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Authors : April - June 2015 issue



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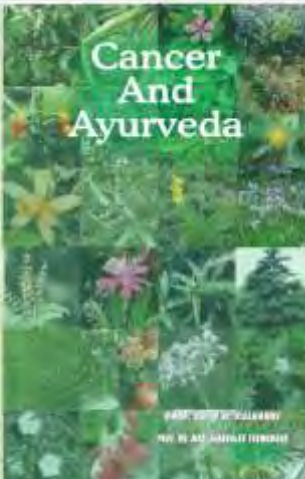

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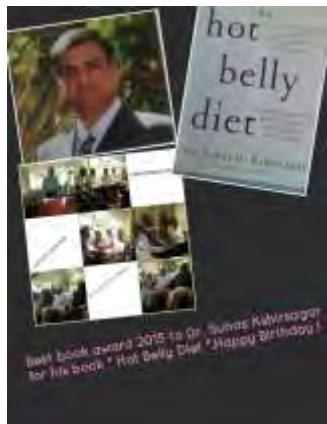


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DEERGHAYU INTERNATIONAL

ISSN 0970 - 3381

VOL. THIRTY ONE - 02

ISSUE NO. 122

Apr.-June 2015

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Research : Clinical

Study The Efficacy Of Mruttika Lepa (mud Pack) In Mukhadushika W.s.r. To Acne Vulgaris.

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ABSTRACT

Mukhadushika (acne vulgaris) is one of such disease which affect the facial skin, at such a particular age i.e., teenage, when the person developing his individuality & recognition. An effective treatment during this condition is necessary. Even though it is a self-limiting, most of them need treatment to have a spotless, bright complexion of the face. Naturopathy a natural, safe and cost effective science advices mud therapy in management of acne vulgaris. A Clinical study was conducted on 30 individuals to study the effect of mruttikalepa (mud pack) in mukhadushika (acne vulgaris) for period of 21 days. Application of MruttikaLepa showed beneficial effect inreducing vedana, shotha, srava, and vivaranata of mukhadushika.. Regular practice of Mruttikalepa is helpful in prevention of Mukhadushika. It improves Mukhakanti (complexion) and twakvarnya.

KEYWORDS: Mukhadushika, Lepa, MruttikaLepa

INTRODUCTION

Today's life style, irregular diet and pollution is directly affecting the skin.Skin provides individual identification and awareness of personal identity and self-image.

Mukhadushika (acne vulgaris) is one of such disease which affect the facial skin, at such a particular age i.e., teenage, when the person developing his individuality & recognition. Face is considered to be the mirror of the body. There is a fantasy for everyone to look good and impress others, during this age.

In Ayurveda five gyanendrias are mentioned. Sparshnendria is most important gyanendria and its sthan is twacha (skin), Twachaissthan of VataDosha, Bhrajak Pitta, Rasa, Rakta, Mamsa, Medadhatu.Mukhadusika is one of the skin diseases described under Kshudraroga in Ayurved. It can be co-related to acne vulgaris a common chronic inflammatory dermatosis consists of keratinized cells, sebum and bacteria. Mainly teenagepopulation is being affected at large, but involves both adults as well as adolescents irrespective of sex. Usually severity is peak at 16 – 25 years of age.

An effective treatment during this condition is necessary. Acharya Vagbhata recommends Lepa as first line of treatment. Present days all over the world people are conscious towards health as well as beauty and have an eagle's eye on cosmeticological appearance. Mukhadushika is a skin disease in which the pidikas arise during puberty on the face causing the disfigurement. As face is a part of physical attraction and major factor of one's appearance, definitely everyone has strong desire for good look and radiant skin.

Even though it is a self-limiting, most of them need treatment to have a spotless, bright complexion of the face. If it is left untreated, it may leave scar and lead to psychosocial disturbance.

Naturopathy a natural and cost effective science provides an easy and nature friendly mode of management skin disease using mud therapy. Present study deals with understanding the role of application of mud pack in management of mukhadushika (acne vulgaris).

AIM & OBJECTIVES

1. To study the effect of MruttikaLepain Mukhadushika..
2. To study the preventive aspect of MruttikaLepa in recurrence of Mukhadushika.

METHODOLOGY

Clinical trials on 30 patients of mukhadushika between age group of 12-30 years of both the sex was carried out. Mruttikalepa (mud pack) is used for Mukhalepa. Black soil is considered to be best among all types of mud; hence for the present study black soil was preferred for application on the face.

Inclusion criteria

- 1) Patient diagnosed for Mukhadushika after examination.
- 2) Patient selected in the age group 12-30 yrs.
- 3) Patient selected irrespective of sex, religion, occupation and socio-economic status.

Exclusion criteria

- 1) Individuals contraindicated in Samhita for mukhalepa were excluded.
- 2) Individuals suffering from any systemic disorder were excluded.
- 3) Individuals suffering from other disorder were excluded.

Procedure:

Mruttikalepa (mud pack) is used for Mukhalepa. Black soil is considered to be best among all types of mud; hence for the present study black soil was preferred.

- Route: Local Application.
- Form : Paste

- Time : Evening(once per day)
- Duration: 15-20 minutes/ Day.
- Thickness : ½ Anguli (0.5 cm)
- Quantity: 10-15 gm.

Patients were asked to clean there face with warm water and black soil made into paste form appliedover the face. After 15-20 minutes or as the signs of drying of pack are noted the patients are asked to clean the face using warm water.

Duration ofTreatment :-

1st setting of Lepa for 7 Days.

2nd setting of Lepa for 7 days was given after an interval of 7 days.

The recurrence was observed after 21 days.

Follow up

Patients were examined timely at specific intervals as 7th day, 14th day,21th day. 28th day 45th day (Post Treatmentup) (Post Treatment Reoccurrence Follow Up)

Assessment :

The improvement provided by therapy was assessed on the basis of classical signs and symptoms, all the signs and symptoms were assigned with a score depending upon their severity to assess the effect of the drugs objectively.

Table no. 1 showing assessment criteria

Subjective parameters		Objective parameters	
1)Vedana in the Pidaka		1) Number of Pidakas	
2) Shotha in the Pidaka		2) Size of the Pidaka	
3) Srava in the Pidaka			
4) Vivarnata of the Pidaka			
A	SUBJECTIVE PARAMETERS		GRADE
1	Vedana of Pidaka	No tenderness	0
		Pain on deep pressure over the Pidaka	1
		Pain on touch over the Pidaka	2
		Pain without touch over the Pidaka	3
2	Shotha in the Pidaka	No Shotha	0

		Mild Shotha	1
		Moderate Shotha	2
		Severe Shotha	3
3	Srava in the Pidaka	No srava	0
		Lasikasrava	1
		Puyasrava	2
		Pinjarasrava	3
4.	Vivarnata of the Pidaka	Normal skin color	0
		Black color	1
		White color	2
		Red color	3
B	OBJECTIVE PARAMETERS		GRADE
1.	Number of Pidakas	No Pidaka	0
		1 - 5 Pidakas	1
		5 - 10 Pidakas	2
		More than 10 Pidakas	3
2.	Size of Pidaka	No Pidaka	0
		0 to 2mm	1
		In between 2 to 4 mm	2
		More than 4 mm	3

Note:- When Pidakas are multiple, the size of the largest pidaka will be considered.

OBSERVATION & RESULTS :

Following are the results after applying Wilcoxon Signed Rank Test to variables.

Vedana in the pidaka

Table no. 2 showing result of vedana in pidaka

Vedana	Mean	S.D.	% relief	P-value
B.T.	2.2000	0.4068	76.68%	< 0.0001
A.T.	0.3333	0.4661		

Before treatment and after treatment mean value for Vedana is 2.2000 and 0.3333 respectively. Percentage Relief in Vedana is 76.68%. P-value is < 0.0001 . Since P-Value is less than 0.05 so we conclude that, Mruttikalepa is significantly effective in Vedana.

Shotha in the pidaka

Table no. 3 showing result of vedana in pidaka

Shotha	Mean	S.D.	% relief	P-value
B.T.	1.7000	0.4661	70.08%	< 0.0001
A.T.	0.4000	0.4982		

Before treatment and after treatment mean value for Shotha is 1.7000 and 0.4000 respectively. Percentage Relief in Shotha is 70.08%. P-value is < 0.0001 . Since P-Value is less than 0.05 so we conclude that, Mruttikalepa is significantly effective in Shotha.

Srava in the pidaka

Table no. 4 showing result of vedana in pidaka

Srava	Mean	S.D.	% relief	P-value
B.T.	0.2000	0.4068	40.68%	0.0719
A.T.	0.0667	0.2537		

Before treatment and after treatment mean value for Srava is 0.2000 and 0.0667 respectively. Percentage Relief in Srava is 40.68%. P-value is 0.0719. Since P-Value is greater than 0.05. results are statistically insignificant.

