it becomes important to take care of one's eyes. Acharya said that dosha dushti leads to Netra Roga. They have given importance to both systemic and local therapies in treatment of Netra roga. In our Samhitas the therapeutic measures adopted in the management of various types of eye diseases, as locally administered drug can cross the blood aqueous, blood-vitreous and blood-retinal barriers.

Acharya Vagbhata said Ashchyotana is *aadya upakrama* (Initial treatment procedure) in all the eye diseases & it is beneficial in all Netra roga. **(A.S. Su.23/1)**

Ashchyotana is a first line of treatment in all types of Netra roga. Ashchyotana of different drug preparations are useful in pain, tenderness, Kandu, irritation in eyes, watering, redness and burning sensation in eyes.

### PROCEDURE OF ASHCHYOTANA:- (A.S.Su. 23/2-4), (Sh.U 13/13)

Procedure of Ashchyotana can be divided in to three parts,

**1) Poorva karma** (pre procedural): Patient is kept in lying position and nivata Sthana. Ashchyotana Drava should be fulfilled through thick cotton pad or clear white cloth.

**2) Pradhana karma** (main procedure): Physician should open eyes of the patient with left hand and the medicated decoction should instil drop by drop from two angula height just above Kaninika sandhi (inner canthus of eye) and dose is 10- 12 drops after that eye is softly clean by cloth. If the disease is kaphavataj then hot fomentation is given.

Acharya Yogaratnakara stated that Ashchyotana should be instilled in the centre of dristi from two angula height.

**3) Pashchyata karma** (post procedural): The eyes should be cleaned with soft cloth. In kapha & vata Pradhana condition Mrudu Swedana should be done with a piece of cloth rinsed in warm water.

In winter Ushna Ashchyotana is done and in summer it is used as sheet.

**ASHCHYOTANA VIDHI KALA** (Proper time for procedure)-. (Sh.U. 13/12)

Ashchyotana is not done at night, means only done during daytime.

**TYPES OF ASHCHYOTANA ACCORDING TO DOSHAS: - (Sh. U. 13/15).**

Vataj netraroga - Ashchyotana of Tikta & Snigdha , UshnaDravya

Pittaj Netraroga - Ashchyotana of Madhur and Sheetal Dravya

Kaphaj Netraroga - Ashchyotana of Tikta, Koshna & Ruksha , Sheet Dravya.

Acharya has described different types of the Ashchyotana on the basis of doshas predominance in disease. These are

- 1) Snehana (In Vataj dosha Netra roga, ruksha Netra )
- 2) Lekhana (In Kaphaj dosha Netra roga, Snigdha Netra.)
- 3) Ropana (In pitta Rakta Netra roga & as Drishti balya.)

**ASHCHYOTANA DHARAN KALA:- (Sh.U.13/16)**

Ashchyotana dharan kal is up to 100 matra in the other eye diseases.

**DURATION :**

Ashchyotana can be performed for one day/ two day/ three days/ up to patient get cured.

**PERFORM :** Ashchyotana can be performed at any time in a day and first three hours of night time. However if there is severe pain and emergency condition, it can be done at any time.

**Sign & symptoms of Samyaka Ashchyotana karma :**

Netra vaimalya

Vedana nivruti

Vyadhi nivruti

Netra laghav

**ASHCHYOTANA VYAPADA: - (A.SU.23/5, 6)**

If the Ashchytana Dravya is very Ushna and tikshna then causes tenderness, redness and loss of vision. If it is cold then it causes irritation and pain in eyes. If the dose is more than 10 to 12 drops then eyelids become ruksha and difficulty in opening the eyelids. The diseases are aggravated, if the Dravya is lesser. If it is not purified then it causes irritation and redness of the eyes etc.

**Complication of Atiyoga of Ashchytana karma :**

Raga

Dosha parisrava

**Complication of Mithyayoga of Ashchytana karma :**

Avila netrata

Gaurava

Roga Vruddhi

**DISCUSSION –**

There are different Drava Dravya used for the Ashchytana procedure e.g. Kwatha, ghrita etc. The probable mode of action of Ashchytana considering the dosha karma appears to be predominantly vata shamaka followed by pitta shamaka & kapha shamaka. Thus the overall effect of the compound drug is vata Pradhana tridosha shamaka & hence it disintegrates the probable pathology of Netra roga, which is mostly tridoshaj in its manifestation. The Drava i.e. liquid form has the quality of flowing into minute channels of the body. Hence when put in the eye; it enters the deeper layers of Dhatus & cleanses entry of every minute part of them. Then it reaches to the target organ & finally reaching the cell. More ever the preparation used for Ashchytana is in the form of suspension containing different particles of drugs & the particles do not leave the eye as quick as a solution. These Ashchytana Dravya or formulations are responsible for the Samprapti bhang and roga mukti i.e. relief from the disease. We can use different preparations as per vitiated dosha. Dosha shaman occurs due to the property of used drugs and ultimately it gives relief from the Netra roga.

**CONCLUSION –**

The action of Ashchytana Dravya occurs by allowing more absorption of the drug by corneal surface which comes in direct contact. The preparation can be selected as per dosha dushti.

Ashchytana procedure is most easy to perform and useful method to treat the Netra roga.

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**CHARTS -****1. INDICATION OF ASHCHYOYANA:**

Ruja	Pain
Toda	Pricking pain/ sensation
Gharsha	Foreign body sensation
Daha	Burning sensation
Ashru	Excessive lacrimation
Ashrusrava	Watery discharge
Kandu	Itching

DOSH	GUNA	RASA
VATA	Sukshoshna, Snigdha.	Tikta
PITTA- RAKTA	Mrudu, Shita	Madhur
KAPHA	Ushna, Tikshna, Ruksha, Mrudu, Vishada	Tikta, Kashaya
SANNIPATAJ	Koshna, Tikshna, Ushna, Mrudu, Shita.	Mishra aushadhi

**2. CHART OF DOSE: - (Su.S. 18/45, 46), (Sh.U.13/16-17)**

Lekhaniya Dravya	8 drops
Snehaniya Dravya	10 drops
Ropaniya Dravya	12 drops

**3. VYAPADA CHART**

Sr. no.	Dravya	Vyapada
1	Ati Ushna (too much hot Drava)	Ruja (pain), Raga (congestion), Drustinash (blindness).
2	Ati sheet (too much cold Drava)	Nistod (continuous pricking pain), Stambha (stiffness), Vedana (pain).
3	Bahu matra ( Drava in excess amount)	Karshya vartmata (discoloration of lid), Gharsha (f.b. sensation), Kruchchha unmeshana (difficulty in opening lids).
4	Alpa matra (Drava in less amount)	Vicar Vruddhi (disease more severe).
5	Aparisruta	Sarambha Utpatti.



## **Role of Dincharya (Daily Regimen) in the Prevention of Lifestyle Disorders**

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### **Abstract -**

Life style Disorders are the gift of the Modern era. Our day to day lifestyle i.e. living our life in pattern according to our place of work causes the specific disorders in the body named as Lifestyle Disorders. The number of Lifestyle Disorders increasing day by day. Obesity, Diabetes Mellitus, Hypertension, Coronary Heart Diseases, Various types of Carcinoma etc, are some of the Lifestyle Disorders. Due to rapid boost in the disorders now a days, prevention of lifestyle disorders is became the need of the individual.

Ayurveda is the Science which incorporated each disease with its Hetus(Causes), Linga(Sign & Symptoms), Aushadh (Treatment) as well as preventive measures. Ayurveda also emphasizes the importance of prevention and for that Ayurveda describes preventive measures which includes Dincharya Ritucharya, Trayopstamba (Aahar.Nidra, Bramhacharya), Aachar Rasayan etc. Dincharya is the most important preventive measure which includes the day to day activities of the human beings which is described in ayurvedic samhitas. Dincharya includes certain upkramas like Dhantadawan, Vyayam, Nasya, Anjan, etc. which enhances the body by maintaining Dosh, Dhatu, Mala samyta ultimately leading to Swasthyarakshan. By following the Dincharya- the daily regimen, one can be prevented by the rapidly increasing lifestyle disorders. So the various upkramas mentioned by the ayurvedic text can effectively prevent the lifestyle disorders. The details of the dincharyokta upkramas will be explained in the paper.

### **Introduction -**

A disorder caused due to alteration in lifestyle and adapting the faulty habits of diet etc. are called as Lifestyle Disorder. Lifestyle Disorders includes Atherosclerosis, Heart diseases, Stroke, Obesity, Type 2 Diabetes, Hypertension, Colon Cancer, Premature Ageing etc. As Ayurveda is recognized as foremost life science and describes each disease with its Hetus(Causes), Linga(Sign & Symptoms), Aushadh (Treatment) & prevention, which attracts the world towards its potential. Ayurveda also emphasizes the importance of prevention and for that Ayurveda describes preventive measures which includes Dincharya .Ritucharya ,Trayopstamba (Aahar. Nidra, Bramhacharya) ,Aachar Rasayan etc. Personal health can be maintained by following Dincharya. Health is a state in which Dosh samyta is leading to Dhatugat samyavyasta . To maintain the samyavasta of Doshas one must follow Dincharya.

Dincharya upkramas mentioned in Ayurveda are Pratahuttan ,Shouchvidhi ,Dhantdhawan ,Jivhanirlekhen ,Anjana,Nasya,Gandusha& Kaval etc

Various upkramas described by the Ayurvedic Text are

**1. Pratahuttan** - Ayurveda ordains that everyone should wake up at Bramhamurta that is 90 minutes before sunrise. Even if not possible to wake up at Bramhamuhurta it is advisable to wake up at least 6 am as it is vata dosh pradhanya kaal & helps in mala ,mutra visarjan, prevents digestive disorders & as this is kaal of satva guna pradhanya which is helpful in concentration of mind so helpful in yogabhyas ,for doing study in the students.

**2. Dhantadhawan** - Ayurveda says that Katu, Tikta , Kashaya ras pradhan & Madhur rasatmak Dhantashalaka is helpful in Dhantadhawan as it helpful in Kaphshaman .Cleaning the teeth by medicated oil and salt is advisable. The mouth is the place of Bodhaka Kapha and has alkaline pH. Hence the teeth should be brushed with medicated powders containing astringent, bitter and slightly pungent taste. For this purpose a mixture of the bark powder of rock salt, black, and long pepper, camphor, turmeric and neem in equal proportions, along with small quantity of cloves and honey. Ayurvedic toothpaste can be used.

**3. Jivhanirlekhan** - Ayurveda describes the Jivhanirlekhen upkram after Dhantadhawan upkram. Jivhanirlekhan helps to prevent Mukh dhurghandh and remove the coatings of the tongue. Nitya Jivhanirlekhan upkram is advised .Jivhanirlekhen is done with metal or wood ,Steel, copper, or silver .Copper is used as it has antiseptic properties but it does tarnish. Cleaning the tongue not only cleanses the mouth but also stimulates the whole digestive tract and improves the digestion.

**4. Anjan** - For netra shudhi and drushtiprasadhan Anjan is applied. Nitya Anjana or Souviranjana now a days called as Surma or Kajal or collyrium helps to make the Netra prasadhan, by maintaining the Kapha dosha samyta. It removes the dirt secretions and get rid of watering or burning .Collyrium is made from the decoction of barberry, licorice, and triphala in equal parts along with honey to make it into a paste. Triphala ghrut is also good for eyes . Rasanjana is made from Honey, Berberis aristata and goats milk which maintains eyes health and beauty.

**5. Nasya** - Administration of the medicine from the Nostrils is called as the Nasya. Pratimarsha Nasya used Daily as it is mrudu & can be use as a preventive measure. For these purpose Anu tail, sesame oil, bramhi oil, or ghee can be used. Constant use of Nasya is useful for protecting the eye, nose, throat against diseases and increasing their efficiency. Due to todays lifestyle , Hair related problems can be prevented by regular use of Nasya.

**6. Gandusha & Kaval** - The Upkram in which the Aaushadi dravya Kwath and Taila is hold in the oral cavity is called as Gandusha . The upkram in which the Aaushadi dravya kalka is hold in mouth and sanchar of the aaushadi kalka is made is called as Kaval. Tila tail or warm water can be used for daily Gandusha which can prevent oral cavity diseases. Cow milk can be used for the oral disorders like mouth ulcers.



Sr.no.	Upkrama	Disorders can be prevented
1.	Pratahuttan	Constipation, Haemorrhoids, Fissure, Fistula, Stress, Obesity, Hypertension, Urinary tract infections etc.
2.	Dhantadhawan	Foul smelling of mouth, Loss of Appetite, Dental disorders
3.	Jivhanirlekhan	Loss of Appetite, Foul smelling of Mouth
4.	Anjana	Irritation, burning, hypersecretion of eyes
5.	Nasya	Hair fall, Greying of hairs, cervical spondylitis, Trismus, Rhinitis, Headache, Chronic Rhinitis, Tremors of hands, Depression, Hypertension
6.	Gandusha & Kaval	Teeth, palate, tongue, cheeks disorders, Sore Throat, Hypersensitive
7.	Dhumpan	Rhinitis, Cough, Asthma, Heaviness of Head, Foul smelling of mouth, Hiccough, Excessive sleep, Ear, Nose & Throat infections etc.
8.	Abyanga	Sciatica, Joint Disorders, Backache, Cervical Spondylitis etc.
9.	Vyayam	Obesity the key factor in the development of the disorders like Diabetes, Hypertension, Coronary Heart Disease etc. So prevent Obesity.
10.	Udavartan	Obesity, Skin disorders etc.
11.	Snan	Skin Disorders
12.	Tambul Sevan	Loss of Appetite, Foul smelling of Mouth etc.

**7. Dhumpan** - Smoking a Cigar containing medicinal herbs (without Tobacco) is useful for alleviating kapha in head & neck region. Medicinal herbs used are Priyangu, Keshar, Chandhan, Tamala patra, Ela, Jatamansi etc. Dhumpan should be done through mouth but smoke should be not exhaled through the nose as it irritates the eyes. Dhumpan is effective in the Kaphaj disorders, Urdava jatrugata disorders etc.