Vivarnata of the pidaka

Table no. 5 showing result of vedana in pidaka

Vivarnata	Mean	S.D.	% relief	P-value
B.T.	2.6000	0.8136	71.66%	< 0.0001
A.T.	0.9333	1.0148		

Before treatment and after treatment mean value for Vivarnata is 2.6000 and 0.9333 respectively. Percentage Relief in Vivarnata is 71.66%. P-value is < 0.0001 . Since P-Value is less than 0.05 so we conclude that, Mruttikalepa is significantly effective in Vivarnata.

Number of pidakas**Table no. 6 showing result of vedana in pidaka**

Number of pidaka	MEAN	S.D.	% RELIEF	P-VALUE
B.T.	1.0000	0.0000	72.83%	< 0.0001
A.T.	0.1333	0.3457		

Before treatment and after treatment mean value for Number is 1.000 and 0.1333 respectively. Percentage Relief in Number is 72.83%. P-value is < 0.0001. Since P-Value is less than 0.05 so we conclude that, Mruttikalepa is significantly effective in Number.

Size of the pidaka**Table no. 5 showing result of vedana in pidaka**

Size of pidaka	MEAN	S.D.	% RELIEF	P-VALUE
B.T.	1.2667	0.4497	74.94%	< 0.0001
A.T.	0.2667	0.4497		

Before treatment and after treatment mean value for Size is 1.2667 and 0.2667 respectively. Percentage Relief in Size is 74.94%. P-value is < 0.0001. Since P-Value is less than 0.05 so we conclude that, Mruttikalepa is significantly effective in Size.

DISCUSSION

The factors involved in formation of pitika - kapha, vata, bhrajaka pitta, rasa, rakta, mansa, meda. Lepa reduces vata, kapha; liquefies fat and cleanses the skin; opens the circulatory channels, facilitates the metabolic activity and improves the complexion of the skin. According to Bhavaprakasha Samhita Krishna Mrutikka have Kapha, Pitta and Dahashamakaproperties; which reduced vedana, shotha, and sarava, of pitikas.

Effect of Mud therapy :-

➤ **Physical Effect**

The weight of mud provides pressure on the site of application and stimulates important acupressure points.

➤ **Thermal Effect**

Enormous moisture content of the applied mud helps in absorbing morbid (excessive) body heat.

➤ **Chemical Effect**

Various chemical present in the mud help in cleansing and protecting the skin, which also prevents many skin ailments. Certain electrolyte present in the mud help in the

process of ionic exchange. Metal like silver, copper, zinc, iron etc. in mud has antibacterial properties.

➤ **Wound debridement**

Debridement is the removal of devitalized tissue, particulate matter, or foreign materials from a wound and is often the first goal of wound care. Clay minerals represent a potential therapeutic for use as a mechanical debridement tool due to their physical adsorptive and absorptive properties.

Black Mud increases the blood circulation and vitalizes the various skin tissues. Mud retains moistures for a long time when applied over body part it causes cooling. The mud relaxes the pores and helps in improving blood circulation in skin surface area.

CONCLUSION

Age (Vaya) is the pradhanahetu for mukhadushika (acne vulgaris). Pittadoshapradhanaprakruti individuals are more susceptible to Mukhadushika i.e., Pitta associated with kapha or pitta associated with vata. Naturopathy provides an excellent and cost effective remedy in management of mukhadushika through mud therapy. Mruttikalepa (mud therapy) reduces vedana, shotha, srava, and vivaranata of mukhadushika. Regular practice of Mruttikalepa also helps to prevent Mukhadushika and thereby controlling the recurrence of mukhadushika. Mruttikalepa (mud pack) improves Mukhakanti and twakvarnya.

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Research : Clinical

“Study The Efficacy Of Madanadi Lepa In Management Of Padadari”

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ABSTRACT :

Due to lifestyle changes, people are unable to follow simple Upkramas of Dincharya like Padabhyanga (oil massage over feet) in daily routine, leading to commonly occurring disease i.e. Padadari (cracked feet). It has remained as a formality in festivals like Diwali in some parts of the country to follow rituals like applying churna on the body or procedures like padabhyanga etc. So, problems related to feet like Padadari (cracked feet) are increasing day by day. There are different treatment modalities available for the same, but these are costly. These treatments are not affordable by low socio economic people.

Bhaishajya Ratnavali explains regular application of Madanadilepa in management of Padadari. Clinical trials on 30 individuals between the age group of 30-50 years of both the sex was carried out using Madanadilepa application for Padadari. Madanadilepa having Snigdha and Vranropan property helped in reducing the signs and symptoms of Padadari, thereby enhancing the healing of cracked feet's. Present study showed 67 % relief in Padasputan (cracks) and 70% in pain relief.

Key words : Madanadilepa, Padadari, Padasputan, Ruja, Vranropan,

INTRODUCTION :-

Now days in developing countries like India, man has to compete for good Economical status. In order to get such desired lifestyle, one has to face continuous busy and stressful life. These are also supplemented by fast food, tinned food (adhyashan, viruddhashan), leading to irregular dietary habits and reduced attention towards self-care. All these factors including poor hygiene are predominant to develop chronic diseases, skin diseases, and kshudraroga like Padadari.

Padadari is one of the commonest & most negligible diseases. It is observed that people are least bothered about their feet though feet bear the whole body weight. In India 80 % of population live in rural area. Most of them work in farms in wet soil and water also. So incidence of cracking the skin of the foot is very common. Poor people ignore this problem due to lack of consciousness about foot care or may be due to costly drugs.

Due to lifestyle changes, people are unable to follow simple Upkramas of Dincharya like

Padabhyanga (oil massage over feet) in daily routine, leading to commonly occurring disease i.e. Padadari (cracked feet). It has remained as a formality in festivals like Diwali in some parts of the country to follow rituals like applying churna on the body or procedures like padabhyanga etc. So, problems related to feet like Padadari (cracked feet) are increasing day by day.

There are different treatment modalities available for the same, but these are costly. MadanadiLepa is mentioned in BhaishajyaRatnavali. The ingredients are easily available and cost Effective. Hence a study was undertaken to analyze the effect of Madanadilepa in Management of Padadari.

AIM AND OBJECTIVE :-

Study of the efficacy of Madanadilepa in the management of Padadari (cracked feet).

METHODOLOGY:-

A clinical study was conducted for the efficacy of *MadanadiLepa on Padadari* on 30 individuals for period of 30 days. Follow up were taken after 7th, 14th, 21th day and post treatment follow up on 45th day.

DRUG REVIEW :-

Table no.1 showing the contents of madanadilepa and its details

Drug Name	L.N. / FAMILY	Rasa	Virya	Vipaka	Guna	Doshakarma
Madan phala	Randiadumentorum/ Rubiaceae	Madhur	Ushna	Katu	Laghu	Kapha- vataShamak
Samudra Lavan	Salarium	Lavan	Ushna	Madhur	Laghu	VataShamak
Siktha	Apis Mellifera	Lavan, Tikta	Sheet	-	Laghu, Ruksha	VataShamak
Mahish Naneet	-	Madhur	Sheet	Madhur	Ruksha, Laghu	VataShamak

madnaScatqaaisakqaMsaamaud'lavaNaMtqaad

maihiYanavanaltonasaMtPtlaopnaMihtma\ d

saPtaah\ sfiTtaooOpadaOOjaayatokmalaaopmaaOe BaO.r.45/23"-24

- First MahishNavneet was taken and melted till it became liquid and then added siktha, madanphalchurna, samudralavan.
- It was preserved in bottles.

- This Madanadilepa was prepared personally and provided on the first day

Procedure :-

- Patients as per inclusion criteria have been taken in this study.
- Patient has advice to wash his/her feet with warm water.
- Madanadidravya is used for Lepa. Patients were asked to apply lepa over the feet and wear shocks at every night before sleep.
- Patient has advised to wash & clean his/her feet with warm water & dry it well at morning.

Statement of limitations :**Inclusion criteria :**

1. Patients suffering from Padadari (PadaSputan,Ruja,) were included.
2. Sex: Patients of either sex were included.
3. Age: Patients between ages 30 to 50 yrs were included.

Exclusion criteria :

1. Patients of Padadari suffering from any other systemic disorder were excluded.
2. Patients who are contraindicated (Bleeding cracks) for lepa were excluded.
3. Patients of Padadari suffering from any other skin disorder were excluded.

Assessment Criteria :**A) Padasphutan:**

No crack	:	0
1 to 3 cracks	:	1
4 to 6 cracks	:	2
More than 6 cracks	:	3

B) Ruja (Pain)

No pain	:	0
Pain on digital pressure	:	1
Pain while walking	:	2
Constant pain	:	3

OBSERVATION AND RESULT :-

After completion of the clinical study, observations in Padadari were recorded.

- Before treatment and after treatment mean value for left leg Padasputan is 2.033 and 0.6667 respectively.
- Before treatment and after treatment mean value for Right leg Padasputan is 2.1333 and 0.733 respectively.
- Before treatment and after treatment mean value for Left leg Ruja is 1.833 and 0.533 respectively.
- Before treatment and after treatment mean value for Ruja is 2.000 and 0.633 respectively.
- Since 'P' value is < 0.05 the result is statistically significant.