**8. Abyanga** - The upkrama in which mardana with the help of sneha dravya is performed on whole or particular area of the body is called Abyanga. Koshna tail is used for abhyanga of the whole body, specifically the Shir and Pad Pradesh. For daily abhyanga Til tail can be used. Vata disorders are prevented.

**9. Vyayam** - Vyayam (Exercise) helps in the medho dhatu kshaya and kapha kshaya. Arda Shakti vyayam is mainly described in ayurvedic text. Exercise can be classified as active, passive & mixed. Among active exercise walking, running, dancing, and games like cricket, football etc are included. A gentle walk or stroll tends to improve the memory, strength, digestive power, the functions of the sense organs. According to Ayurvedic Text, Ardamastyendrasana is considered to be the effective asana in Diabetes Mellitus as it

causes the pressure on the abdomen and mainly the pancreas which helps in insulin production. Yogaabhyas is considered to be effective in Hypertension according to Ayurvedic Text. As Aasanas like Shavasana, Makaraasana, etc & Pranayam like Anulom vilom , Omkar, etc are very much effective in reducing the stress level perhaps reducing the levels of blood pressure.

**10. Udavartan** - It is followed by Abhyanga upkrama. The upkram in which the aushadi dravya choorna like triphla choorna etc. are used all over the body & its massage is given. It helps to burn the fats which helps in Medhodhatu kshaya ultimately reduces the body weight i.e. obesity levels. Choorna of Horse gram, Chick pea, or Moong dal can be used for Udavartan.

**11. Snan** - Ushan jal is used for snan below the manya pradesh, & for above manya pradesh Sheeta jal snan is done. If Ushna jal is used for shir Pradesh than it is harmful for hairs & eyes.

**12. Tambul Sevan** - Sevan of Sugandhi dravya with Paan is called Tambul. Jayphal, Lavanga, Kankol etc are used in Tambul By following Ayurvedokta Dincharya Dosh and Dhatu Samyata occurs which may lifestyle disorders.

Ayurveda also explains. Trayopstamba (Aahar, Nidra, Bramhacharya) as a important preventive measure regarding Lifestyle disorder. Aahar includes the diet which mainly satva guna pradhan and which doesn't prakop any of the Doshas. Nidra includes the proper timings and durations of sleep as waking up at Bramhamuhurta is explained in Ayurvedic Samhitas. Duration of sleep must be of 8-10 hours. Bramhacharya should followed as it prevents many disorders.

### **Importance of Dincharyokta Upkrama in Preventing Lifestyle Disorder**

#### **Conclusion -**

Ayurveda explains preventive measures as an important factor .The definition of health is more than just the absence of disease. Prevention has increasingly been practiced in recent years in response to ever increasing incidence of chronic diseases. Ayurveda has been effectively using preventive measures. Ayurveda explains Dincharya, Ritucharya, Trayopstamba, Aachar Rasayan, etc as preventive measures. Dincharya is one of the main important factor. By following Dincharya health is maintained and prevented from many disorders mentioned in above in the paper. So Dincharya is very effective in the prevention of Lifestyle Disorders.

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## **Management of Post-Operative Pain of Fistula-In-Ano after Primary Threading under General Anaesthesia.**

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### **Abstract :**

Lack of knowledge about effective analgesics in Ayurvedic medicine is the greatest disadvantage. This is one amongst the various causes of fall down of Ayurvedicsurgery. Hence there is constant quest for ideal analgesic drugs. Any type of *SHALYA* and *SHALYA KARMA* results in manifestation of vedana (pain). Hence in post-operative period management of pain is very much important. Any drug/procedure, which pacifies vata acts as a potent vedanastapanapaya. Advent of Ayurvedicanalgesicdrug will be of a great sigh and relief to Ayurvedicproctologists. So in the present study the patients suffering from fistula-in-ano who had undergone the procedure of primary threading and fulfill the criteria of selection of the study are selected.

**Key Words :** Vedana, Shula, Pain, Fistula-in-ano, Diclofenacsodium, Shigru extract tablets.

### **Introduction :**

ShalyaTantra, one amongst eight branches of Ayurveda, basically deals with Shalya and management of these diseases by various methods. Shalya causes vedana to the body and mind. The two terms vedana and shoola are used as synonyms in Ayurvedic literature. Management of the disease too is primarily aimed at relieving of vedana i. e. Vedanasthapanana.

Pain is commonest post-operative manifestation after any surgical procedure. After surgery tissues get damaged and it causes individual to react to remove the pain stimulus. Effective post-operative pain relief encourages early mobilization and discharge from the hospital. Excessive pain in post-operative period will be unbearable and will lead to other effects like sinking sensation, apprehension, sweating, nausea, palpitation and increase or decrease of blood pressure i. e. shock due to pain.

Lack of effective analgesics in Ayurvedic medicine is the greatest disadvantage. This is one amongst the various causes of down fall of Ayurvedicsurgery. Hence there is constant quest for an ideal Ayurvedic Analgesic procedures (Vedanasthapanapaya). Any type of Shalya and Shalya karma results in manifestation of vedana. Without Vata pain is not possible. Any part of the body when sangnyavahanadi (pain receptors) gets stimulated due to some irritation phenomenon that leads to Shoola. Lack of effective analgesics in Ayurvedic medicine is the greatest disadvantage. This is one amongst the various causes of down fall of Ayurvedic surgery.

Hence there is constant quest for an ideal Ayurveic Analgesic procedures (Vedanasthapanapaya). Any type of Shalya and Shalya karma results in manifestation of vedana. Without Vata pain is not possible. Any part of the body when sangnyavahanadi (pain receptors) gets stimulated due to some irritation phenomenon that leads to Shoola Ease of Use (Vedana) and in all type of Shoola, Vata is predominant. So any drug/procedure, which pacifies vata, acts as a potent vedanasthapanapaya.

In field of ayurvedic surgery, management of fistula-in-ano by ksharsutra after primary threading was gained immense popularity. Efficacy of Kshar-sutra in fistula-in-ano has been proved by various multicentered research study. But Ayurvedic surgeons are facing problems of postoperative pain management. In spite of horrible complications induced by modern Analgesics, Ayurvedic surgeons are forced to prescribed them. Advent of an Ayurvedic analgesic drug/procedure will be a great sigh and relief to Ayurvedic proctologists. So in the present study the patients who have undergone primary threading for fistula-in-ano will be subjected to Shigru Extract tablets in the postoperative period for assessment of their Analgesic effects. The results will be compared with established modern non-steroidal analgesic drug "Diclofenac Sodium".

An effort will be made in this study to find a safe and effective vedanasthapanapaya (Analgesic Procedure), who have undergone primary threading in the management of fistula-in-ano.

#### **Aims and Objectives :**

1. To review and analyze available literature of vedana and pain Shigru extract tablets and Diclofenac sodium injection as explained in Ayurveda and modern medical science.
2. To observed and compare the therapeutic effect of post-operative pain management by Shigru extract tablets and Diclofenac sodium injection in the patients suffering from fistula-in-ano who have undergone primary threading.
3. To formulate probable mode of action of Shigru extract tablets.

#### **Materials and Methods :**

##### **Materials : Medicine -**

1. Diclofenac sodium IV.
2. Shigru Extract Tablets (500mg).

##### **Patients : (Examinations and Diagnosis) :**

The patients of fistula-in-ano who were fit for study were selected for clinical trial. The detailed history and Systemic and local examination of patient was done and the findings were noted on the specially designed proforma.

##### **Clinical Parameters of Study :**

##### **Subjective :**

- Pain in anal region
- Nausea or vomiting
- Gastric irritation

**Grading of pain :**

Based on numerical rating scale score.

**Grading of Nausea / Vomiting :**

- Absence of nausea or vomiting : 0
- Sensation of vomiting (Nausea) : 1
- Retching but no vomitus : 2
- Some vomitus : 3

**Grading of Gastric Irritations :**

- No gastric irritation : 0
- Mild gastric irritation : 1
- Discomforting gastric irritation : 2

**Investigations :****a. Blood tests :**

1. Total count
2. Differential count
3. ESR
4. Haemoglobin percentage
5. Random Blood Sugar level
6. HIV I & II
7. HBsAg
8. Chest X-ray
9. ECG
10. Serum Creatinine
11. Blood Urea

**b. Urine Examinations :**

1. Sugar
2. Albumin
3. Microscopy

**Methodology :** Source of data: Patients were selected from IPD of shalyatantra department of Ayurved hospital Pune for trial.

**Inclusion Criteria :**

1. All patients in age group 18-60 years were selected.
2. Patients will be selected randomly irrespective of sex, economical status, education and marital status.

**Exclusion Criteria :**

1. Patient which suffering from systemic diseases were excluded from the study e.g. Diabetismellitus, tuberculosis, renal failure, hypertension.
2. Patient who were suffering from CA rectum crohndiseas, ulcerative colitis.
3. HIV and Hepatitis –B positive patients.

**Study Designs :**

It is a comparative clinical study of randomly selected 40 patients.

**Study Drugs :**

**Shigru :** Shigru has the potency to pacify the pain and it is being used profoundly in Osteoarthritis and many other inflammatory diseases. As this fact Shigru Extract tablets has been selected for the post operative pain management of fistula –in-ano after primary threading under general anaesthesia. Shigru Extract tablets have been procured from Himalaya Drug Company.

The Shigru has been described as potent vedanastapak drug in the classics. Shigru is the best vatashamakdrug. It is katu rasa pradhan, laghu and teekshnagunapradhan, ushnaveerya and katuvipaka.

**Diclofenac Sodium :**

It is a newer analgesic, anti-inflammatory drug, similar in efficacy to naproxen. It inhibit PG synthesis and short lasting antiplatelet action. Neutrophilchemotaxis and superoxide production at the inflammatory site are reduced. It is well absorbed orally, 99% protein bound, metabolized and excreted both in urine and bile. The plasma T<sub>1/2</sub> is 2 hours. However, it has good tissue penetrability and concentration in synovial fluid is mentioned for three time longer period than in plasma, excreting extended therapeutic action in joints.

**Sample Size :**

40 patients who were fulfilling the criteria of selection for present study were randomly selected and categorized in to two groups as Group A & Group B.

**Group A :**

Sample size : 20 patients.

Drug : Diclofenac sodium injection

Duration : 5 days

Dose : 500 mg 8 hourly.

Diet : Patients are advice to follow high nutrition diet.Green leafy vegetables & more liquid diet.

### Complete Assessment of The Procedure :

Assessment was done based on improvement in the signs and symptoms.Results were categories as :

1. Complete relief :100%
2. Marked relief : above 75%
3. Moderate relief : 50%-75%
4. Mild relief : 25%-50%
5. No relief : 0-25%

### Total Effect Of The Treatment :

The comparative analgesic effect of the treatment will be calculated on the relief of pain.This relief of pain will be calculated by considering the difference in total post-operative pain score calculated after primary threading and pain score at the end of fifth day.The difference of pain A graph within a graph is an "inset," not an "insert." The word alternately is preferred to the word "alternately" (unless you really mean something that alternates).

Score in both the groups will be compared and subjected to statistical analysis.

### Observations And Results :

**Table no. 1 : Demographic observation of total registered patients.**

Findings	Predominance	Percentage
Age	31-40 age group	40%
Sex	Male	100%
Occupation	Service	40%
Religion	Hindu	97.5%
Marital status	Married	80%
Habitat	Urban	60%
Education	Graduates	30%
Socio-economic status	Middle class	50%
Food habit	Mixed	55%
Vyasana	Alcohol	30%
Nature of work	Moderate	37.5%
Dehaprakriti	Vata-Pitta	45%
Type of bhagandar	Parisravi	85%
State of anal sphincter	Contracted	60%
Nature of pain	Cutting	50%
No. of external openings	Single	80%

**Table 2 : Effect of trial on subjective & objective parameters of Group B.**

Sr. No.	Symptom	Noof Pt.	Mean		Diff.	%Relief	SD ±	SE ±	tValue	pValue
			BT	AT						
1.	Pain	20	3.75	3.20	0.55	14.67%	0.235	1.05	2.342	>0.02
2.	Vomiting	20	0.50	0.45	0.10	20%	0.100	0.447	1.000	>0.10
3.	Gastric Irritation	20	0.30	0.25	0.05	30%	0.153	0.684	0.326	>0.1

**Table No. 3 : Comparative Study On results in both Groups.**

Sr.	Cardinal sign and symptoms	Results in Percentage	
		Group A	Group B
1.	Pain	58.90 %	14.67%
2.	Vomiting	-11.11%	20.00%
3.	Gastric Irritation	-50%	30.00%

**Discussion :**

In the present study, it was found that out of 40 patients were in age group of 31-40 year. Even though the disease afflicts at all ages but it is more common in middle age person. This age group persons are maximum exposed to etiological factors hence the more incidence is seen in middle age group. The findings in this study substantiate that incidence of fistula-in-ano is the middle aged person.

Riding, travelling, irregular food habit, smoking etc. which aggravate the dosha, leading to manifestation of fistula-in-ano. No female patient in the present study may be probably due to hesitancy of female patient for exposure to anal examination.

Prevalence was According to religionwise incidence of the disease the more seen in hindu religion (97.5%). It can not be concluded on this basis that hindu were more affected by this disorder. The people of all religion are susceptible to this disease.

Maximum no. of patients belongs to mixed food habits (55%). The spicy fried, less fiber and rich protein food leads to agnimandhya and koshthabaddha. Hence who consume mixed diet is more prone to develop this disease.

Vata-Pitta prakriti (45%) people were found to afflict this disease in the present study. These prakriti people were susceptible for this disease.

**Overall assessment of therapy :**

After completion of treatment schedule of 5 days in both the groups, moderate relief was observed.



The overall effect of therapy in group A treated with Diclofenac sodium is complete relief in 4 patients 20%, moderate relief in 4 patients 20%, mild relief in 3 patients 15%, and no relief in 3 patients, 15% based on numerical pain scale.

The overall effect of therapy in group A treated with Diclofenac sodium on the vomiting and gastric irritation are increased by 11.11% and 50% respectively in the 5<sup>th</sup> day of treatment.

### **Discussion on Therapeutic Procedure :**

#### **Shigru Extract Tablets :**

The Shigru has been described as potent vedanastapak drug in the classics. Hence this drug has been selected for the present study. Shigru is the best vatashamak drug. It is katurasapradhan. Lghu and teekshnagunnapradhan, ushnvirya and katuvipaka.

Probable mode of action:

Vedana is primarily due to vataprakop. For vedanastapak vatashamak drug is best suited. Shigru is having katurasa, laghuguna, ushnvirya and katuvipaka as predominant properties. As all these properties are antagonist to vatadosha. This drug acts as vatashamak and reduces vedana.

#### **Conclusion :**

After discussion on various observations in the present clinical study following conclusion will be drawn.

#### **Conclusion on Conceptual Study :**

Vedana means disagreeable sensation. All the diseases are exhibited by vedana. Vedana is diagnostic as well as prognostic. Even though the systemic description of vedana is not available to formulate the concept of vedanagyanotapatti and vedanastapan, upyas.

Vatadosha is the prime factor for the manifestation of vedana. For vedanastapak and vatashamanupaya should be adopted.

Vedana has definite similarity with the description of pain as described in modern medical science.

Shastrakarma performed to treat the surgical disease will cause aghata to tissue, resulting in vedana. Management of this vedana is most important. Modern surgical procedure to produce pain according to the report published in 1990 that pain is a 5<sup>th</sup> vital sign that should be regularly measured and managed promptly.

Primary threading of fistula in ano will cause pain in the post-operative period. This pain has to be managed for better acceptance of procedure.

Hence the patient treated with Diclofenac sodium has a comparatively low intensity of pain than the patient treated with Shigru tablet but the patient treated with Diclofenac sodium has a comparative increased tendency of vomiting and gastric irritation than the patient treated with Shigru tablet.

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## Significance of Ideal Nidra in Lifestyle Disorder.

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### Background :

Ayurveda, the first systematic science ever evolved throughout the globe emphasizes on physical and mental fitness with prevention and preservation of health in a comprehensive manner. This ancient science developed from extra-sensory logic of our great seers, is crowned with undoubted knowledge, which is unchallenged till date.

“Prevention is better than cure” is the basic concept of Ayurveda. Curing a diseased person and redefining his healthy status, is the primary goal of a physician. However, Ayurveda generally aims at preventing the person from getting diseased by maintaining the balanced condition of *Tridoshaj*, viz ; *Vata*, *Pitta*, *Kapha* in his body. This idea of prevention is explained for the first time in ayurveda and is the basic concept for a healthy society.

Ayurveda suggests balance in the functions of *Doshas*, *Dhatu* and *Mala* as well as *Agni* and *Ojas*, throughout a day and accordingly the daily routine should be planned. Each and every individual for maintaining healthy conditions of body and mind, should follow this concept called “*Dincharya*”.

To keep fit, one should be very alert at every movement. One must understand the importance of biological clock or circadian rhythm. The environmental changes every now and then, i.e; morning, afternoon, evening, day and night, summer, rains and winter. In order to keep healthy, each person must try to adjust with these constant changes.

One, who wants to keep fit himself for whole of his lifetime, should also be fit for every day. Health depends on how one spends each day. The ideal lifestyle for a day is called as “Daily Regimen” (*Dincharya*). Daily regimen explains the various duties from one day to next day. Daily regimen is also divided into 1) Day regimen. 2) Night regimen.

### “*Brahmemuhurteuttishthet*”

“Early to bed and early to arise makes a man healthy, wealthy and wise. This proverb has a great significance. Ayurveda has recommended auspicious time *Brahma-muhurta*.

*Brahmamuhurta* is auspicious time for getting up from bed. *Brahmamuhurta-vaishishtyam* is the best time for meditation.

Ayurveda believes in saying it. It focus on daily regimen that can avoid lifestyle disorder diseases, but in today's lifestyle changing day by day and in changed lifestyle it's very difficult to follow daily regimen.

*Ritucharya* is a well known fact that different atmospheric changes in the atmosphere affect all living things is detrimental. In order to achieve maximum benefits from the good qualities of the atmosphere and protection from the bad effects, Ayurveda has prescribed certain rules, in regard to diet and sleep (*Nidra*), called seasonal regimen or *Richaryacharya*.

### **Introduction :**

*Trayopstambh* is the key to health and disease, does not lie in the application of drugs or chemicals or special therapies but in the prime factors on which our life and vitality is based. The three most important ones in Ayurveda are food, sleep and sexual energy. (*Ahar, Nidra and Brahmacharya*).

**Importance of Three Pillars:** The life will be happy with increasing body strength, colour, complexion and growth. In Ayurveda *Dincharya* is mentioned by *Acharyas*. According to Ayurveda, one should wake up at "*Brahmya muhurta*" Sleep is an important phenomenon in our life as a part of normal physiology to provide rest and relaxation to the body, mind and senses which gets tired and exhausted because of daily schedule, hence in *Charaksamhita* it is included *Trayopstambh* to give prime importance to three pillars of life which gives strength, complexion and compactness to the individual body. *Susrutacharya* said that *nidra* is a state of human body when sense organ disconnect from their grasping of their objects. According to *Vagbhatnidra* is caused by increased in *Tamma gunna* and also influenced by *Tamma gunna* as we see that *Tamma gunna* increases at night time, hence *nidra* will occur at night time. According to *Charak samhita nidra* which taken properly in terms of quality and quantity gives *Sukh, Pushty, Balata, Gyana and Jivitam*. On the other hand abnormal sleep in terms of quality and quantity inadequate, excessive or irregular will exert exactly opposite effects that are *Dukkh, Karshyam, Abalam, Agyanam, Ajivitam*.

There should be equal balance between *Dosh, Dhatu, Mala, Agni* and Harmony between mind, body and spirit. If person has all these things considered as healthy, so in today's very hectic lifestyle and person is always stressed for time. Most of our health problems are related to modern lifestyle, stress. Stress has become inevitable part of modern lifestyle stress is the major cause which cause diseases. In human stress typically describes negative conditions or positive conditions that can have an impact on person's mental and physical well being.

Change in lifestyle is one of the most important factors for stress. Because of stress emotional problems like inability to concentrate, poor judgments, memory problem, mood disturbances, anxiety, depression etc.

Stressful life is also a cause to push youngsters to get addicted to alcohol, cigarette smoking, drug abuse etc. Because of this stress induced diseases like hypertension, diabetes also increases. Due to these diseases lifespan of human being is also decreasing day by day.

### **Ayurvedic Concept :**

**Importance of Nidra :** *Nidra* or sleep is the secondary important pillar of life. It is a physiological state of rest for the body, mind, sense and motor organs. When the mind is exhausted and exhausted sense organs detract from their objects, the man sleeps. A person spends 1/3<sup>rd</sup> of his life in sleep. So, it is important to see that one gets a sound sleep at night.

According to *Samhitas Kapha Pradhan Prakruti* person will have more *Nidra*; In *vatapradhanprakruti* person will have less *nidra* & *nidra* will *madhyam* in *pitta pradhanprakriti*.

Natural Sleep in Adults: One feels sleepy during the night because of the calm and quiet environment conditions and increase of *Tamma gunna*. During day bright light and various noises stimulating effects and keeps a person awake and alert similarly *Sattava* quality predominates and hence the person remains active.

1. Qualities of adequate sleep (**SamyakNidra**) : Due to proper and adequate sleep body tissues and *doshas* remain in balanced state of health both physically and mentally. *Charak* states that, happiness and sorrow, obesity and emaciation, strength and weakness, virility and impotence, knowledge and ignorance, life and death are all depends on adequate and inadequate sleep.
2. **Atinidra** : Oversleep leads to obesity & diseases due to increased *kaphadosha* such as DM.
3. **Anidra** : Inadequate sleep leads to increase *vata dosha* wasting of tissue, emaciation, causes of insomnia.

### **Effects of Insomnia :**

1. Body ache
2. Indigestion
3. Drowsiness
4. Giddiness

Improper sleep causes mental as well as diseases like diabetes mellitus, hypertension, obesity, congenital heart diseases. Due to stressful lifestyle and improper sleep the risk of hypertension had increase.

**Obesity** : Repeated disruption of Circadian System, pineal hormone Melatonin suppression by exposure to light tonight .Sleep deprivation causes impairment of the immune system plus metabolic changes favoring obesity.

**Diabetes mellitus** : Improper sleep causes Diabetes mellitus.

**CHD** : Stressful lifestyle causes coronary heart diseases.

Due to smoking, alcoholism, psychological disturbances more people get addicted and various causes of death due to cancer etc. Today alcoholism is main addiction in India.

### **Modern Concept :**

Ancient lifestyle was little bit different than today. During ancient time person where less occupied and there was less strain, but in today's hectic and materialistic culture. Rarely person gets the time to think of his own health or fitness. Many people think that daily lifestyle is not possible to follow.

Lifestyle of Indian villagers is more natural than people living in urban area. They sleep early and get up in early morning, but in urban life is very artificial. Due to person activities, occupations and recreations people go to bed very late and also get up very late after sunrise. Night duty causes disturbance in sleep. People who work in night become more prone to symptoms of loss of sleep, hence ayurveda prescribes not to work in night and not to sleep in day time.

Human body has internal biological clock that regulates our twenty four hours sleep wake up cycles also known as Circadian rhythm. Light is the primary source that influences circadian rhythm, when the sun comes up in the morning, the brain tells the body to wake up. At night when there is less light our brain triggers to release Melatonin hormone that makes sleepy. When circadian rhythm disrupted, person may feel disoriented and sleepy and cause many disorders like insomnia. The etiological factors of insomnia provided in ayurveda included dietary consumption and stress.

### **Conclusion :**

During sleep sympathetic activity decreases; while parasympathetic activities sometimes increases therefore the blood pressure falls, pulse rate decreases, BMR falls by 10% to 20%, muscle tone decreases, skin vessels dilates and activity of gastro-intestinal tract sometime increases. During normal daily physical and mental activities catabolism tends to be greater

metabolism after hours of wakeful phase, a state of tiredness of body resulting in sleep therefore a man who works hard exerts more physically and mentally would require hours of sleep. If we do not take proper sleep at night then there will be indigestion. Disorders are caused due to improper sleep are *Agnimandhya*, *Ajirna*, *Amlapitta*, headache, constipation. It also affects the nervous system causing mental disorders like lack of concentration, insomnia, inability to concentrate, poor judgement, memory problem, mood disturbances, anxiety, depression. Therefore ideal *Nidra* plays an important role in maintaining good health and helps to avoid life disorders.

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## **Randomized open clinical study of Charakokta Mutrasangrahnīya Mahakashay with special reference to Madhumeh i. e. Diabetes mellitus.**

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### **Abstract :**

Mutrasangrahnīya i.e. Mutrapravruttirodhanam, is the main function .Acharya Charak has not described the indications of Mahakashaya in the chapter 'Shad virechana shatsrutīya', so this work was done with Aim to study clinical efficacy of Murtasangrahnīya mahakashay in Madhumeha.

### **Objectives :**

- 1) to study the efficacy of Mutrasangrahnīya Mahakashay in prabhut mutrata
- 2) to study the efficacy of Charakokta Mutrasangrahnīya Mahakashaya in Avil mutrata

The patients included in this study were newly detected sign and symptoms of Madhumeha i.e. Diabetis . sample size was 200 randomized selected the drug showed significant results using infostate in Naktamutrata  $p < 0.001$  and mutra avilata  $p < 0.001$  the conclusion is Mutrasangrahnīya Mahakshay has potent action with significant action on madhumeha samprapti in newly detected patients.

**Key words :** Mutrasangrahnīya Mahakashay, Madhumeha, Naktamutrata, DM

### **Background :**

In 2015 according to WHO more than 200 million people suffer from Diabetes . it is estimated that it will be double in 2025. Diabetes is called Silent killer. According to our Acharyas Prameha is Tridoshjanya vyadhi with predominance of Kapha which is specified as bhahudrava this bahudrava kapha causes shaithilya in body among all dushyas Meda Kleda and Manmsa are damaged greatly in all types. Thus samprapti is sarvadehik.

The Cardinal symptoms of Madhumeha as given in Samhitas is Prabhut – Avil mutrata the patient is suffering from Atimutrapravrutti, & because of naktamutrata, patient can't have calm & sound sleep at night and Nidra one of the the Trayopstambha gets affected. Mutrasangrahnīya means mutraati pravrutti rodhanam i. e. Decreasing quantity & frequency of Mutra.

### **Introduction :**

In present era , because of changing life style people are unable to obey Dincharya, Rituchrya Achar rasayan these things and frequency of getting ill is increased. due stress sedentary lifestyle led to fatal diseases like Madhumeha, Hridrog, Shwas and lot of complications which



are difficult to treat. Among these Madhumeha is one and most common . It is third leading cause of death . Tremendous research and discovery of some useful remedies in modern medical science many queries about these complication remain unanswered . the diabetic patients wants to take medicine for life time . the modern treatment is costly , full of adverse reaction which are frustrating not only to the sufferer but also to physicians to overcome these points this study plan .