DISCUSSION :-**Age :-**

- The age wise distribution of the patients shows that the higher incidence of padadari was recorded in the age group of 40-45 (33.33%) and 45-50 (30%).
- Due negligence and vatadosha predominant maximum patient of padadari that is 63.33% was seen in the age group 40-50 year.

Sex:-

- The distribution of patients based on sex indicates that male patients were affected more (63.67 %) compared to females (36.33 %)
- Males were more susceptible to padadari because of excessive work in wet soil and water. Which were considered to be potent causative factors for occurrence of padadari.

Occupation:-

- Occupation wise distribution showed that farmers (43.33 %) were affected more as compared to other occupations.
- The reason behind may be because of excessive work in wet soil and water, not using footwear on regular basis, carelessness regarding foot hygiene were important causes of Padadari.

Number of cracks:-

- After application of madanadilepa on Right leg the initial mean score was reduced from 2.13 to 0.73 showing improvement of 65.62 % which was statistically significant.
- After application of madanadilepa on Left leg the initial mean score was reduced from 2.033 to 0.667 showing improvement of 67.21 % which was statistically significant.

➤ Above improvement seen because of Vranropan, vatashamak, and Snigdha property.

Ruja (pain) :-

- After application of madanadilepa on Left leg the initial mean score was reduced from 1.83 to 0.53 showing an improvement of 70 % which was statistically significant.
- After application of madanadilepa on Right leg the initial mean score was reduced from 2.00 to 0.633 showing an improvement of 68.33 % which was statistically significant.
- This may be due to mahishnavaneet having snigdthaguna and siktha having vranropan property.

Probable mode of action**Madanphal :-**

Karahat (Synonyms of Madanphal) means it improve the luminosity (dipti) of hand.

Madanphal has vranropan property so it reduces the padasputan.

SamudraLavan :-

It has kshar Property which removes raktakharata present at affected site.

Function of raktadhatu is to fuse (Sandhankarm) so it helps for heal skin.

Sikta :-

Siktha has Mrudu, Snigdha Property.

It heals wounds, unites fractures, reduces vata diseases, and cures diseases of blood and skin diseases. So it reduces padasputan and ruja.

MahishNavneet :-

Navneet has snigdthaguna and vatashamak property

It reduces ruja and helps in ropankarma.

CONCLUSION

- (1) Padadari is one of the commonest and neglected diseases.
- (2) Excessive walking, not using footwear on regular basis, carelessness regarding foot hygiene were important causes of Padadari.
- (3) Regular application with MadanadiLepa shows beneficial effect for Padadari.
- (4) Madanadilepa showed excellent results in healing of the cracks and thereby helped in relieving theruja (Pain) associated with the same.
- (5) Madanadilepa has snigdthaguna, sheetaVirya and vataghnta, varnaropanproperty which helps in reducing signs and Symptoms of Padadari.

- (6) Post treatment follow up showed effective use of Madanadilepain prevention of padadari.
(7) Regular practice of Padabhyanga is helpful in prevention of Padadari.

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Research : Clinical

A Clinical Study on the Efficacy of a Nutritional Compound In *Prameha* (Diabetes mellitus)

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ABSTRACT

The latest global prevalence of diabetes reveals 387 million people diagnosed with diabetes, which is supposed to rise to 592 million by 2035; As per the International Diabetes Federation (IDF). WHO in 2012 estimated 1.5 million deaths were directly caused by diabetes.

8.2% of the adult population or 72.1 million people have diabetes in South East Asian region, 65.1% of whom live in India. By 2030, India's diabetes numbers are expected to cross the 100 million mark.

Type II diabetes can be effectively managed by modifying diet and with regular exercise only.

Madhumeha a type of Vataja Prameha described in Ayurvedic Medicine is the nearest resembling condition with Diabetes Mellitus.

In Ayurveda various Pathya Ahara (wholesome food) are advised for Madhumeha (diabetes) patients.

The present randomized control trial on total 30 patients in two groups was carried using various Pathya Ahara (barley, greengram, horsegram, wheat, Amalaki, Haritaki, Bibhitaki, soyabean in equal quantity) in form of granules, for trial group.

Results suggest Pathya Ahara Dravya's (wholesome food) help in better glycemic control and reducing the symptoms when used along with anti-diabetic Ayurvedic drugs in Madhumeha (diabetes).

KEYWORDS :- Prameha, Pathya Ahara, Nutritional compound, Diabetes Mellitus

INTRODUCTION :

Ayurveda advocates that 'Excellence of health' is the basic need for achieving Purushartha. It aims at preserving and promoting the health of an individual as first goal and then to treat the disease.^{1,2} Due to various reasons and due to negligence of rules and regulation mentioned in Ayurveda for healthy living, man has become a victim to different kinds of diseases.

Diabetes mellitus has emerged as an important public health problem globally. Majority of which are Type II i.e. NIDDM. 347 million people worldwide have diabetes³. In 2012, an

estimated 1.5 million deaths were directly caused by diabetes⁴.

The latest global prevalence of diabetes reveals 387 million people diagnosed with diabetes, which is supposed to rise to 592 million by 2035; as per the International Diabetes Federation (IDF). India is presently home to 62 million diabetics — an increase of nearly 2 million in just one year. India is second only to China which has 92.3 million diabetics. By 2030, India's diabetes numbers are expected to cross the 100 million mark. The prevalence of diabetes in the age group of 20 to 79 years stood at nearly 9% of the population in India. WHO projects that diabetes will be the 7th leading cause of death in 2030⁵.

Madhumeha is a type of Prameha which resembles the clinical picture of Diabetes Mellitus.

The management of Diabetes Mellitus is based on three main aspects i.e. diet, exercise and drugs. Majority cases of type II diabetes can be effectively managed and controlled just by modification diet and with regular exercise only.⁶ Control of body weight, blood lipids and controlling blood glucose are important for reducing the long term complications of diabetes.

In Ayurveda, diet is given the foremost place in management of Prameha. In Ayurveda dietetic management has been mentioned under heading of Pathya.⁷ And those which are harmful or worsen the disease conditioned are said to be Apathya. Different kinds of Pathya Ahara (beneficial nutrients) like Yava (barley), Mudga (green gram), Godhuma (wheat), kulatha (horse gram) etc are advised to be used by the patients suffering from Prameha^{8,9,10,11,12,13}

Here an attempt was made to analyze the efficacy of Pathya Dravya's mentioned in Ayurvedic classics in Prameha.

AIM

To study the effect of various Pathya Ahara in the form of a nutritional compound in Prameha.

MATERIALS & METHODS

This is a Randomized control trial study with pre-test and post-test design undertaken in two groups.

DURATION OF STUDY :- 02 months

GROUP A (control group)

Consist of 15 patients who were advised with standard Ayurvedic treatment with Asanadi Gana Kashaya 30 ml twice daily before food and Nisha-Amalaki tablet 2 tab (500mg each) twice a day for two months and kept as control.

GROUP B (Trial group)

15 patients of this group were given same line of treatment as in Group A along with the nutritional compound prepared from various Pathya Ahara (barley, green gram, horse gram, wheat, Amalaki, Haritaki, Bibhitaki, soyabean mixed in equal quantity) in form of granules was given 15gm twice daily before food along with warm water.

Mild to moderate diabetic cases were selected based on the following standard reference chart for classification as per classification of S.N Khosle at al.nagarjuna.

INCLUSION CRITERIA

1. Cases of Diabetes mellitus having fasting blood sugar within range of 121 mg/dl to 220 mg/dl and post prandial blood sugar within range of 181 mg/dl to 280 mg/dl were selected.
2. Patients above the age group of 25 years and below 60 years of age were selected
3. Patients within 5 years of diagnosis for diabetes mellitus were selected for the study.

EXCLUSION CRITERIA

1. Patients having fasting blood sugar above 221 mg/dl and post prandial blood sugar above 281 were excluded.
2. Patients with uncontrolled blood sugars were excluded.
3. Patients with other systemic disorders and complications of diabetes mellitus were excluded from the study.

ASSESSMENT CRITERIA

Efficacy of treatment was assessed in the reduction of signs and symptoms before and after the course of study with the help of self-graded assessment scale. Changes in the following symptoms were noted & taken for assessment.