Acharya Charak has elaborately explained the treatment of various disease in Sutrashana Adhyay 4i. e. Shadvirechanshritiya adhyay, he had described groups of Aushadhidravas according to specific symptoms or vyadhi , termed as a Mahakashaya as a basic guideline or keynote for physicians . He had summarized five hundred Kashaya in fifty mahakashay Mutrasangrahaniya one of them which contains Jambu, Amra, Plaksha , Vata , Kapitan, Udumber , Ashwattha . Bhallatak, and Khadir. These Mahakashaya are not used commonly at large scale in today's Ayurvedic Practice so it is necessary to work on it . while describing Mahakashayas Charakacharya had given just their name and contents , no other indication is maintained .

In case of Atimutrapravritti vitiated Kapha gets mixed with kleda , Meda Rasa, and other dravadatus . After entering in to Basti , it transform them to Mutra And causes Atimutrapravrutti . Same is the case with Madhumeha but occurs with greater extent and with involvement of more dushyas . Thus Acharya has given stress on treating disease in its early stage . So patients included in this study were newly detected diabetics . Various type of work has been carried out all over the country but no effort was done regarding Mutrasangrahaniya Mahakashaya in Madhumeha however little effort here.

Study carried out with following aim and objectives Aim To study clinical efficacy of Charakokta Mutrasangrahaniya Mahakashaya in Madhumeha i.e. Diabetes mellitus. objectives: 1) to study the efficacy of Mutrasangrahaniya Mahakashaya in prabhut mutrata 2) to study the efficacy of Charakokta Mutrasangrahaniya Mahakashaya in Avil mutrata. Following methodology was adapted.

### **Study design :**

Randomized, open, clinical, Trial

Place of study M. A. Podar Hospital Worli Mumbai 18

Sample size : 200

### **Selection of Patients :**

#### **A) Inclusion criteria -**

1) both gender

2) Age - 35 to 75 years

3) Blood sugar

Fasting 130 to 200 mg%

PP. 180 to 300 mg%

- 4) NIDDM with any Prabhut Mutrata Avil Mutrata
- 5) Newly detected patients

**B) Exclusion criteria -**

- 1) NIDDM with any complication
- 2) Pregnancy, Lactation
- 3) Any other major systemic illness
- 4) Duration of study 6 weeks

**Consent :**

Pre written consent was taken from every patient included in the study

Case record form all records in the study were well documented in a specially prepared case record form .

**Follow up :**

After obtaining ethical clearance from institutional ethical committee & the initial registration, base line evaluation , each patient was examined clinically with maintenance of urine frequency chart weekly . Urine examination for sugar was done weekly . Blood sugar (fasting and PP) was done after 15 days At each followup patients were assessed for clinical symptoms as per grades .

Drug preparation kashaya was prepared as per mention in Samhita .Extract carried out all extracts were collected and concentrated under vacuum in falling film triple effect concentration plant . Concentrated extract was spray dried into powder form . It was tabulated extract was spray dried in to powder form .it was tabulleted each weighing 500mg in automatic tablet machine.

Statistical analysis for subjective data willcoxson sign rank test and for objective data Z test applied.

**Observations and Results :**

The demographic analysis of these patientsis being presented here

**1) Gender wise distribution :**

Sr. No.	Gender	No. Of patients	Percentage
1	Male	110	55%
2	Female	90	45%
	Total	200	100

**2) Family history wise distribution :**

Sr. No	Family history	No of patients	Percentage
1)	present	157	77.5%
2)	Absent	43	32.5%
	Total	200	100

Most of the patients included in this study were middle age group . Heredity plays an important role in Madhumeha . Because of Nakta mutrata most of the patients have disturbed sleep .these are the major finding regarding demographic details .

**Clinical study analysis :****Statistical Analysis of Prabhuta mutrata :**

Sr. no.	Symptom	Mean	SD <sup>2</sup>	SD	SE	P
1)	Day time mutrapravrutti	2.1	0.388	0.623	0.729	<0.001
2)	Naktamutrata	1.95	0.408	0.639	0.202	<0.001

**Statistical Analysis of blood sugar level :**

Sr. No.	Blood sugar level	Mean	SD <sup>2</sup>	SD	SE	P
1	Fasting	71.25	387.9	19.7	3.44	<0.001
2	PP	116.4	654.19	25.58	8.08	<0.001

Ksudha vruddhi, pipasavruddhi, swedatipravrutti, and daurbalya for these ordinal data wilcoxon sign rank test applied and significant result found .

**Conclusion :**

Mutrasangrahaniya mahakashaya acts with significant results in newly dignosed Madhumeha vyadhi especially on prabhut mutrata .

Most of the patients included in this study were middle age group. Heredity plays an important role in Madhumeha. Because of Nakta mutrata most of the patients have disturbed sleep, these are the major finding regarding demographic details .

As the drug has highly significant effect on Naktamutrata it prevents disturbed sleep and patients have sound sleep preventing hazards of disturbed sleep .The drugs controls blood sugar levels, so it may be that much effective in further treatment of Madhumeha and may delay or prevent the complications of Madhumeha as instead of treating complications it is best to prevent them. This work is just first step focusing Charakokta Mutrasangrahaniya mahakashaya.

The main Rasa of charakokta Mutrasangrahaniya mahakashay ghanvati is kashay rasa it is given in almost all samhitas that kashaya rasa is sangrahi , Ruksha, laghu with kledshoshana, kaphashamana properties . Acharya dalhan has stated that it is shoshana for dravdatu or vran meha etc. Kashaya rasa of Mutrasangrahaniya Mahakashay absorbed increase dravya guna from body , decreases Abaddhatwa of Dushyas i.e. Meda ,Kleda , mansa, etc decreases kled by kledshoshana property . Kashaya rasa is kaphaghna ras and shoshak property hence acts on bahuta and Dravata of main dosha in Madhumeha samprapti . Thus mutrasangrahaniya mahakashaya hampers both the causes responsible for prabhuta avil mutrata hence hypothesis comes true .this study was a sincere effort to find out efficacy of Charakokta Mutrasangrahaniya Mahakashaya in newly detected patients of Madhumeha . In this stage of the samprapti was just started , the drug give significant result . Asthe drug acts on the root cause of Madhumeha pathogenesis it may prevent or delay the onset of complication

This article is focused on a life style perspective to achieve perfection in treatment regimen.Key words- Changing lifestyle, Mind and DUB.disorder-DUB. This study evaluates the etiology, pathogenesis and prognosis of DUB in Ayurvedic

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## Role of Ayurvedokta Aharaja-Viharaja Hetus in Ajirna

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### Abstract :

A study was conducted to determine the cause and effect relationship between *Aharaja-ViharajaHetus* mentioned in the classics of *Ayurveda* and *Ajirna*. Healthcare is one of the major pillars of The Union Budget which declared a new health protection scheme for health cover upto Rs.1 lakh per family on 29/02/2016. But, a staggering 70 percent of the population still lives in rural areas and has no or limited access to hospitals and clinics. Most of the diseases suffered by people today are now being claimed to relate with errors in lifestyle.

रोगाःसर्वेऽपिमन्दाग्नौ अ.ह. नि. १२/१

Such diseases are mainly caused by Agnimandya, which is the direct consequence of Ajirna (Indigestion). An Observational Retrospective Survey was conducted and 137 subjects were asked to fill up a questionnaire which was used to determine whether or not they had indigestion based on their diet and their daily lifestyle. The causes which were found to be significantly responsible for indigestion were irregularity in meals, Divaswapa, Ushahpana, drinking water immediately before or after meal, eating excess of spicy food, sweet food and fermented food, Viruddhashana.

### Introduction :

The dietary habits of person are based on choice, availability, economic conditions and sometimes, even religious customs. Diet is the first medicine, which is quite evident from the famous statement that "If one practices 'Pathyasevana' (Proper diet), one does not require any medication". Since our Ahara (diet) and Vihara (lifestyle) have a direct effect on our Swasthya (health), even slight modification in these can help us to prevent or to overcome the diseases like Ajirna (Indigestion). The meaning of Ajirna as given by Acharya Caraka in the first chapter of Sutrasthanam –

आहारस्य अपचनम्च. सू. १/१२

The condition of indigestion arises when our *Ahara* (food we eat) is not digested properly.

**Causes of Ajirna :**

अत्यम्बुपानाद्विशमाशानाच्चसंधारणात्स्वप्नविपर्ययाच्च  
कालेऽपिसात्म्यंलघुचापिभुक्तमन्नंपाकंभजतेनरस्य ॥७॥

सु. सू. अ. ४६

The causes of Ajirna are as follows -

1. Ati ambupaana- Excessive drinking of water
2. Vishamashana- Irregularity in meals
3. Sandhaarana -Obstructing natural urges like mala and mutra
4. Swapnaviparyaya-Sleeping late at night

It is said that due to the above *Hetus*, even the food taken in small quantity and at the right time will not be properly digested which will lead to *Ajirna (Indigestion)*.

**Types of Ajirna :**

आमंविदग्धंविष्वक्फपित्तानिलैस्त्रिभिः अजीर्णकेनचिदिच्छन्तिचतुर्थरसशेषतः ॥ ५॥  
अजीर्णपञ्चमंकेचिन्निर्दोषंदिनपाकिच वदन्तिषष्ठंचाजीर्णप्राकृतंप्रतिवासरम् ॥ ६॥

सु. सू. ४६ / १९९

1. Aamajirna - It is caused due to vitiated Kapha dosha.
2. Vishtabdhajirna - It is caused due to vitiated Vata dosha.
3. Vidagdhajirna - It is caused due to vitiated Pitta dosha.

According to some scholars, Rasasheshajirna, Dinapakiajirna and Prakrut Ajirna are also its types. The present study aimed to discuss faulty diet habits and irregular lifestyle. These were observed to play an important role in manifestation of many lifestyle disorders; one of the major is Ajirna (Indigestion).

In the present times, a person generally takes two meals, a breakfast and an evening tea with light food. Apart from this having one or more cups of tea/coffee per day is common practice in the offices, B.P.O and even colleges. Young people opt for fast foods like franky, vadapav instead of regular 'old fashioned' home cooked healthy meals. This faulty way of life and diet are the causes of Vishamashana, which further leads to Ajirna (*Indigestion*).

Modification in this lifestyle and dietary habits will improve our health and longevity of life, by avoiding –

1. Irregular Food Intake - As it is said "Eat Breakfast like a King, Lunch like a Prince, and Dinner like a Pauper".
2. Consumption of excess tea/coffee, tobacco, smoking, alcohol, highly spicy foodstuffs, non-vegetarian diets.

One of the major lifestyle disorders currently faced by the population is *Ajirna* (Indigestion). Indigestion is mostly overlooked, as it does not have any major effect on daily life in its earlier stages but severe indigestion causes-

Unintentional weight loss or loss of appetite

- ♦ Repeated vomiting or vomiting with blood
- ♦ Black, tarry stools
- ♦ Trouble swallowing that gets progressively worse
- ♦ Fatigue or weakness, which may be symptoms of anaemia

The Aim was to study the cause and effect relation between *Aharaja* and *Viharaja* Hetus explained in *Ayurveda* about *Ajirna* (Indigestion).

The Objectives were as follows :

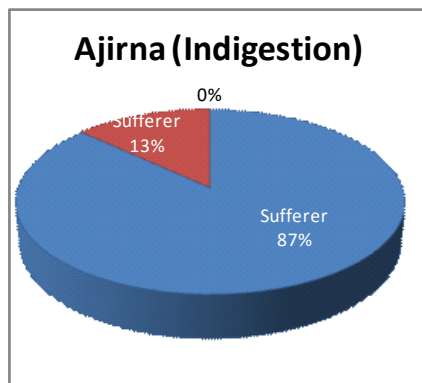
1. To study the causative factors leading to *Ajirna*.
2. To study how life is hampered because of *Ajirna*.
3. To study ideal food habits and proper lifestyle as mentioned in *Ayurveda*.

The Methodology followed was :

1. Conceptual Method: *Ayurvedic* texts related to subject was studied along with relevant modern literature.
2. Questionnaire : The methodology of our study is Observational Retrospective Survey. A survey of 137 subjects was done.

The Inclusion was done using the following criteria:

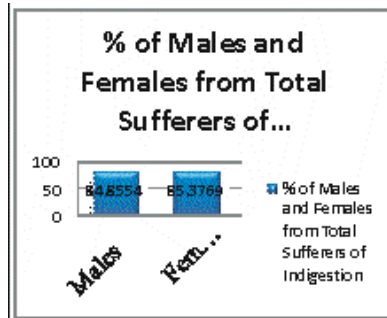
1. Age: People between the age of 18 to 65 years were selected for the survey.
2. Selection was done without any bias against gender, race, caste, creed, occupation and socio-economic status.



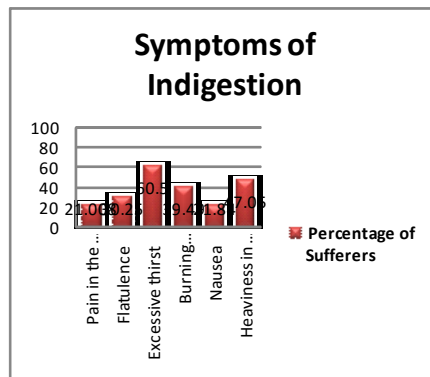
**Observation :**

Statistical Analysis : Data obtained in the study were subjected to Statistical Analysis.

87 % of total 137 subjects surveyed suffered from *Ajirna*(Indigestion). Among those, there were 57 males and 62 females.



The symptoms of indigestion as seen in the subjects suffering from indigestion were as follows-



**Result :**

Odds ratio was applied in the study and the following result was obtained:

Irregularity in meals = 1.315

Sleep during day time = 3.218

Sleeping late at night = 0.7660

Drinking water directly after waking up = 4.154

Drinking water immediately before or after meal = 1.605



Eating excess of -

- ♦ Spicy food = 1.052,
- ♦ Sweet food = 1.525
- ♦ Cold food = 0.5053
- ♦ Fermented food = 1.013
- ♦ Taking breakfast after bath = 1.131
- ♦ Having Virudha Aahar such as-
  1. Tea + biscuit/poha/roti = 1.250
  2. Milk + khichdi/fruits/nonveg = 1.330

### Discussion :

The study supports the theory of 'cause and effect' by revealing that most of the people have irregularity in food intake timing as well as water drinking habits which are important factors involved in causation and exaggeration of *Ajirna*. In the present study, most of the etiological factors were found to be related with diet and lifestyle. Study shows that 87% of the total surveyed people were habituated to *Ajirna*.