- (1) Fasting Blood sugar
- (2) Post Prandial Blood Sugar
- (3) Fasting Urine sugar
- (4) Post Prandial Urine sugar

Pippasa :-

Normal thirst up to 1.5 liters per day
 Feels thirsty up to 2 liters per day
 Feels very thirsty 3 liters per day
 Always thirsty > 3 liters per day

0
1
2
3

Karpadadaha:-

No burning sensation in hands or feet
 Occasional burning sensation in hands or feet
 Frequent burning sensation in hands and feet
 Persistent/continuous burning sensation

0
1
2
3

Mutra Vega :-

Frequency of Micturation at night
 Grade :-
 Frequency of Micturation at night

0-1
0
2-3

Daurbalya :-

No weakness
 Feels tiredness after strenuous work
 Feels frequent tiredness even after

0
1
2

Grade :-	1	mild work	
Frequency of Micturation at night	4-5	Always associated with tiredness	3
Grade :-	2		
Freq. of Micturation at night	> 5		
Grade :-	3		
Kshuddha :-		Sweda :-	
Normal timely manifestation	0	No sweating	0
/can control hunger		Profuse sweating after hard work	1
Slightly increased	1	Profuse sweating even after mild work	2
/Can control hunger up to 1 hr.		Sweating even at rest	3
Excessive hunger	2		
/ cannot withstand			
Feels hungry even after consuming food	3		

FOLLOW UP OF THE STUDY

Patients were asked to report every 15 days from the starting of the treatment course of the study for a total period of two months.

RESULTS: (Table 1 & Table 2 showing details of the results)

Age – Out of 30 patients for study 26 patients were above age group of 40, it reveals that the individuals are more affected by Type 2 diabetes after forties.

ADHIKA KSHUDHA (excess hunger)

The group A i.e. Ayurvedic treatment showed 36.36% improvement and group B i.e. nutritional compound supplementation showed 50% improvement which was significant in case of group B.

ADHIKA PIPASA (excess thirst)

The group A showed 30.67 % improvement and group B showed 53.34 % improvement.

ADHIKA MOOTRATA (excess urination)

The group A showed 40% improvement while group B showed 52.94% improvement.

F.B.S. (Fasting blood sugar)

The group showed 6.184 % improvement where as group B showed 10.93 % improvement.

P.P.B.S. (post prandial blood sugar) :- The group A showed 4.27 % improvement where as in group B showed 8.54 % improvement.

On F.U.S. (Fasting urine sugar) - The group A showed 22.22% improvement where as in group B showed 40%.

On P.P.U.S. (post prandial urine sugar) –The group A showed 18.75% improvement as compared to the group B which showed 26.47%.

The overall effect was noted as marked Improvement in 0 % patients in Group A and 6.66 % in Group B. Moderate improvement in 20 % in Group A and 33.34 % in Group B. While mild improvement in 60 % in Group A and 40 % in Group B. No relief was observed in 20 % patients in Group A and 20 % in Group B.

DISCUSSION :-

More number of cases were seen above the age of forty, this might be due to decreased physical activity and other stress factors after this age. There were 55 % of the cases had the history of Madhumeha in family. This supports that Type 2 diabetes mellitus has a strong genetic component.

The nutritional supplement was given before food and has Dravya like Yava and Kulatha which are Guru and by there supplementation of other Ahara Dravya's decreases the symptom of Adhika Kshudha. The protein contents in these Dravya's helps the patients to overcome the emaciation caused by utilization of fats and proteins for energy needs of the body thereby relieving the symptom of Adhika Kshudha

Madhura Vipaka of Yava, Amalaki, and Rajashimbi pacifies vitiated Vata & Pitta Dosha thereby relieves the symptom of Adhika Kshudha.

Most of the Dravya's in nutritional supplement given to group B patient are of Kashaya Rasa which is having properties of Shoshana, Kaphaghana and Mutra Sangrahaniya. And also Dravya's like Yava and Kulatha are having properties of Kleda Shoshana and Rukshana Karma which probably must have helped in relieving the symptoms. The protein contents in Nutritional supplement overcomes the emaciation and thereby decreases formation of ketone bodies which helps in decreasing symptoms of polyuria.

The properties of Yava being Guru but Apatarpana helps in reducing the Satiety and does the Atarpana there by Pacifying the Kapha dosha without vitiating the Vata Dosha.

The rich fibre content of barley (Yava), soybean (Rajashimbi), and wheat bran (Godhuma) slows down the carbohydrate digestion and absorption and so improves glycemic control. These Dravya's i.e. barley (Yava), soybean (Rajashimbi), and wheat bran (Godhuma) have a low glycemic index of 22, 14 and 54 respectively which helps in controlling the raise in the post prandial blood glucose levels.

CONCLUSION

Statistical analysis reveals that administration of nutritional compound along with Ayurvedic treatment was more effective when compared to Ayurvedic treatment alone.

Diet plays a key role in the management of diabetes mellitus. Newly diagnosed and mild cases of diabetes can be effectively managed by advising proper diet and exercise only.

Various Pathya Ahara Dravya's i.e. which are beneficial to the body are mentioned in different Ayurvedic text while treating Prameha, which helps in better glycemic control when used

along with exercise and anti-diabetic drugs in needed cases

Nutritional compound helped in relieving the signs and symptoms of the disease and provided feeling of wellbeing.

The nutritional compound formulated can be undertaken for a large trial considering its efficacy obtained in the present study.

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Deerghayu International is included in

'Indian Citation Index'

- Editor

Research : Clinical

To study the role of Tila Taila Shiro Abhyanga on Mentally Stressed Persons.

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Abstract

Improper diet habits and continues work load has lead to different kinds of mental and physical stress on humanity. Stress can be understood as pathology in Manovaha Srotas due to the aggravation of Manasika Doshha like Raja and Tama. Vata dosha also plays a key role in development of various symptoms of stress and depression like Shiro-shoola, Nidra Nasha etc.

Clinical study was conducted to study the role of Tila Taila Shiro Abhaynga on Mentally Stressed persons. The study was been conducted in 2 Groups. 30 patients were given Tila Taila Shiro Abhyanga and remaining 30 were given counseling for total period of 30 days.

Shiro Abhyanga is one of the procedures coming under Dinacharya. Every person should follow Dinacharya to maintain their health. Shiro Abhyanga helps in pacifying Manasic as well as Sharera Doshas. Psychogalvanometer & Questionnaire proved to be an easy and efficient instrument in measuring stress & psychosomatic arousal in a person.

Keywords : Manovaha Srotas, Shiro Abhyanga, Dinacharya, psychogalvmometer.

Introduction

A lot of research has been conducted into stress over the last hundred years. Some of the theories behind it are now settled and accepted; others are still being researched and debated. During this time, there seems to have been something approaching open warfare between competing theories and definitions. Views have been passionately held and aggressively defended.

Increased sedentary lifestyle, over stress, faulty diets- using fast food items etc. irregular timings of meal due to change in the duties and use of stale foods with preservatives, addiction to Alcohol, smoking etc.

These all leads to low Dhatu bala, low Ojas, vitiation of all Doshas; resulting in premature aging, fatigue, debility, inability to adopt to stress, recurrent illness. In a healthy individual, the stress response (fight, fright, or flight) is provoked by a genuine threat or challenge and is used as a spur for appropriate action. An anxiety disorder, however, involves an excessive or inappropriate state of arousal characterized by feelings of apprehension, uncertainty, or fear.

Stress is the enigma that is plaguing humans increasingly in the present days. Modern life style and modern occupations are fuelling more and more expectations and work efficiency from humans. This is putting too much strain on us leading to stress. It must be noted that among all the systemic diseases most of the diseases find their root cause is stress.

Ayurveda being the science of life contains all the references pertaining to life, so it is imperative that stress in one or the other form too must have been said in Ayurveda.

Ayurveda includes oil massage as one among the daily regimen and a therapeutic procedure. It is clear from the textual references that Abhyanga helps man to prevent the common health hazards of both physical and mental health. Shiro Abhyanga helps in nourishing all the sense organs and reducing the diseases of the head. So the present topic was selected in order to find out the therapeutic use of Shiro Abhyanga in stress.

Stress is the enigma that is plaguing humans increasingly in the present days. We are neither being able to stop stress nor control it. In Ayurveda the term "Stress" is not defined individually but dushti of Manasic Doshas i.e. Raja and Tama which are related to Manovaha Srotas. Due to the dushti of this Manovaha Srotas, there can be symptoms like Bhaya, Krodha, Chinta etc which leads to mental stress.

As it was not possible to measure stress an instrument was used to detect the stress levels named as Galvanic Skin resistance Meter (Psycho Galvanometer) was used.

As it is not possible to physically perceive manas i.e. mind, a standard questioner to evaluate stress on it was adapted MindBodySoul.com was decided to diagnose, evaluate the initial state and effect of Shiro-Abhyanga. It was also important to select the oil to be used for Shiro-Abhyanga. Different oils and oil-processes with herbal medication were thought over and amongst the investigator and experts, ultimately it was decided to use Til-taila as it is the best oil used for all types of diseases.

Shiro-Abhyanga is mentioned as one of the procedures in Dinacharya. Shirodhara or other procedures for management of stress proves to be complex and expensive. Hence the study has been undertaken to assess the efficacy of Tila Taila Shiro Abhyanga on Mental stress.

Aim

1. To study effect of Tila Taila Shiro-Abhyanga in mental stress.

Objectives

1. To study stress with a modern perspective.
2. To study Galvanic Skin Resistance and Psycho galvanometer.

Material and Methods

Clinical trial was conducted in two groups. Trial Group - 30 patients were given Tila Taila Shiro Abhyanga Control Group - 30 patients were given counseling for consecutively 30 days.