According to the survey, causes which were found to be significant for indigestion are:

1. *Vishamashana*- Irregularity in Meals
  2. *Divaswapa* – Sleep during day time mostly in afternoon
  3. *Ushahpaana* – Drinking water directly after waking up
  4. Drinking water immediately before or after meal
  5. Eating excess of spicy food, sweet food and fermented food
  6. *ViruddhaAshana*- Incompatible food combinations
- ♦ If one does not follow proper dietary habits, his/her *Agni* will be diminished due to irregular digestion leading to *Ajirna*.
  - ♦ Sleeping in afternoon leads to vitiation of *Kapha* and *Agnimandya* (Non stimulation of *Agni*) which results in *Ama* (Undigested food) which is toxic to health.
  - ♦ Eating excess of spicy food results in *Ati-Deepana* (excess stimulation of *Agni*) and *Daha* (Burning sensation)
  - ♦ Eating excess of sweet, cold and fermented food, drinking water directly after waking up, leads to *Agnimandya* and produces *Ama*.
  - ♦ Drinking excess water after meal leads to creation of *Amavisha*.

### भोजनान्तेविशापहमद्य . नि ०८-०९

It was found that people have a habit of taking *Virudhashana* (Incompatible food combinations) such as Tea + biscuit / poha which not only hampers the digestion process but also causes *Amavisha*.

Drinking water early in the morning affects the *Agni* and causes *Agnimandya*, thus hampering the digestion process of the food ingested during the rest of the day.

One of the beneficial effects of bathing is that it causes *Agnideepana* ( अ. ह. सू. १६-१८) and thus any food ingested after bathing is digested properly. Therefore one should always bathe before having breakfast.

#### Conclusion :

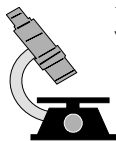
अनात्मवन्तःपशुवत्भुञ्जतेऽप्रमाणतः  
रोगानीकस्यतेमूलमजीर्णप्राप्नुवन्तिहि

As Acharya Susruta has rightly said in *Sutrasthanam* of *SusrutaSamhita*, the persons who don't think and eat in excess like an animal, suffer from *Ajirna* (Indigestion) which is the *moola* (root) of all diseases.

Thus by following proper diet and lifestyle, we can achieve health and longevity of life.

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# **“In- vitro Assessment of Anti-microbial Activity \ of Standardized *Bhringaraja Taila*”**

**Vd. Pravin M. Janjwal\*\***

**Dr. Shriram S. Savrikar**

**Abstract :** The present study was conducted in three steps,

1. Preparation of *Bhringaraja Taila*.,
2. Development of standard and quality control parameters for *Bhringaraja Taila*. And
3. Assessment of antimicrobial property of standardized *Bhringaraja taila*. Physico-chemical tests of the drug were carried out using pharmacopeial standards mentioned in API. The drug antimicrobial activity was tested by ——— method. It was observed that although the source material *Bhringaraj* (*Eclipta alba* is having antimicrobial activity against ———. *Bhringaraj Taila* tested formulation does not have any anti-microbial activity.

**Keywords :** *Bhringaraj Taila*,

## **I INTRODUCTION :**

More and more people are getting attracted towards Ayurvedic medicine in order to avoid harmful side effects of the synthetic drugs. In this scenario, it is necessary that these people get good quality and authentic Ayurvedic medicine. Being very complex in nature quality control of Ayurvedic drugs is comparatively a difficult affair. All these manufacturers are supposed to follow the pharmacopeial standards mentioned in Ayurvedic pharmacopeia of India (API).

Pharmacopeial standards of Ayurvedic drugs are being developed in a stepwise manner. Monographs of certain Ayurvedic drugs are available in Ayurvedic Pharmacopeia of India (API). However, pharmacopeial standards of many of the drugs still remain to be developed. *Bhringaraja Taila* is one such formulation. It is a very popular and famous oil preparation used as a hair tonic having a cosmetic value also. Three different formulation compositions of *Bhringaraja Taila* are found described in *Bhaishajya Ratnavali*. Out of them studies on two formulations *Bhringaraja Taila* (*Mahat*) and *Bhringaraja Taila* (*Svalpam*) have already been carried out.<sup>1</sup> *Bhringaraja Taila* (*Mahat*) is mentioned in Ayurvedic Formulary of India (AFI)<sup>2</sup>. But pharmacopeial standards of this formulation still remain to be notified. The third formulation of *Bhringaraja Taila*<sup>3</sup> still remains to be studied. *Bhringaraja Taila* a type of *Snehapaka*, the Medicated oil is having a cosmetic potential also. It is a very common formulation prepared from *Bhringaraja*. It is extensively used in hair fall and other hair problems. It is likely to be effective in these conditions on account of the antimicrobial activity of *Bhringaraja*. In this context it is observed

that *Bhavamishra* describes *Bhringaraja* as a *Krimighna* drug.<sup>4</sup> Many research workers have also reported the antimicrobial property of *Bhringaraja* in recent research works<sup>5,6,7,8</sup> However *Bhringaraja Taila* still remains to be studied and explored for its antimicrobial activity.

Considering the significance the present study is designed to assess the *Bhringaraja Taila* for its antimicrobial activity. The antimicrobial activity will be assessed in vitro by applying standard methods.

No study of efficacy of drug can be carried out unless the drug is standardized. The quality and efficacy of the drug can be maintained through standardization of drug. Standardization is also important for maintaining the uniformity of the drug. Considering the significance this study was carried out on standardized *Bhringaraja Taila*.

## II AIMS & OBJECTIVES :

**Aim :** To establish *Bhringaraja Taila* as antimicrobial agent in the treatment of hair infections.

### Objective :

1. To prepare *Bhringaraja taila* according to the method and formulation described in *Bhaisajratnavali*.
2. To develop standard & quality control parameters for *Bhringaraja Taila*.
3. To assess antimicrobial activity of *Bhringaraja taila*.

### Preparation of *Bhringaraja taila*

#### Material :

1. *Bhringaraja* (*Eclipta alba* L. Hassk.) *swarasa* – 1 *Prastha* (768ml)
2. *Yashtimadhu* (*Glycerrhiza glabra* Linn.) *churna* – 1 *Pala* (48gm)
3. *Tila taila* – 1 *Kudava* (192ml)

#### III : Methods :

#### Method of preparation of *Bhringaraja Taila* :

*Bhringaraja Taila* was prepared by adopting standard method of preparation of *Snehapaka* as described in *Sharngadhara samhita*. The method is described below:

1. Standard method of Preparation of *Snehapaka*<sup>14</sup> according to *Sharangdhar Samhita* *Snehapaka* was prepared by using one part of 'kalka dravya', four parts of oil or ghee (commonly sesame oil & cow ghee) & sixteen parts of drava. Drava dravya may be other than kwarth such as jala, swaras, kanji, mansa rasa, gomutra etc.

Preparation of *Bhringaraja Taila*<sup>3</sup>

भृङ्गराजरसप्रस्थेयष्टीमधुपलेनच । तैलस्यकुह्वंपक्वंसद्योदृष्टींप्रसादयेत् ॥  
नस्याद्वलीपलीतघ्नंमासेनैतन्नसंशयः ॥ (भै.र.६४/२७१-२७२)

Stainless steel vessel.

Heating source : Gas stove

Temperature : Madhyamagni(80°C -90 °C)

1. *Bhringaraja* (*Eclipta alba* L. Hassk.)swarasa – 1 Prastha (768ml)
2. *Yashtimadhu* (*Glycerrhiza glabra* Linn.) churna –Pala(48gm)
3. *Til taila* – 1 Kudava (192ml)

#### IV : PROCEDURE :

1. The whole plant of *Bhringaraja* (*Eclipta alba* L. Hassk) was washed, crushed & squeezed in a fine muslin cloth to get juice.
2. The dried roots of *Yashtimadhu* (*Glycerrhiza glabra* Linn.) were finely powdered. Little amount of water was added to the powder to produce *Kalka*.
3. The required amount of oil to be prepared was taken in a stainless steel container.
4. *Til taila* was heated till appearance of froth on its surface. It was allowed to cool. Prescribed amount of *Bhringaraja* juice & *Yashtimadhu Kalka* was added to the oil.
5. The oil was then subjected to heating at mild fire (*madhyamagni*)
6. Heating was continued in mild fire, over gas stove.
7. Constant stirring was carried to avoid sticking of the *Kalka* drugs.
8. On the first day, heating was continued for 2 hr 30 minutes. Later it was allowed for self-cooling
9. Next day, again heating was continued till the completion of paka.
10. The heating was stopped when the heated oil passes all the tests like *Phenodgama*, *Varti*, *Kalka*, *Agni Pariksha*. Thereafter the oil was left to cool of its own.
11. The cooled oil was filtered and stored for carrying out further analytical tests.

Three batches of *Bhringaraja Taila*, each of one liter batch size were prepared and stored by following above mentioned procedure. All the three batches, were subjected to physicochemical analysis for standardization. The sample of all the three batches of standardized oil was then subjected to antimicrobial study.

Agar cup plate method to study antimicrobial activity of *Bhringaraja Taila*

#### V : Results and observation :

##### *Kalka* parikshan

#### V : Results and observation :

##### *Kalka* parikshan

1. Not sticky
2. Free of water contents
3. Can be made into varti when rolled between fingure
4. No crackling sound when put on fire

**Taila Parikshan**

1. Free from water contents.
2. No crackling sound
3. Dark green colour
4. Rasa katu tikta

Type of paka - *madhyma*

Type of agni- *madhymagni*

Bhringaraja Taila	Sample A	Sample B	Sample C
Taila obtained	156 ml	152 ml	160 ml

**OBSERVATION AND RESULT**  
**STANDARDIZATION OF RAW DRUGS**  
**BHRINGARAJA**

**CONSTITUENTS** - Alkaloids, Ecliptine and Nicotine.

**IDENTITY, PURITY AND STRENGTH**

Test Name	Observed value	API standard
Foreign matter	Not Present	Not more than 2 %
Total Ash	15 per cent	Not more than 22 %
Acid-insoluble ash	6 per cent	Not more than 11%
Alcohol-soluble ash	15 per cent	Not less than 5%
Water-soluble extractive	35 per cent,	Not less than 15%

**YASHTIMADHU****IDENTITY, PURITY AND STRENGTH**

Test Name	Observed value	API standard
Foreign matter	Not Present	
Total Ash	5 per cent	Not more than 10 %
Acid-insoluble ash	1 per cent	Not more than 2.5
Alcohol-soluble ash	15 per cent	Not less than 10 %
Water-soluble extractive	30 per cent,	Not less than 20

**SESAME OIL - pH 4.5**

Identification : Shake 2 ml with 1 ml of hydrochloric acid containing 1 per cent w/v solution of sucrose and allowed to stand for five minutes; the acid layer was a pink colour & changes to red on standing.

**Sesame oil**

Test Name	Bhringaraja taila	Sesame Taila
Specific gravity	0.9176	0.9170
Refractive index (at 40°)	1.463	1.466
Wt. per ml (at 25°)	0.9176	0.9170
Acid value	6.16	4.9
Iodine value	66.99	112.55
Saponification value	190	192
Unsaponifiable matter	1.28	1.35
Peroxide value	1.2	5
Viscosity in centistokes	50	40
pH	4.3	4.5

**T. L. C. FOR BHRINGRAJA :**

The chromatogram obtained has been presented in As could be seen from the figure, it shows 3 prominent spots at Rf 0.56, 0.43, 0.31 in short wave uv.

**T. L. C. FOR YASHTI :**

TLC of Yashthi shows Rf 0.73, Earlier reseaserchers have presented TLC of yashthi in their studies. One such study is mentioned here. Permender Rathe Sushila Ratheeand Deepti Ahuja<sup>17</sup> has separated one spot with Rf value 0.71. He has mentioned that the spot refer to Glycyrrhetic acid. API standard also shown same blue spot Rf value 0.71 but not specify constituent.

**T. L. C. FOR FINAL PRODUCT :**

TLC OF BHRINGRAJA TAILA SHOWN FOLLOWING RF VALUE

Sample A	Sample B	Sample C
Rf 0.54 ,0.68,	Rf 0.56, 0.70	Rf 0.58, 0.72

**Result of antibacterial activity –**

Sr.No.	Patogen	Antibacterial activity Result after 24 hrs
1	<i>E. coli</i>	Negative
2	<i>Candida albicans</i>	Negative
3	<i>S. auerus</i>	Negative
4	<i>S. typhi</i>	Negative

**CONCLUSION :**

Present results can be used as a quality control method for characterization of samples to check their uniformity. The obtained values of physical and chemical parameters for the finished product can be adopted to lay down new pharmacopoeial standards to be followed in the traditional preparation of *Bhringaraja Taila* with batch to batch consistency.

In antimicrobial study Zone of inhibition could not be observed in all the eight plates used in the study. These plates belonged to *Candida albicans*, *Escherichia coli*, *Salmonella typhi* and *Staphylococcus aureus*.

The medicated oil Bhringaraja Taila does not show any antimicrobial activity against *Candida albicans*, *Escherichia coli*, *Salmonella typhi*, *Staphylococcus aureus*.

On the basis of the present study it can be said that *Bhringaraja Taila* will not be effective in the treatment of hair infections as it does not show any antimicrobial activity.