Drug	Tila Taila
Dose	15 – 20 ml once daily
Procedure	Shiro Abhayanga
Kala	Prataha kala (morning) for 5 mins
Methods	Local Application
Duration of the treatment :	30 days
Total period of Study	30 days

Inclusion criteria

1. Patients included in the study were healthy individuals between the age group of 25-35 years.
2. Patients were taken from Bharati Vidyapeeth College of Ayurved Hosiptal, Pune.
3. Mentally stressed patients were evaluated completely by stress questionnaire ans G.S.R. (Psychogalvanometer).

Exclusion Criteria

1. Any Patients suffering from known systemic illness or any chronic health disorder were excluded from the study.
2. Patients who has not passed or who is below the mark in questionnaire.
3. Male patients aged above 35 years.

PSYCHO GALVANOMETER

Area of Measurement

Thumb, middle finger and Index finger are generally preferred because fingers have the largest representation in cerebral cortex. 1 deflection = 100 Ohm

Measurement

The person is made to sit on a wooden chair with no contact with the ground. Electrodes are wrapped around index and middle finger of the subject. Electro cardio graphic jelly is applied on the fingers before this in order to avoid bias. The instrument is switched on. Deflection on the galvanometer scale is noted and resistance is carefully tabulated.

Uses

It is used to assess degree of cortical arousal in a person

It is widely used as a measure of stress and anxiety.

It is used to assess the emotional response of a person to a particular stimulus.

Questionnaire - Prior to answer to the questions all the patients were assured, consoled and encouraged to score the questions put to them correctly and were assured of the secrecy of the information and were told that will not be disclosed to any one at any point of time. The information gathered will strictly be used for scientific assessment of their mental stress. The sum total of score (as submitted in the form of check list) was assessed as follows;

The questions in English were translated in vernacular or in the language best known to the patient (English, Hindi, Marathi, etc.). Initially patients showing mild to moderate stress (as assumed from the check list) were included in the study and were put on Tila Tail Shiro-Abhyanga.

Assessment criteria

Parameters

Mental Stress Questionnaire	Score of GSR in \downarrow (Ohms)
Rarely (1 point) if score is 35 -- 50 ---	Grade 1 = 100 - 200 \downarrow — Severe stress
Mild Stress	(High)
Sometimes (2 points) if score is 51-- 79 --	Grade 2 = 200 s" h-Ö° 300 \downarrow — Moderate
Moderate stress	stress (Medium)
Often (3 point) if score is 80-105 Severe	Grade 3 = 300 \downarrow --- Mild stress
stress	

Nidra

Normal sleep for 7 – 8 hrs / night --- 0

Sleep for 5 – 6 hrs / night ----- 1

Sleep for 4 – 5 hrs / night ----- 2

Sleep for 3 – 4 hrs / night ----- 3

Headache

No headache ----- 0

Mild ----- 1

Moderate ----- 2

Severe ----- 3

Results

Age wise Distribution

Sixty patients enrolled for the study were divided in two Age groups i.e. 25 – 30 yrs and 31 – 35 yrs. Majority of patients were from the age group of 25 to 30 yrs and 31 to 35 yrs which includes 7 and 8 patients respectively.

Prakriti wise Distribution

Out of 60 patients enlisted in the study, the majority patients were of Pitta Pradhana.

Occupation wise Distribution

Out of 60 patients taken for the studies maximum numbers of patients were having engineering as a profession i.e. 51%.

According to Duration of Sleep (Hrs)

In trial group before the treatment, duration of sleep in 10 patients was 2 - 3 hrs, duration of sleep in 16 was 3 - 4 hours, after the treatment there was increase in duration of sleep by 6 - 7 hours in 17 patients and 7 - 8 hrs in 13 patients.

According to Shirashoola

In control group no relief was seen after the study, while in trial group marked relief was seen in 20 patients and in 6 patients no relief was noted.

Questionnaire

A total of 35 questions were given and highest score was 105 and then mean was calculated in control group before the counseling was done it came out to be 74 and after counseling was done mean came to be 73 on 30th day. This shows that there was no any major difference in the mean, t cal and P values in control Group which were 2.517 and 0.08 respectively.

In Trial group there was a major difference seen in the mean values which came out to be 74 before treatment was done and after the treatment it was 46.6 likewise t cal and P values were also seen which were 8.17 and 2.57.

Dicussion

Age wise Distribution

This observation indicates that the psychological stress is affecting more people in the age group of 25 to 30 yrs, as there were the key bread winners for their family. All this indicates that the responsibilities whether domestic or related to day-to- day work induce psychological stress in the carrier oriented middle-aged people.

Prakriti wise Distribution

As the tendency of Pittapradhan prakurti is more likely to be sympathetically aroused as compared to other Prakrutis

Occupation wise Distribution

Engineers seemed to be stressed out more due to their demanding mental jobs and self decision making skills.

According to Duration of Sleep (Hrs)

As Tila which is known for its Sukshma, Vyavayi, Ushna and Yoga vahi gunas has the quality to penetrate easily through the hair orifices it controls vayu, which controls mind.

According to Shirashoola

As Vayu when gets vitiated, aggravates the Manasika Dosha's, which in turn disturbs

the Manovaha Srotas and the above mentioned symptoms mitigated.

Questionnaire and G.S.R

Due to reduced symptoms like shirashoola etc. and increase in the duration of sleep, it helped in relieving the stress level. As the stress level reduced there was good improvement seen in the values of Questionnaire and G.S.R score.

Conclusion

The stress response of a person depends on his prak^oti and it varies in accordance with the prak^oti.

Psychogalvanometer & Questionnaire proved to be an easy and efficient instrument in measuring stress & psychosomatic arousal in a person.

Vata dosha also plays a key role in the development of various symptoms of stress and depression like shira shoola and nidra nasha.

Tila tail been the best treatment for vata disorders has been proved effective in reducing these symptoms.

Shiro Abhyanga is one of the procedures coming under Dinacharya. Every person should follow Dinacharya to maintain their health and it also helps in pacifying Manasic as well as Sharera Doshas.

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Research : Clinical

“Assessment Of The Role Of Arishta Patra Kashaya Gandusha In The Management Of Mukhapaka”

Scholar : Dr . Vikram V. Shelke M.d. (sch.) Swasthavritta

Guide : Dr. Deshpande B. S. M.d. (swasthavritta)

ABSTRACT

Mukhapaka is neither a serious disorder nor one that can be dismissed as cursory. In Ayurveda, non-practice of dinacharya procedures are said to major cause for mukhapaka. Various dravyas have been mentioned in the classics for gandusha. Among these arishtapatra has been mentioned in GandushaAdhyaya of AshtangSangraha. Study of Arishtapatrakashayagandusha in mukhapakadone on 30 individuals for period of 45 days. Patientshaveshown significant response. This is because of Nimbapatrakwatha which have tikta rasa, sheetavirya and other properties likepittagnata, dahaprashamana and vranaropana. Gandusha of Arishtapatrakashaya is very beneficial for Mukhapaka. Hence its role in disease was proved. Arishtapatrakashayagandusha do not show any adverse effect duringpresent study. Regular practice of this gandusha reduces all the symptoms of mukhapaka and also prevents mukhapaka.

KEY WORDS : Mukhapaka, Gandusha, Arishtapatrakashaya.

INTRODUCTION

The potential causes that makes a person ill are trividhahetu i.e. heena, mithya, atiyoga of artha, kalaandkarma. To prevent these factors Swasthavrittaparipalana in the form of dinacharya, ritucharya and roganutpadaneeya have been advocated respectively. Among these dinacharya has its own significance as it includes personal protective measures explained for maintenance of personal hygiene¹. MukhaSwasthya (oral hygiene) has gained importance now a day, because mukha is such anga, which is exposed to many risk factors in day-to-day life. Habits like tobacco chewing, smoking etc have increased incidences of diseases pertaining to oral cavity. Among various mukharogas, mukhapaka (aphthous ulcer) is considered as pittajanatmaja and raktapradoshajavikara, characterized by vedanayuktavrana inside the mukha kuhara.² The lakshanas of mukhapaka can be correlated to a clinical entity “aphthous ulcer” (recurrent ulcerative stomatitis) explained in the contemporary medical science, which is also characterized by painful superficial ulcers in the movable mucosa of the mouth with recurrent episodes. physical, thermal and chemical causes of injury to oral cavity (due to exposure to various risk factors) can be better counteracted by practicing gandusha daily. Various dravyas have been mentioned in the classics for gandusha. Among these Arishta (Nimba) Patra has been mentioned in GandushaAdhyay of Ashtang Sangraha.³ Hence, present study has been undertaken to assess the role of Gandusha with ArishtaPatraKashaya in the

management of Mukhapaka. The lakshanas of mukhapaka can be correlated to a clinical entity "aphthous ulcer" (recurrent ulcerative stomatitis) explained in the contemporary medical science, which is also characterized by painful superficial ulcers in the movable mucosa of the mouth with recurrent episodes.⁴

AIM : Management of Mukhpaka by ArishtapatrakashayaGandusha.

OBJECTIVES :

- 1) To study in detail about Mukhapaka (Apthous ulcer).
- 2) To study in detail about GandushaUpakrama.
- 3) To assess the preventive aspect of ArishtaPatraKashayaGandusha in recurrent Mukhapaka.

MATERIALS AND METHOD : A study of Arishtapatrakashayagandusha for 45 days/4 follow up. Total 30 patients selected. Authentication and standardisation of drug done. Data collected with the help of observations and assessment criteria.

INCLUSION CRITERIA

- Patients complaining recurrent mukhapaka.
- Patients between age group of 20-50 yrs were included.
- Patients of both sex were included in the study.

EXCLUSION CRITERIA

As per BhavprakashPurvakhanda patients contraindicated for Gandusha were excluded.⁵

- Gandusha is contraindicated in unconscious, poisoned, weak, krisha person, patient suffering from bleeding disorders and conjunctivitis.
- Patient having chronic or carcinogenic ulcers in oral cavity.
- Mukhapaka due to any other disorders e.g. Syphilis, AIDS, DengueHaemorrhagic Fever etc.
- Patients suffering from any other systemic disorders will be excluded.

ASSESSMENT CRITERIA :-

Patients having sign and symptoms of mukhapaka, i.e. No. of vrana, Frequency of attack, Ruja, Daha, Raktavarnata of vrana.

Rank Test.

OBSERVATIONS AND RESULTS

Patientshaveshown significant response in No. of vrana, frequency of attack, raktavarnata of vrana, daha and sankhya.

TABLE – 1

Distribution of patients according to age -

Age group	No. of Patient	Percentage
20-30	18	60%
31-40	8	26.67%
41-50	4	13.33%

TABLE – 2

Distribution of patients according to habit –

HABIT	NUMBER OF PATIENT	PERCENTAGE
Tobacco chewing	3	10%
Smoking	6	20%
Alcohol	4	13.33%
Tea/Coffee	10	33.33%
No Habit	7	23.33%

TABLE – 3

Effects of Arishtapatrakashayagandusha on signs and symptoms of mukhapaka –

Symptoms	Mean score		Percentage of relief	P Value
	B.T.	A.T.		
No. of vrana	2.167	0.6333	69.84%	<0.0001
Frequency of attack	2.300	0.6333	72.46%	<0.0001
Ruja	1.700	0.5333	68.62%	<0.0001
Daha	1.767	0.4333	75.47%	<0.0001
Raktavarnata of vrana	2.233	0.6000	73.13%	<0.0001

MODE OF ACTION :

According to rasa and gunas, we can consider the action as follows:

- 1) Tikta Rasa is vranaropak, shothahar, shlesmakalasangochak due to which they promotes healing of ulcers⁶.
- 2) As healing starts, vedana gradually goes on reducing.
- 3) Due to LaghuGuna, suksmastrotogamitva occurred.

4) Due to RukshaGuna, lekhana of the Kapha occurred.

5) Due to DeepanPachan quality of Nimba, local Aamapachan occurred.

Tikta Rasa is amapachak and also has krimighna and shothahara action which is useful for Vranashodhan and Vranaropana.

CONCLUSION :-

- Gandusha is one of the important procedures of dinacharya for maintaining the health of oral cavity.
- Gandusha of Nimbapatrakwatha which have Tikta-Kashaya Rasa, sheetavirya and other properties like pittaghnta, vranaghnta and varnaropan.
- Drug is safe to use, Gandusha procedure is easy to perform and time required is also less. Patients having different vyanas are more prone to Mukhapaka.
- On the basis of this study, it can be concluded in nutshell that, Gandusha with Nimbapatrakwahta provided significant result in reducing signs and symptoms; and also in preventing reccurrentMukhapaka.

Practicing of Gandusha with Nimbapatrakwahta as a routine karma should be popularized among population for leading a better Mukhaswasthya.

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Research : Clinical

To Study The Effect Of Kakubhadi Churna In Essential Hypertension

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ABSTRACT

This study was conducted to evaluate the KakubhadiChurna in the patient suffering from Essential Hypertension.30 patients were selected as per the inclusive criteria with Newly diagnosed Essential hypertension, Mild Hypertension(Stage I Hypertension), Moderate HTN(Stage II Hypertension) and presenting symptom like headache, dizziness, sweating etc.

The study was open trial study. All the patients administered Kakubhadichurna with dosage 3 gm with goghrit as anupan.

The routine investigation such as Haemogram , Blood Urea and Creatinine ,ECG, Urine – Routine and Microscopic, Blood Sugar – Random was carried out before treatment and special investigation like lipid profile was done before and after the treatment. The assessment of the treatment was done on 0th, 3rd, 7th, 14th, 21st day.

The Kakubhadichurna showed significant relief in lakshanas like headache, dizziness, weakness, dyspnoea, sweating, marked decrease in cholesterol level and brought elevated blood pressure to the normal level after the treatment. Statistical analysis reveals that there was significant relief of symptoms ($P < 0.05$) at 5% level at significance and also reduction of blood pressure was significant ($P < 0.05$) at 5% level of significance.

During the study period there was no adverse effect of drug noticed. The Kakubhadichurna is safe and effective Essential Hypertension.

Keyword :Kakubhadichurna, Essential Hypertension, Cholesterol.

INTRODUCTION

Regarding the disease HYPERTENSION(Uccharakta chap) is the gift of this era. It is probably the most important public health problem in developed and developing countries. It is common, asymptomatic,readily detectable, usually easily treatable and often leads to lethal complication if left untreated. It is one of the most modifiable risk factor for Cardiovascular diseases. According to 2012 year data:

One out of 3 is hypertensive, One out of 6 is obese and One out of 10 is diabetic

In India, 139 million people i.e. approx. 15% of world's population suffers from hypertension, out of which 23.10% are males and 22.60% are females.

Essential Hypertension (EHT) is an instrumental disease which is the recent diagnostic invention of modern science. Hence there is no direct reference of this disease in Ayurvedic classics by name as well as by pathophysiological views. Many works has been carried out on HTN to evaluate the perfect diagnosis and mode of treatment on the basis of Ayurvedic principles, but a widely acceptable theory is still not available. Different opinions cite various diseases as parallel of HTN e.g, Raktagatavata, Raktavritvata, Pranavritvyan, Shleshmavritvyan etc.

HTN is the result of stressful, hectic, anxiety lifestyle. Ayurvedic texts provide no straight reference about EHT. As the blood pressure is a disease of circulatory system and Ayurveda doctrine believes in same constituents in morbid as well as physiological conditions by the only difference of normalcy and vitiation, it becomes necessary to discuss about Ayurvedic circulatory system. Mula of Rasavahasrotasa is Hridaya and DashaDhamani. (C.Vi.5/8).

In fact EHT is the idiopathic in nature. But predisposing factors which aggravate the blood pressure are reported in modern science.

According to modern science etiological factors are given as follows

Sodium metabolism, genetic factors, environmental factors(alcohol taking, obesity, smoking, stress etc). Charaka in Sutra 17 has implied alcohol intake as an etiological factor for PittajaShiroroga and PittajaHridroga. Some of the symptoms of these diseases also coincide with hypertension. Chinta, Bhaya, Shoka and Krodha these factors can be included in stress. Each and every factor has the propensity to vitiate different Doshas. (C.Ch.3/115) (Chinta-VataPrakopa, Shoka -VataPrakopa, Bhaya-VataPrakopa, Krodh- Pitta Prakopa).

Ayurveda is the science which depends upon signs and symptoms (Swalinga) of the diseases for their diagnosis. As the signs and symptoms of the EHT can be inferred under many VyadhiAvasthas e.g. RaktapradoshaVikaras and Complex Avarana then it becomes a light job by taking the etiological factors quoted under the same headings.

In Charaksutrastan 24 (VidhishonitiyaAdhyaya) following are the Hetus quoted for Raktapradosha manifestation.

So, EHT is Vatapradhan, Tridoshajvyadhi with Raja and Tama dosha. Kakubhadichurna contains Arjun, Vacha, Shunti, Haritaki, Rasnaetc which has Rasayanguna and due to its rasa, veerya, vipak has Tridoshnashak action especially Vatashamak. Katu-Tikta as main rasa will act on rakta and is Hrudya(Arjun). So, this drug has been selected to see its effect on EssentialHTN.

AIM AND OBJECTIVES :

AIM :

TO EVALUATE THE EFFECT OF KAKUBHADI CHURNA IN ESSENTIAL HYPERTENSION BY TAKING CLINICAL TRIALS.

OBJECTIVES :

The study has been planned with the following objectives:

1. Literary study of Essential hypertension on the basis of Ayurvedic and modern parameters.
2. To evaluate the effect of KakubhadiChurna on Essential Hypertension any adverse effects by taking clinical trials.