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## AYURVEDIC MANEGMENT OF PCOS

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### Abstract :

Poly cystic ovarian syndrome (PCOS) is a complex syndrome affecting 5 to 15% of the females of reproductive as well as premenopausal age. It involves various symptoms related to metabolism and reproductive system. **In Ayurvedic literatures there are explanation of some conditions which, as- in Kashyap Samhita, Kalpasthan, RewatiKalpa, there are references of PushpaghniRewati (anovulatory menstruation +obesity +hirsutism), ShushkaRewati (primary amenorrhoea), KatambharaRewati (secondary amenorrhoea), and VikutaRewati (irregular menses)- which are found in PCOS. Symptoms complex matches with Pushpaghni Revati *In this study a Polyherbal formulation prepared by Unijules life Sciences ltd. is evaluated on 36 patients suffering from various symptoms of PCOS for three months treatment duration. A highly significant result was observed in pain during menstruation, interval between two menses, follicular size and in decreasing the BMI i.e. in obesity also.***

Overall this study established a good management useful for PCOS without causing any unwanted effects.

### I. Introduction :

Polycystic ovarian syndrome (PCOS) is the most common disorder in women of reproductive age as well as premenopausal women.' This is a type endocrine disorder which involves **an ovulation**, hirsutism, irregular and painful menstrual cycles, amenorrhoea, having small cysts in the ovaries etc. This is a major cause of infertility in women, also known as stein-levithel syndrome.<sup>2</sup>

Clinically, PCOS is made up of three characteristics: hyperandrogenic state, anovulation and insulin resistance<sup>(34)</sup> the accompanying insulin resistance and hyperinsulinemia mark PCOS as a prediabetic state, with high incidence of impaired glucose tolerance, gestational diabetes, and overt diabetes. In patients with PCOS, other metabolic and biochemical changes, such as hypertension and dyslipidemia, increase the risk of cardiovascular disease.

According to Ayurveda PCOS is caused by the imbalance of the three *doshas* in which aggravated *kapha* affects the functions of *vata* and *pitta* by which *ras* and *rakta* dhatu get affected with formation of *Ama* (toxins) in weaker channels of the body affecting *artav-vaha strotus* which is responsible for reproduction in female body.

## II. Materials And Methods :

**Enrollment of the Patients:** This study was carried out in **SHRI VISHWAYADNYA AYURVEDA'S The Ayurvedic T.H.Y.R.O.I.D. Clinic**. The patients attaining the OPD and fulfilling the criteria of selection were enrolled in the trial irrespective of their religion, cast etc.

**Criteria for Inclusion:** Female patients aged between 12 to 65 and fulfilling the ESHRE/ASRM - Rotterdam revised criteria for PCOD, 2003 (fulfilling at least two of the following three criteria)<sup>5</sup> were enrolled in the study.

1. Oligomenorrhea and/or anovulation
2. Hyperandrogenism (Clinical and/or bio-chemical)
3. PCO-diagnosed by Ultra Sonography

**Criteria for Exclusion:** Following patients were excluded from the trial

1. Patients having Oligomenorrhea and anovulation due to any other etiology apart from PCOD.
2. Patients having severe chronic diseases like tuberculosis, carcinoma, any illness of reproductive system and/or pelvic disorders etc.
3. Patients having any congenital deformities, cardiac problems etc.
4. Patients of severe insulin resistance, severe thyroid abnormalities. Cushing's syndrome, were excluded.
5. Patients of adrenal hyperplasia, androgen secreting neoplasm were also excluded from the trial.

### STUDY DRUG :

1. In this clinical study Polyherbal formulation used derived from time to time clinical observations along with Internal Treatment for 3 months- Revati Kalp 2 cap BD
2. Panchakarma Treatment of span 21 days including
  - a. Basti- Manjishtjadi Kharbasti & Dhanwantar Taila alternate days
  - b. Uttar Basti- Kshar Tail 5 ml

Revati Kalp cap is a Polyherbal formulation of seven times Bhavit herbs of Sharapunkha (Tephrosia Purpurea), Latakaranja (Cesalpinia cristea). Haridra (Curcuma longa). Shatapushpa (Anethum sowa), Shatawari (Asparagus racemosus), Trikatu, Shukrashodhana Mahakashay and Tankan bhasma (Borax), in a capsule form of 500 mg.

### STUDY DESIGN :

This was an open labeled, non comparative study conducted after taking prior informed consent of the patients. Total 26 patients were enrolled in the study out of which 19 patients had completed the 12 week duration of treatment. In this period all patients were advised to take the capsules in a dose of two capsules two times a day after meal. Patients were called up for follow up after every one month.

**Assessment criteria :****Table 1 Demographic data of the Patients**

		No. of pt.	%
<b>Age group</b>	12 to 25	3	15.79
	25 to 40	13	68.42
	40 to 55	2	10.52
	55 and above	1	5.26
<b>Marriage</b>	Married	14	73.68
	Unmarried	5	26.31
<b>Diet</b>	Vegetarian	11	57.89
	Mix	8	42.10
<b>Occupation</b>	Office work	13	68.42
	House wives	6	31.57

During each visit patients were assessed for the duration of menses, size of the follicular and ovulation, Body mass index (BMI) and pain during menses. Symptom score from 0 to 3 depending on severity was assessed for all symptoms.

Obtained results were measured according to the grades as completely improved (100% relief), marked improvement (75 to 100%), Moderate improvement (50 to 75%), mild improvement (25 to 50%) and unchanged (upto 25%).

During treatment period patients were advised for dietary habits needed for reduction in weight. Avoid junk foods and for some exercise in morning.

**INVESTIGATIONS :**

Routine investigations of Hb%, TLC, DLC, ESR were carried out before and after treatment also USG was done on 2<sup>nd</sup> and 3<sup>rd</sup> day of menses for PCO and in between 12<sup>th</sup> to 20<sup>th</sup> day of menstruation for follicular growth and ovulation. Also serum analysis for LH and FSH were done on 2<sup>nd</sup> and 3<sup>rd</sup> day of menses.

**STATISTICAL ANALYSIS :**

All data was analyzed by using appropriate statistical tests by considering  $p < 0.0001$  as a highly significant,  $p < 0.001$  as significant and  $p < 0.05$  as insignificant.

**III. Observation And Results :**

In present study most of the patients belongs to the age group 25 to 40 i.e. 61.11%. while 83.33% females were married and 66.66% were of vegetarian diet. (Table I) 60.11% of the patients were housewife and 65.43% patients were suffering from irregular menses (Oligomenorrhoea). 85.33% females were having improper dietary habits (*Vishaniashan*), 50.76% were having painful menses and 35.04% cases were of primary infertility. 69.11% patients were of *Vatakaphajprakniti*. More than 70.99% had stress, 75.43% had symptoms of *Ama and Mandagni*. 25.25% were obese, 85.58% were having bilateral PCO as per USG report. 90.66% had follicular size between 0-10 mm and LH:FSH ratio was  $>2$  in 34.22 % of the patients.

After the completion of 3 months treatment period highly significant results were obtained in reducing pain during menstruation (80.82%), and in reducing the irregularity of menses i.e. in

reducing the interval between two menses (72.72%). Whereas significant results were obtained in follicular growth/ovulation (77%) and in reducing obesity (17.72%).

On overall assessment 67.77% patients showed complete improvement, 13.88% showed marked improvement, 10.66% patients showed moderate improvement, where as 3.55% of patients showed mild improvement and 4.12% patients didn't have any improvement in the symptoms of PCOD. All the hematological parameters were within limits

In PCOD lots of immature eggs are formed in ovaries due to too much production of luteinizing hormone (LH) compared to follicle-stimulating hormone (FSH) but due to too much production of male hormone testosterone their ovulation doesn't occur, which results in formation of cysts with associated disorders related to menstruation. Most of the times pts with PCOS are treated with hormonal therapies, though it gives relief in short period but the hormones which are secreted naturally or physiologically when supplied by artificial means it puts endocrine system in to sleep and puts body in a lazy mode causing irreversible metabolic damages. So treatment for PCOS should be holistic in context of regulating menstruation by means of curing all associated disorders.

Metformin is widely used drug for treatment of PCOS to reduce the insulin resistant, but these study shows that as we go strictly with the protocol of reducing metabolic disorders we need not to go with metformin which will definitely prevents side effects and cures the disease holistically. This polyherbal formulation is composed in such a way which cleanses, nourishes and rejuvenates entire metabolism along with regulating the female reproductive system.

Sharapunkha (*Tephrosiapurpuria*) is a bitter tonic, mainly used for liver, spleen and kidney disorders. It has anti-inflammatory, cleansing, tonic activities which help in curing several metabolic disorders. Animal studies on wister rats in which PCOS was induced by ietrozole treatment showed significant results in relieving the symptoms of PCOS showing normalcy in estrous cycle further to induce ovulation and fertility.<sup>6</sup> Latakaranja (*Caesalpinia crista*) is a uterine tonic which helps in proper production and secretion of ovum. It cleanses and nourishes the uterus. It is useful in alleviating *vata dosha* by which it checks the digestive troubles, amenorrhea and reduces the pain associated with menstruation etc. Haridra (*Curcuma longa*) is a well known herb having anti-inflammatory and cleansing activity, it helps in alleviating *kapha dosha* which helps in removing the toxins and opens up the blocked sub channels affecting proper estrous cycle. Shatapushpa (*A net hum sowa*) is useful in correcting *Artava kshaya* (oligomenorrhoea) and *Kashtartava* (dysmenorrhoea)<sup>7-8</sup>. It nourishes the *rasa* and *rakta dhatu* which helps in proper metabolism and production of the ova in ovaries. Shatavari (*Asparagus racemosus*): is the herb having anti-stressor, immunomodulatory and tonic activity for women. It improves overall issues related to reproductive system and fertility. It has the demulcent action which acts as a protector and tonic for the mucous membrane. It has the estrogen modulating activity which contributes to menstrual cycle regulation. Trikatu (*Sounth, marich pippali*) is cleansing, bio-availability enhancer and corrects the metabolism by removing the toxins. Improves appetite and helps in maintaining the proper lipid profiles. Tankan bhasma is astringent and antiseptic; it promotes the menstruation and uterine activities. It checks amenorrhoea, dysmenorrhoea etc. it alleviates *kapha* and *vata* & removes the obstruction in sub channels.

Also significant results were observed in anorexia & overall digestion & metabolism of the patients showing that this formulation has overall effect on entire pathophysiology of the disease.



# **“To Study The Efficacy of Karpoor Ghrita Lepan in Parikartika With Special Reference to Flistula-in-Ano”**

**Dr. Manjushri A. Chalak, Dr. M. J. Qadri**

## **Abstract :**

In the present study an effort were made to derive a standard and easily accessible treatment for fissure in ano. In Bhaishajya Ratnavali the karpoor ghrita is described in reference to Sadyavrana is very potent vranashodhana, vranalekhana and vranaropak. Hence it is selected for clinical evaluation. Drug in the form of Karpoor (Cinnamomum camphor) was selected for clinical trial as it possess Vedanasthapan (analgesic), lekhan (scrapping) and krimighna (anti-bacterial) property mentioned in Ayurvedic text and various research study on it proved its analgesic and anti-inflammatory property. Drug was also easily available and cost effective. Drug was used for preparation of karpoor ghrita in the form of malahara ( ointment) . Two types of malahara were prepared for clinical trial. Total 60 patients were selected for clinical trial on the basis of randomised sampling and divided in two equal groups each containing 30 patients. In two groups application of ghrita daily two weeks. All patients were assessed on the basis of clinical findings and assessment criteria (Gudapida, Gudakandu, Raktastrava, Sphincteric spasm, size of the ulcer) included in study. Findings of assessment criteria were observed before and after therapy.

All the observations were discussed and statistically analysed. On observation, study revealed that karpoor ghrita lepan was found effective in management Parikartika (fissure in ano). Results obtained were statistically analysed and conclusion drawn from the study.

**Keywords :** Parikartika, karpoor ghrita

## **INTRODUCTION :**

In the era of busy and advanced life style , change in the food habits and mental stress causes lot of disturbance in digestive system which result into many diseases . Anorectal disorders are very common among these diseases. Parikartika ( fissure in ano ) is a very common and most painful condition among the anorectal diseases . Because of injury to somatic nerve supply to anal region. In Ayurveda Parikartika which means Karatanvatvedana i.e. cutting pain around the anus. In Ayurved texts Parikartika is described as complication of virechanavyapad i.e. therapeutic purgation.

## **AIMS AND OBJECTIVE :**

**AIMS :** To study the efficacy of karpoor ghrita lepan in treatment of Parikartika w.s.r. fissure in ano.

**OBJECTIVES :**

- To evaluate the efficacy of karpoor ghrita lepan in treatment of Parikartika.
- To achieve the healing of fissure in ano by Ayurvedic medication.
- To examine the pain relief defaecation & itching in fissure in ano.
- To explore the possibility of avoiding surgeries & its complication in extensive.
- To find out a simple, harmless, conservative & effective alternative

**MATERIALS AND METHODS :**

The present study was conducted basically at 3 levels-

1. Conceptual study. 2) Standardization & quality control of trial drugs. 3) Clinical Study .

**Level I (Conceptual Study) :**

**A)** Conceptual review of the topic from Ayurvedic samhita was done. **B)** References of Parikartika & description of Karpoor ghrita and Shatadhauta ghrita were collected & compiled. Study of Fissure in ano from modern literature & internet was done with the latest update on the fissure in ano.

**Level II (Standardization & quality control of drug) :**

**A)** Authentication and Standardization of Karpoor ghrita and Shatadhauta ghrita was done Pune University and Jeevanrekha Analytical Services, Aurangabad respectively.

**Level III (Clinical Study) :****CLINICAL TRIALS :**

**Type of Study** –The present study is open, randomized, controlled, prospective, clinical trial including Group A and Group B

**Study Design:**

**Sample size : 60 patients**

**Groups** - Two groups made for study

**Group A** :30 patients (Experimental group) Karpoor ghrita lepan daily for two weeks

**Group B** : 30 patients (Control group) Shatadhauta ghrita lepan daily for two weeks

**Duration** : Daily application upto maximum two weeks

**Follow up** : 0 , 3 , 5, 7, 14 days.

**Place of study:** Total 60 patients having parikartika were selected irrespective of age, sex & religion from the OPD & IPD of Shalyatantra department of the Hospital according to inclusion & exclusion criteria.