MATERIALS AND METHODS :**Drug Review**

- KakubhadiChurna is mentioned in BhaishayaRatnawali underHridrogadhikar. It is acombination of ten drugs like Arjun, Vacha, Shunthi, Haritaki, Rasna, Shati, Pippali, Pushkarmool, Bala&Nagbala; which has Rasayanguna and due to its rasa, veerya, vipak has Tridoshnashak action especially Vatashamak. This churna has Katu-Tikta as main rasa which acts on rakta and is Hrudyaa(Arjun). So, this drug is very effective in HTN.

METHODOLOGY :

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

TYPE OF STUDY : Open clinical trial

PLACE OF WORK: The clinical trial was carried out at OPD and IPD of BharatiVidyapeethUniversityAyurved Hospital,Dhankawadi, Pune-43. Total 30 patients were selected randomly. Total 32 patients were screened of which 2 patients were dropped out from study because of irregular follow up.

DRUG ADMINISTRATION

Treatment given	KakubhadiChurna
Dose	3 gms in morning
Kala	Rasayankala
Route of administration	Oral
Anupan	Goghrit
Follow up	0, 3, 7, 14, 21

INCLUSION CRITERIA :

- 1] Age group 18-70yrs
- 2] Irrespective of gender, work, religion, economic condition etc.
- 3] Newly diagnosed Essential hypertension.

4] Mild Hypertension(Stage I Hypertension)

Moderate HTN(Stage II Hypertension)

EXCLUSION CRITERIA :

- 1] Secondary Hypertension
- 2] Hypertension associated with Life threatening diseases like Diabetes Mellitus Type I & II, Hypertensive Encephalopathy, Myocardial Infarction, Stroke, Renal Diseases, Congestive Cardiac Failure.
- 3] Pregnancy Induced Hypertension (PIH)
- 4] Endocrinological diseases

OBJECTIVE PARAMETERS

1. Systolic and Diastolic blood pressure
2. Lipid profile (before and after the treatment)

INVESTIGATIONS :

- 1] Haemogram with E.S.R
- 2] Urine – Routine and Microscopic
- 3] ECG
- 4] Chest X-Ray, USG- Abdomen & Pelvis (if required)

For exclusion criteria :

- 5] Blood Sugar – Random
- 6] Blood Urea and Creatinine

Before & after treatment :

- 7] Lipid Profile

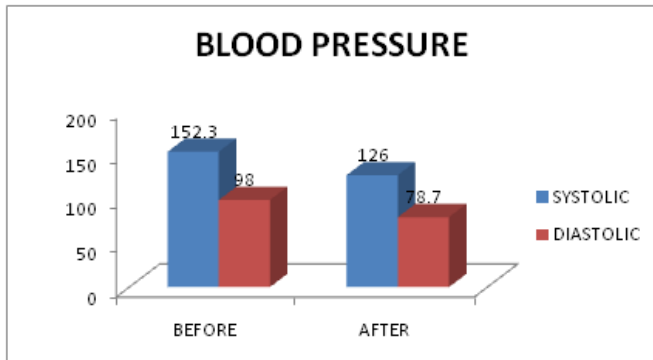
CLINICAL ASSESSMENT CRITERIA

- Primary End Points – Control of Systolic and Diastolic Blood Pressure

CLINICAL ASSESSMENT PARAMETERS

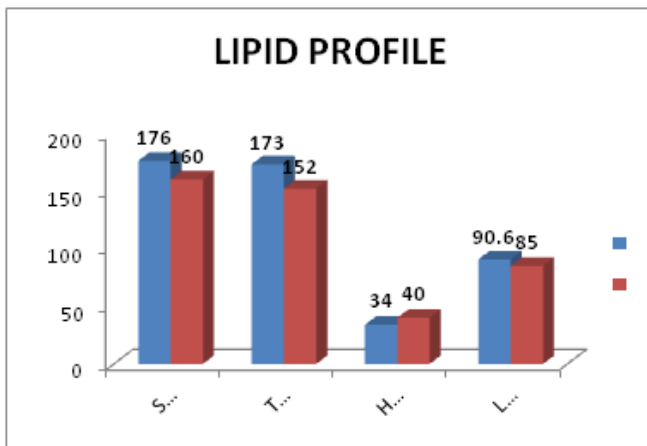
SYMPTOMS	GRADATION
NIL	0
MILD	1
MODERATE	2
SEVERE	3

**OBSERVATIONS
SYSTOLIC & DIASTOLIC BLOOD PRESSURE**



Mean score of Systolic B.P significantly reduced from 152.3 to 126. And Mean score of Diastolic B.P significantly reduced from 98 to 78.7. So, the effect of KakubhadiChurna on systolic & diastolic B.P. was significant ($P < 0.05$) at 5% level of significance.

LIPID PROFILE



LIPIID	MEAN	MEAN
PROFILE	BT	AT
Sr. Cholesterol	176	160
Tryglicerides	173	152
HDL	34	40
LDL	90.6	85

Mean score of cholesterol, tryglicerides, LDL was significantly reduced & increased for HDL which indicates that Kakubhadichurna was significant at 5% level of significance.

DISCUSSION

Total 32 patient was enrolled for the study. Out of which 2 patient were dropped out because they failed to maintain regular follow up, and rest 30 patients were completed.

LIPID PROFILE : Kakubhadichurna shows highly significant result in Sr. Cholestrol,

Triglycerides, LDL and HDL with 5% level of significance.

CHOLESTEROL, TRIGLYCERIDES & LDL: Arjun ismedorognashak so decreases triglyceride and chloesterol by accelerating the turnover of LDL-cholesterol in the liver, lowers beta-protein lipids. Vacha has lekhan karma; reduces lipid accumulation in fat cells. Haritaki reduces ill effects of fat rich, creamy & oily food so acts as cholesterol normalizing drug. Pushkarmoola removes aavarana so acts on med dhatu, increases dhatuagni, it possess legit cardio-protective and anti-obesity properties so decreases Cholesterol, Triglycerides, LDL (which is bad kind cholesterol). Pippali due to its ushna, tikshna properties scraps toxic build up from cell walls, arteries and tissues to reduce excess body weight and cholesterol. Drugs like Shunthi, Pippali, Haritaki etc are balya, aampachak, deepan, pachan and srotoshodhak so shows effective result in reducing cholesterol level.

HDL: The study shows significant increase in HDL level. Arjuna helps in recovery of HDL components and provides strength to the heart muscle. Pushkarmoola increases HDL cholesterol (good kind) as it possess cardio-protective and anti-obesity properties due to which its regular intake provides a healthy heart. Other drugs like Pippali, Shunthi, Haritaki, Shati etc has hypolipidemic properties which leads to increase in good cholesterol, they also acts as dhatuagnivardhak so strengthens all the dhatus, improves cardiac circulation.

SYSTOLIC AND DIASTOLIC BLOOD PRESSURE :

It was found that kakubhadichurna has significant relief in systolic and diastolic blood pressure. The probable cause of this may be due to collective effect of all rasayan drugs and cardiogenic action of Arjun. It regulates the heart rate and blood flow in the blood vessels due to hrudya, raktaprasadan and raktashodhak properties so results in bringing blood pressure to the normal level. Pippali due to its warming qualities invigorates the blood and tone the heart muscle; with improved blood circulation all the vital organs are oxygenated and function more efficiently. Pushkarmoola, Shati, Shunthi, Haritaki etc all drugs of Kakubhadichurna acts as deepan, pachan, aampachak, dhatuagnivardhak and provides balya to heart which leads to improved blood circulation resulting in lowering the blood pressure.

RESULT

- EHT is Vatapradhan, Tridoshajvyadhi with Raja and Tama dosha.
Vata acts as the major dosha in Hypertension. Pitta and kapha also plays secondary role in producing the symptoms in Hypertension i.e. dizziness and headache.
- Kakubhadichurna contains Arjun, Vacha, Shunthi, Haritaki, Rasna etc which has Rasayanguna and due to its rasa, veerya, vipak has Tridoshnashak action especially Vatashamak.
- Katu-Tikta as main rasa will act on rakta and is Hrudya (Arjun). So, this drug is very effective in HTN.
- KakubhadiChurna acts on lipids and lowers cholesterol (triglycerides, LDL) and increases HDL level so it is hypolipidemic.

CONCLUSION

In assessing overall effect of the therapy it was seen that –

1. KAKUBHADI CHURNA to be highly significant in the control of Hypertension.
2. It can be concluded that Kakubhadichurna possess cardio-protective properties. It is balya, aampachak, rasayan, tridoshnaashak and increases dhatuagni which strengthens all the dhatus, improves blood circulation and brings blood pressure to normal level.
3. No any adverse effect is found in this study.

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Experiments :

Interpretation of 'Snayu' with the help of Modern texts and Cadaveric study.

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ABSTRACT : The concept of Snayu and Peshi is in controversy. Most of scholars consider Peshi as a muscle^{1a} and Snayu as ligament, tendon, sphincter, aponeurosis etc^{1b}. Some consider Peshi as fascia, intermuscular septum etc.^{1c} and Snayu as muscle^{1d}. In Ayurvedic literature we can see the term Snayu' in many context like, Snayu Marma, Snayugat Vata Vyadhi & its treatment, Snayu Vidha Lakshnas, importance of Snayu in Shalya. Hence to understand about concept of Snayu, it becomes necessary for a scholar to understand what actually Snayu means. For this purpose literature and cadaveric study was done.