**Consent** : A well informed written consent were taken from the patients. A proforma of consent from is enclosed with this submission.

**1] Inclusion criteria** - Patients were selected with Parikartika irrespective of age, sex & socio-economical class.

**2] Exclusion criteria -**

- ❖ Patient having Parikartika (Fissure in ano) secondary to Ulcerative colitis , syphilis , crohn's disease , tuberculosis and CA of rectum and anal canal.
- ❖ Patients with infectious disease like HIV and HBsAg.
- ❖ Patients with uncontrolled diabetes and HTN.
- ❖ Patients with fissure in ano associated with condition like Haemorrhoids, fistula in ano.

**CRITERIA FOR ASSESSMENT SUBJECTIVE CRITERIA :****1. Gudapida (cutting pain) Visual analogue pain scale**

0	1	2	3	4	5	6	7	8	9	10
No	Pain is $\leq$ half an hr. after defaecation.		Pain > half an hr. but 1 hr. after defaecation.				>1 hr. after defaecation.			
No	Mild		Moderate				Severe			

**Grade 0** – No pain

**Grade 1** –Duration of painful condition less than or equal to one and half hour after defaecation.

**Grade 2** – Duration of painful condition more than half hour but less than or equal to 1 hour after defaecation.

**Grade 3** – Duration of painful condition more than 1 hour after defaecation.

**2. Gudakandu ( Itching in anal region )**

**Grade 0** – No itching.

**Grade 1** – Itching during defaecation.

**Grade 2** – Itching intermittently.

**Grade 3** – Itching continuously.

**3. Raktastrava (PR bleeding)**

**Grade0** – No bleeding.

**Grade1** – Bleeding like streak on stool only during defaecation.

**Grade2** – Along with bloody streak on stool drop wise bleeding also (1 to 10 drops)

**Grade3** – Heavy bleeding more than 10 drops that is soiling the cloth.



**4. Sphincteric spasm****Grade0** – No spasm**Grade1** – Spasm relived on P/R examination**Grade2** – Slightly puckered anal aperture.**Grade3** – Severe spasm with puckered anus.**OBJECTIVE CRITERIA :****5. Size of ulcer****Grade0** – No ulcer (fissure) or healed ulcer.**Grade1** – Superficial ulcer less than half cm with non-inflamed edges and fibrosis**Grade2** – Ulcer between half to one cm with inflamed edges.**Grade3** – Deep ulcer greater than one cm with fibrose floor and edges.**OBSEVATION AND RESULT :**

Thirty patients for each group were selected randomly for the project work. All the selected patients were thoroughly examined and diagnosed and selected based on exclusive and inclusive criteria. The assignment revealed the following statistics.

**1) Incidence of age**

Age group	Group		Total	P-value
	Group A	Group B		
≤ 20	1	0	1	0.25 4
21 - 30	11	13	24	
31 - 40	4	6	10	
41 - 50	8	10	18	
> 50	6	1	7	
Total	30	30	60	

**Conclusion :** By using Chi-square test p-value > 0.05 therefore there is no significant difference between age distribution in group A and group B.

**1. Incidence of sex :**

Gender	Group		Total	P-value
	Group A	Group B		
Male	16	21	37	0.2
Female	14	9	23	88
Total	30	30	60	

**Conclusion :** By using Chi-square test p-value > 0.05 therefore there is no significant difference between distribution of gender in group A and group B.

**2. Incidence of Religion :**

Religion	Group		Total
	Group A	Group B	
Buddhist	3	2	5
Hindu	23	25	48
Muslim	4	3	7
Total	30	30	60

**3. Incidence of occupation :**

Occupation	Group		Total
	Group A	Group B	
Business	0	1	1
Education	2	3	5
Farmer	10	7	17
House Wife	10	5	15
Service	4	11	15
Worker	4	3	7
Total	30	30	60

**4. Incidence of Socioeconomic Status :**

Economic Status	Group		Total
	Group A	Group B	
Poor	11	7	18
Middle	17	19	36
Rich	2	4	6
Total	30	30	60

**Statistical analysis of different parameters :**

As grading used for the parameters were ordinal in nature, inter-group comparison (i.e. for comparing two groups with each other) "Mann-Whitney U test" is used. We have tested hypothesis for each parameter and result is interpreted accordingly. The level of significance is kept at 0.05.

**1. Gudapida**

**Conclusion :** By using Mann-Whitney U test p-value < 0.05 therefore there is significant difference between grade of Gudapida in group A and group B at day 7

**2. Gudakandu :**

Gudkandu	Group A			Group B			P-value
	Min	Max	Median	Min	Max	Median	
Baseline	1	3	3	1	3	2.5	0.993
Day 3	1	3	2.5	1	3	2	0.587
Day 5	1	3	2	1	3	2	0.178
Day 7	1	3	2	0	2	1	< 0.001
Day 14	0	3	1	0	2	0	0.058

**Conclusion :** By using Mann-Whitney U test p-value < 0.05 therefore there is significant difference between grade of Gudakandu in group A and group B at day 7.

**3. Raktastrav :**

		Raktastrav grade				Total
		0	1	2	3	
Baseline	Group A	0	3	7	20	30
	Group B	0	2	14	14	30
Day 3	Group A	0	2	12	16	30
	Group B	0	2	14	14	30
Day 5	Group A	0	2	20	8	30
	Group B	0	4	23	3	30
Day 7	Group A	0	10	11	9	30
	Group B	5	15	10	0	30
Day 14	Group A	0	11	8	11	30
	Group B	0	18	7	5	30

**Conclusion :-** By using Mann-Whitney U test p-value < 0.05 therefore there is significant difference between grade of raktastrav in group A and group B at day 7, Day 14

**4. Sphincteric spasm :**

		Sphincteric Spasm grade				Total
		0	1	2	3	
Baseline	Group A	0	3	7	20	30
	Group B	0	2	14	14	30
Day 3	Group A	0	2	12	16	30
	Group B	0	2	14	14	30
Day 5	Group A	0	2	20	8	30
	Group B	0	4	23	3	30

Day 7	Group A	0	10	11	9	30
	Group B	5	15	10	0	30
Day 14	Group A	0	11	8	11	30
	Group B	0	18	7	5	30

Sphincteric Spasm	Group A			Group B			P-value
	Min	Max	Median	Min	Max	Median	
Baseline	1	3	3	1	3	2.5	0.329
Day 3	1	3	2	1	3	2	0.948
Day 5	1	3	2	1	3	2	0.059
Day 7	1	3	2	0	2	1	0.001
Day 14	0	2	1	0	2	0	0.091

**Conclusion :** By using Mann-Whitney U test p-value < 0.05 therefore there is significant difference between grade of Sphincteric Spasm in group A and group B at day 7.

#### 6. Size of the Ulcer :

Size ulcer	Group A			Group B			P-value
	Min	Max	Median	Min	Max	Median	
Baseline	1	3	3	1	3	2	0.231
Day 3	1	3	2.5	1	3	2	0.444
Day 5	1	3	2	1	3	2	0.085
Day 7	1	3	2	0	2	1	0.002
Day 14	0	2	1	0	2	0	0.161

**Conclusion :** By using Mann-Whitney U test p-value < 0.05 therefore there is significant difference between grade of size ulcer Day 7 in group A and group B at day 7.

#### DISCUSSION :

##### ❖ Probable mode of action of drug :

Effect of Karpoor ghrita as well as Shatadhaut ghrita in the treatment of Fissure showed very promising results but statistically the difference was significant and Karpoor Ghrita showed better results than Shatadhaut Ghrita. In case of parameter Gudapida, the difference in result was seen significant on 7th day ( $p < 0.001$ ) and on 14th day. This difference in the result is probably due to healing property and soothing effect of Karpoor. Due to its tikta and madhur rasa, it acts as a potent Vranaropak and Pittashamak which relieved the patient sharp burning pain in Fissure in ano. Ghrita along with Karpoor also helped for Vranaropan and Pittashaman by its yogavahi action.

Gudakandu is associated symptom and it was seen in varying severity from patient to patient in this clinical study. The effect of treatment on Gudakandu in both groups showed good results, but it was statistically significant in the experimental group with Karpoor ghrita from 7th day of

treatment. Though it was not statistically significant on 14<sup>th</sup> day but clinically it showed better result. The Kandughna action was due to Kledaghna property of Karpoor because of its tikta, katu rasa and laghu, rukshaguna.

Effect of treatment on raktastrava shows that the p value is <0.001, which is significant in experimental group. It suggest that treatment is effective in managing Raktastrava in fissure in ano probably due to healing of Fissure by Karpoor ghrita. Relief from constipation due to GandharvaHaritaki also helped in controlling bleeding by preventing friction and tear of anal mucosa by softening the stool.

Effect of Karpoor ghrita also showed significant results in relieving Sphincteric spasm, this might have probably seen due to Lubricating and soothing action of ghrita and daily local application and gentle anal dilatation by finger with Karpoor ghrita. Decrease in the size of the ulcer due to vranaropak property and soothing effect of the karpoor ghrita which helped in healing the fissure gradually.

**CONCLUSION** : The following conclusion can be made with the help of present study, on the basis of obtained data and result.

1. Vata and Pitta dosha are found dominant in samprapti of Parikartika.
2. The site of Parikartika is similar to site of Fissure in ano.
3. Most of the patients with fissure-in-Ano complain of constipation.
4. Fissure-in-Ano can be managed without the help of surgical management.
5. Age group between 21-30 years is more prone to fissure in ano.
6. Karpoor ghrita showed significant effect in relieving raktasravaand sphincterspasm.It was analyzed scientifically by standard statistical method.
7. Effect in parikartika (Fissure-in-ano) especially fast healing of ulcer is better in Group A as karpoor ghrita has good varanaropaka property also.
8. Shatadhauta ghrita shows good efficacy towards reducing pain in anal region.
9. Excessive consumption of Lavaôa, Katu, Tikta, Ruksa, UshnaAhara and irregular diet and diet timings are the main precipitating factors of this condition.
10. Hence the efficacy of karpoor ghrita is more significant in parikartika .
11. This study requires further research with the help of investigative methods.

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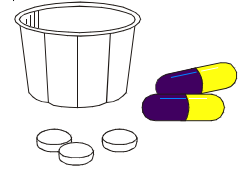
## Information - Ayurveda Pharmacy

### Siddha Taila (Medicated oils) Treated with Milk

- 1) Anu Taila - contains Milk
- 2) Apamarga Kshar Taila
- 3) Bala Taila
- 4) Bhrungaraj Taila
- 5) Bilva Taila - contains Goat's Milk
- 6) Brahmi Taila
- 7) Chandanbalalakshadi Taila
- 8) Chukra Taila 
- 9) Gudabhransha Taila
- 10) Irimedadi Taila
- 11) Jatyadi Taila
- 12) Mahanarayan Taila - processed with Milk
- 13) Marichyadi Taila
- 14) Narayan Taila
- 15) Paribhadra Taila
- 16) Sahachar Taila
- 17) Shadabindu Taila
- 18) Vacha Taila - processed with Milk
- 19) Vedanahar Taila
- 20) Vishagarbha Taila
- 21) Varnaropak Taila 
- 22) Vranashodhak Taila

### Tablets & Medicines which are containing processed Mercury listed below

- 1) Kutajaparpati Vati
- 2) Sootashekhar Sadha
- 3) Sookshma Triphala
- 4) Sukhasarak Vati
- 5) Thiostanin
- 6) Arogyawardhini
- 7) Arshakuthar
- 8) Chandrakala Rasa
- 9) Krumimudgar Rasa
- 10) Madhumalini Vasant
- 11) Panchamrit Parpati Vati
- 12) Shankha Vati
- 13) Tribhuvankirti
- 14) Vatvidhvansa Rasa
- 15) Mahalaxmivilas Rasa
- 16) Makardhwaj Vati
- 17) Suvarnamalini Vasant
- 18) Svarna Soot Shekhar Vati
- 19) Raupya Bhasma
- 20) Vyadhiharan Rasa
- 21) Tamra Bhasma
- 22) Rasaparpati
- 23) Shwas kuthar
- 24) Suvarna Sameer Pannaga
- 25) Narach Rasa
- 26) Rasa Sindoor



*Mercury % can tested or find out from tablet or any medicine by Atomic Absorption to PPM level.*

## Ageing Begins Even Before Birth



The process of ageing begins even before we are born, says a new study, which used rats to model pregnancy and foetal development. It showed that providing mothers with a diet full of antioxidants during pregnancy meant their offspring aged more slowly during adulthood. The offspring of mothers with lower levels of oxygen in the womb can age more quickly in adulthood.

"Antioxidants are known to reduce ageing, but here, we show for the first time that giving them to pregnant mothers can slow down the ageing clock of their offspring", said Beth Allison of the University of Cambridge in Britain.

The study also emphasized that the environment we're exposed to in the womb may be just as important in programming a risk of adult-onset of heart disease. Researchers found that adult rats born from mothers who had less oxygen during pregnancy had shorter telomeres, essential part of human cells that effects the age of cells, than rats born from normal pregnancies. The offsprings' also had problems with the inner lining of their blood vessels, revealing signs that they had aged more quickly and were prone to heart disease earlier than normal.

Sunday Times of India, Pune, March 6, 2016

## Exercise benefits from Vitamin C Supplements?



Washington : Taking vitamin C supplements daily may have similar cardiovascular benefits as regular exercise in over weight and obese adults, a new study has claimed.

Overweight and obese adults are advised to exercise to improve their health, but more than 50% do not do so, researchers said.

Research conducted at the University of Colorado, Boulder, has suggested that taking vitamin C supplements daily can have similar cardiovascular benefits as regular exercise in these adults. The blood vessels of overweight and obese adults have elevated activity of the small vessel constricting protein endothelin (ET)-1. Because of the high ET-1 activity, these vessels are more prone to constricting, becoming less responsive to blood flow demand and increasing risk of developing

vascular disease.

Exercise has been shown to reduce ET-1 activity, but incorporating an exercise regimen into a daily routine can be challenging.

The study examined whether vitamin C supplements, which have been reported to improve vessel function, can also lower ET-1 activity. Experts found daily supplementation of vitamin C (500 mg./day) reduced ET-1 related vessel constriction as much as walking for exercise did. Vitamin C supplementation represents an effective strategy for reducing ET-1 mediated vessel constriction in overweight and obese adults, the experts said.

Chavanprash, the Ayurveda ageold preparation contain Vitamin C which founds in Amalaki (Emblca Officinalis)

The Times of India, Pune Monday, September 7, 2015

## **Your Daily Bread can up Lung Cancer risk**

### **Food Rich in Glycemic Index Tied to Disease; Bagels and Cornflakes too on High Risk list**

Houston : Consumption of foods with a high glycemic index (GI) such as white bread, bagels, cornflakes and puffed rice may be associated with an increased risk of lung cancer, a study has warned.

The findings by scientists from the University of Texas in US also unvell for the first time that glycemic index is more significantly associated with lung cancer risk in particular subgroups, such as non smokers and those diagnosed with the squamous cell carcinoma (SCC) subtype of lung cancer.

In US, lung cancer is the second most common cancer type, but is by far the leading cause of cancer mortality. Accumulating evidence suggests that dietary factors may modulate lung cancer risk, researchers said. Diets high in fruits and vegetables may decrease risk, while increased consumption of red meat, saturated fats and dairy products have been shown to increase lung cancer risk.

Glycemic index is a measure the quality of dietary carbohydrates, defined by how quickly blood sugar levels are raised following a meal. "Diets high in glycemic index result in higher levels of blood glucose and insullin, which promote pertubations in the insulin like growth factors", said Stephanle Melkonian from University of Texas.

To clarify the associations between GI glycemic load and lung cancer risk, researchers surveyed 1905 patients diagnosed with lung cancer and 2413 healthy individuals.

Dietary GI and GL was determined using published food GI values and subjects were divided into five equal groups, based on their GI and GL values.

"We observed a 40% increased risk of lung cancer among subjects with the highest daily GI compared to those with the lowest daily GI", said Xifeng Wu from University of Texas.

In non-smokers, the researchers found that those in the highest GI group were more than twice as likely to develop lung cancer as those in the lowest group. Among smokers, the risk was only elevated by 31% between the two groups. The relatively mild effects of a risk factor such as GI are more evident in the absence of the dominant risk factor, researchers said.

The Times of India, Pune  
Monday, March 7, 2016





## **Herbs, Spices boost Heart Health?**

A new study has found that spices and herbs don't just add flavour to your food, but may also help boost your heart's health. Nutritionists say the ingredients, which are rich in antioxidants, help improve triglyceride concentrations and other blood lipids. Triglyceride levels rise after eating a high fat meal, which can lead to an increased risk of heart disease. If a high antioxidant spice blend is incorporated into the meal, triglyceride level may be reduced by as much as 30% when compared to eating an identical meal without the spice blend.

Researchers looked at three categories of studies - spice blends, cinnamon and garlic. Cinnamon was shown to help diabetics by significantly reducing cholesterol and other blood lipids. The garlic studies suggested there was an 8% decrease in total cholesterol with garlic consumption which decrease risk of heart problems by 38% in 50 year old adults. In the study conducted, meals were prepared on two separate days for six men between the ages of 30 to 66 who were over weight, but otherwise healthy. The meals were identical, consisting of chicken, bread and a desert biscuit, except that the reasearchers added two tablespoons of a high antioxidant culinary spice blend, which included garlic powder, rosemary, oregano, cinnamon, cloves, paprika, turmeric, ginger and black pepper, to the test meal.



## **Long-term use of Antacids may lead to Kidney Damage**

New Delhi : The next time your doctor prescribes proton pump inhibitors (PPI) for acidity, do question if it is really necessary and how long should you take it. For, there is an emerging body of evidence suggesting side-effects including kidney damage on long term use of these drugs.

Two of the most recent studies indicating the association between kidney damage and PPIs have been published in the Journal of the American Society of Nephrology.

The first study followed 10,482 participants from the Atherosclerosis Risk in Communities Study. Researchers found that PPI users were between 20 to 50% more likely to develop chronic kidney disease than non PPI users. There users were also more often Caucasians, obese, and taking antihypertensive medication.

Experts said the suggested links could be because of reduction in levels of magnesium in the blood due to PPIs. However, further research is required to prove the same. Fortis C Doc Center of Excellence for Diabets, Metabolic Syndrome and Endocrinology, said PPIs are the most effective drugs for acidity and related disorders.

"Several studies have hinted at the possibility of its side effects, including kidney damage. But there is no evidence to show the cause and effect relationship".

The Times of India, Pune  
Tuesday, November, 2, 2015



## **Why Painkillers fail in Most Back Pain Cases?**

It is a fact that in chronic back pain cases, painkillers reduce the pain only temporarily. In most cases the pain is back once the effect of the medicine subsides. Published studies suggest that long term usage of painkillers tends to weaken the immune system. It's also been noticed that the effectiveness of pain killers reduces over time.

Back pain, in most patients, is a result of spinal disorders which in turn are caused by weaknesses and imbalances in spinal musculature. X-ray and MRI are static imaging methods that do not fully help diagnose the cause of back pain. Of all back pain cases 85% are in fact labeled 'non-specific' back pain.

Varun Patil, 37 was suffering from back pain for the last five years. He developed back pain due to long hours of sitting and driving. Initially, he opted for pain killers however, they gave him only temporary relief. He was not able to sit, stand and walk for more than 30 minutes. He had to stop his work-out routine as well. He visited an orthopaedic surgeon and was diagnosed with Disc Herniation at L4-L5. He was advised pain killers, injections, traction and bed rest. However, nothing seemed to give him lasting cure.

Varun's surgeon then suggested that he meet doctors at Spine Clinic, Seventy-five percent of the body's weight is borne by muscles and to locate the cause of back pain. Varun's spine muscles need to be studied. At Spine Clinic, he underwent a spine function test, the DSA. Accurate diagnosis led to a non-in-vasive muscle regeneration treatment program, where the weaker muscles were specifically targeted.

Within a couple of weeks he was no longer in pain. He was relieved of the restrictions and curbs he had imposed upon himself and his painkillers have stopped completely.

The Times of India, Pune  
Tuesday, 6 October, 2015



## **5th International Ayurveda Research Day Conference Sunday, 31st January 2016**

The 5th International Ayurveda Research Day Conference was organized on Sunday 31st January 2016 at Sumant Moolgaokar (Sushruta Sabhagruha) and Navalmal Firodiya Auditoriums (SIPKA and Deerghayu Sabhagruha), International Conception Center towers, S. B. Road, Pune, India.

This was the 63rd International Conference organized by Deerghayu International, International Ayurveda Association and sister concern. The day was celebrated as 'Sushruta Samhita Divas' a day celebrated as a tribute to the legendary medical - surgical legacy, among the conferences dedicated to each from the 'Brihad Trayee'.

The proceedings of the Conference started at 10 am with prayer 'Dhanvantari Stavana'. At the inaugural ceremony, Conference Patron Prof. Dr. P. H. Kulkarni, Guest of honor Prof. Dr. S. P. Sardeshmukh (Dean, Faculty of Ayurveda, Tilak Maharashtra University and Member, C. C. I. M.), Prof. Dr. Satish Dumbre (Dean, faculty of Ayurveda, Maharashtra University of Health Sciences and Principal, Ashgtang Ayurveda College), Lucia Tommacini (Rome), Etienne Premdani (Holland), Neena Bailey (U. K.) and the Executive resident Dr. Atul Rakshe were present at the dias. Dr. Akshyaya Chyavan was the compere for the session.

125th Issue of Deerghayu International was inaugurated. A book named 'Swastha : The eternal Life' written by Dr. Ruturaj Kadam Patil and writing committee was also released.

Prof. Sardeshmukh said that he was witnessed the research in Ayurveda for decades as he was the first to receive Ph. D. in Ayurveda.

Highlight of the scientific session was Neena Bailey's speech on research methodology. Neena shared her experiences about scientific writing and gave number of useful tips about dos and don'ts especially while writing for a popular international journal.

Next session was organized at Navalmal Firodiya auditorium. Lucia Tommacini's speech about 'Ayurveda counseling' was an example of wisdom expressed very articulately. Especially the concept of 'metabolism of emotions' and role of emotions in certain of diseases was very thought provoking.

Etienne Premdani presented his study on live blood analysis and Ayurvedic concepts of Dosh, Dhatu, Mala, Ama and various diseases.

Dr. Neelima Sompura from Wadodara (Gujarat) shared her experiences in her Gynecology practice and Power Yoga.

Two parallel scientific sessions were organized in Navalmal Firody auditoriums (East and West : SIPKA and Deerghayu Sabhagruha) post lunch.

During these sessions, over 50 researches presented their work. Neena Baily and Prof. Dr. Kavita Indapurkar were the mentor and moderators for the session in SIPKA auditorium. Prof. Dr. J. K. Barde and Lucia Tommacini were the mentor and moderators for the scientific session in Deerghayu Sabhagruha.

The Presentation Ceremony started and 5.30 pm.

Prestigious 'Hari Anant Kulkarni Gold Medal' for best research was presented to Dr. Atul Rakshe for his M. Phil. level research on exploratory study of Pain in heels caused by calcaneal spur in different Prakruti individuals. His guide for this research is Prof. Dr. Yogini Kulkarni.

Institute of Indian Medicine declares its fellows time to time. The fellowship is declared to those who contribute to Medical Science by new research or as an author of a scientific book for those who contribute to medical education. During the ceremony, Dr. Harshad Mohare, Dr. Kaustubha Ghodake Vedpathak, Dr. Ruturaj Kadam Pail, Dr. Vikas Chothe, Dr. Manish Patil and Dr. Ganesh Lokhande received the Fellowship. Prof. Dr. Pravin Joshi and Prof. Dr. Eknath Kulkarni were declared the Post Doctoral Fellows of IIM.

Dr. Poonam Patil, Dr. Meenal Hings, Dr. Swati Kamat, Dr. Pranjali Ghodake Vedapathak, Dr. Vikas Chothe, Dr. Sanyukta Mohare and Dr. Ruturaj Kadam Patil were felicitated for their contribution as members of the scientific writing and syllabus design committee for PRAANAM, Barcelona, Spain.

The tile of 'Ayurveda Vaidya' was declared to Ms. Carmen Navarro Founder, Director of PRAANAM, Barcelona, Spain, for her contribution to Ayurveda education, propagation and practices for last ten years.

During his speech, the Patron Prof. Kulkarni said that honest research in Ayurveda should be utilized for the search of new medicines which can avoid disease.

Prof. Dumbre stated that the contemporary research in Ayurveda is losing the standards rapidly. The rules have to be implemented strictly to maintain the minimum global standards in Ayurveda research.

Best Thesis award was presented to Dr. Umesh Gate for his Ph. D. level research in Ayurveda. His guid is Prof. Dr. Kavita Indapurkar.

Best Paper Presentation Award for the conference was presented to Dr. Yogesh Helmar and Dr. Vaishali Kuchewar. Best poster award was presented to Dr. Gawari Chhaya and Dr. Vinaya Tilekar.

Three books were released in this ceremony. 'Diabetes Ayurveda Cure' written by Dr. Mrunali Morey, Dr. Eknath Kulkarni and Dr. Atul Rakshe, 'Abhyangatantra : Ayurveda Massage' written by Prof. Dr. Mugdha Bothare, Prof. De. Ramesh Deshmukh and Dr. Devika Deshmukh (USA) and 'Joint disorders and Ayurveda' by Dr. Chandrakant Pawar and Dr. Mugdha Bothare.

Dr. Ramesh Deshmukh, Member of Central Council of Indian Medicine felicitated Dr. P. H. Kulkarni on behalf of all the authors.

These books are written on various topics under guidance of Prof. Kulkarni. Three hundredth book of the series was released during the function. This is a record in modern history of Ayurveda.

Dr. Atul Rakshe said that Ayurveda research has to join hands and such conferences and meetings which bring all Ayurveda research under one roof should be organized time to time.

A pre-congress meet was organized at 'Dr. Rakshe Center of Ayurveda and "aediatics', Karvenagar, Pune on Saturday 30 January 2016.

The media representatives and members of the conference management committee were present.

This conference was managed, conceived and executed by Dr. Ruturaj Kadam Patil, Dr. Harshad Mohare, Dr. Kaustubha Ghodake Vedapathak, Dr. Vikas Chothe, Dr. Poonam Patil, Dr. Sandeep Nikam. Dr. Akshaya Parvatikar, Dr. Priyanka Surjuse, Dr. Sanyukta Mohare, Dr. Prachi Bhagwat, Dr. Zohed Shaikh, Dr. Swapnil Daspute and a brigade of young Ayurveda Practioners.

# 5th International Ayurveda Research Day conference



# 5th International Ayurveda Research Day conference



Dr. Atul Rakshe receives 'Hari Anant gold medal for best Ayurveda research thesis'



Etienne Premdani (Holland) receiving the 'International Ayurveda propagator award 2016'



Lucia Tommasini (Rome) receiving the 'International Ayurveda propagator award 2016'



Neena Nerkar (U.K.) receiving the 'International Ayurveda propagator award 2016'



Dr. Shashikant Kale receiving the 'International Rural Ayurveda propagator award 2016'



Recipients of the Fellowship of IIM