Most of people consider Snayu as ligament. The reason may be Sushrutacharya's reference stating that the main function of Snayu is Sandhibandhan. But when a joint is dissected, the structures intervening are ligaments along with muscles and tendons, which are responsible for movements and support of joint. When Snayu Prakara were analyzed, they resemble with muscles and tendons. When we perform region wise dissection, the no. of muscles and tendons are fairly similar to no. of Snayu than the no. of ligaments. After studying Snayugat Vata Vyadhi, Snayuvridha Lakshana and Snayu Marma we found that they resemble with muscles and tendons. Also when muscles and tendons are counted separately in a particular region then, their collective number is approximately equal with no. of Snayu. Thus Snayu can be considered as muscles and tendons.

Keywords : Snayu, Peshi, Cadaveric study. Tendons, Muscles.

Introduction : Ayurveda is very ancient medical science. At that time, the method of dissection followed by the Sushruta was entirely different from method of dissection which is followed today. Further, the structures explained by Sushruta had a physiological base and hence many of these structures explained are not clear to us. To understand these structures, the concept of correlation began, which lead to many controversies. Sushruta has stated number of various structures in the body like Sira, Snayu, Asthi, Sandhi etc. and have also explained their importance and different pathological conditions in different Sthana of Samhita. Hence to understand clearly the pathological conditions, the concept regarding the structure should be clear.

The concept of Snayu and Peshi is one of the controversial concepts. Most of scholars consider Peshi as a muscle^{1a} and Snayu as ligament, tendon, sphincter, aponeurosis etc^{1b}. Where as some consider Peshi as fascia, intermuscular septum etc^{1c}. and Snayu as muscle^{1d}.

In Ayurvedic literature we can see the term Snayu in many context like, Snayu Marma, Snayugat Vata Vyadhi & its treatment, Snayu Vidha Lakshnas, importance of Snayu in Shalya. Hence to understand about concept of Snayu, it becomes necessary for a scholar to understand what actually Snayu means.

We have gone through the description given by Sushruta in detail regarding their Karya, Sthana, Sankhya, Prakara etc. and then dissected the human cadaver. During dissection it is observed that, Snayu matches more with muscles and tendons than the ligaments.

AIM :

To find out what actually 'Snayu' is?

OBJECTIVES :

1. To collect detailed literature about Snayu and Peshi from various Samhitas.
2. To correlate Snayu with different structures mentioned in modern texts and
3. To conduct cadaveric study for the confirmation of correlated structures of Snayu mentioned in modern anatomy.

MATERIALS :

1. Literature : Ayurvedic literature -Brihatrayies and other Samhitas and Modern - Grays anatomy,Cunningham,etc. were referred.
2. Dissection: Cadaver,Various instruments of dissection & Digital camera.

METHODS :

Type of Study - Literary and cadaveric study.

Place of study - Dept. of Rachana Sharir, Bharati Vidyapeeth Deemed University, college of Ayurved, Pune.

Study Design -

- 1) Literary study is carried out by collecting references regarding Peshi and Snayu from Samhitas.
- 2) The details about Peshi and Snayu from Ayurvedic literature is correlated with structures mentioned in modern anatomy.
- 3) The correlated structures of Peshi and Snayu are visualized and confirmed by cadaveric dissection.

The entire study is conducted for rational interpretation of Snayu by answering following three questions with proper justification.

1. Why Peshi is not muscle?

2. Why Snayu is not ligament?

3. Why Snayu can be muscle?

Observations :

Observations while literary and cadaveric studies are noted and put forth as;

1). Why Peshi is not muscle?

a) On the basis of Karya^{2a}: As per reference regarding Karya of Peshi we get a word Sanvrit^{2a} it means covering, i.e. Peshi covers Sira, Snayu, Asthi, etc. Here we get confusion that whether the covering is for all structures together or for the individual structure. If we consider it as the covering to all the structures then it indicates muscle, which most of the experts might have considered. But if we consider it as individual covering then Peshi may be fascia, intermuscular septum, adventitia of artery & vein, epineurium of nerve, periosteum, fibrous capsule etc.

b) On the basis of Sankhya and Sthan:

- i) In female 20 extra Peshi have been explained out of which 5 are in each Stana^{2b}. When we dissect the Stana (breast) of a female we never find any muscle instead we get suspensory ligaments^{7a}. So Peshi cannot be the muscle.
- ii) In Yakruta (liver), Pliha (spleen) & Unduka, Sushruta stated there are 6 Peshi^{2c}. But when we dissect the particular Sthana (liver^{7b} & spleen^{7c}) we never find any muscle.
- iii) In Griva (Neck) Sushruta stated that there are 4 Peshi and 36 Snayu^{2d}. When we dissect the particular part we get almost near about 40 muscles^{7d}.

Example	No of Peshi	No. of Snayu	No. of muscles
In Stana	5	-	-
In Yakruta & Pliha (Liver & Spleen)	6	-	-
In Griva (Neck)	4	36	Near about 40

From this above information we can say that Peshi cannot be exactly the muscles.

2) Why Snayu is not ligament?:

a) On the basis of Karya^{2e}: The function of Snayu has been described by the Sushruta as, a boat consisting of flanks becomes capable of carrying load of passengers in the river, only if it is tied properly with the bundle of ropes, all joints in the body are tied with many Snayu by which the person is capable of bearing load. When we go through this verse we understood that Snayu are the structures which bind the joint i.e. in modern anatomy they are the ligaments. However when we carefully see we can understand that the Snayu here are not actually binding the joint but they are supporting the joint from all the direction thus keeping the joint stable. Even when we see a structure of a joint in modern anatomy then the movement of joint is affected by the 3 factors⁶:

1. The articular surface (bones).
2. The strength and tension of ligaments.
3. A third factor that holds joints together but also restricts movements is the arrangement and tension of muscles around the joint. Muscle tension reinforces the restraint placed on a joint by ligaments⁶. Although the ligaments strengthen the joints but some parts of the strength results from the muscles that surround the joint. (So we can consider Snayu as Muscle.)

Eg. In a shoulder joint the rotator cuff muscles perform the same.

b) On the basis of Sankhya and Sthana : If we go on the basis of Sankhya of Snayu in particular Sthana then it comes closer to the muscles than the ligaments. E.g.in Jangha (leg) region Sushruta stated there are 30 Snayu^{2f}, when we relate this with modern anatomy the no. of Snayu matches more with no. of muscles and tendons than the no. of ligaments present here^{7e}.

Example	No of Snayu ^{2f}	No of ligaments	No. of muscles and tendons
In Jangha (leg)	30	08	34 ^{7e}

3) Why Snayu can be muscle?

a) On the basis of Karya : Sushruta tells about Snayu Vidhya Lakshanas^{2g}. Here commenting on the word “Kriyaswashaktistumula” Dalhana says that the body movement like Utkshepana, Apakshepana, Prasaran (relaxation), Ankunchan (contraction) etc.^{2g} functions can be considered by the word Kriya. Here we can say that the Karya of Snayu are all those written above. All these functions are more related with muscles.

b) On the basis of Prakara, Swaroop and Sthana: Fourtypes of Snayu are being mentioned on the basis of Swaroop as follows^{2h} :

1. Pratanvat
2. Vrutta
3. Pruthul
4. Sushir

1) **Pratanvat :** The meaning of word Pratanvat means tendril or a plant with tendrils or branching out or ramification^{5a}. In the cadaver dissection such structures are seen as different tendons of the muscles like extensor digitorum longus , flexor digitorum profundus^{7f} which have a single belly with four branches (tendons). Most of such structures are in extremities and Sushruta also says that Pratanvat Snayu are found in Shakha and Sandhi. Hence we can compare Pratanvat Snayu with muscles with branched tendons of extremities.

2) **Vrutta :** The meaning of word Vrutta means round , rounded^{5b}. During dissection we have observed different muscles which are rounded like Sartorius^{7g}, rectus abdomens, rectus femorius

etc. Hence, here we can compare Vrutta Snayu with rounded muscles.

3) Pruthula : The meaning of word Pruthula means flat, broad, large^{5c}etc. According to the Sushruta these are the Snayu which are present in Parshwa , Prusta , Ura & Shira. In cadaveric dissection of above sites we get the muscles like trapezius^{7h} in Prushta , lattimus dorsi in Parshwa, pectoralis major in Ura and occipito- frontalis in Shira, which are the flat muscles according to the modern. Hence we can compare Pruthula Snayu with the flat muscles.

4) Sushir : The meaning of word Sushir is tube, hollow space^{5d}. According to the Sushruta this Sushir Snayu are present at the end part of Amashaya (stomach), Pakvashaya (large intestine) and Basti(urinary bladder). While dissecting these particular sites it is observed that the sphincters which are pyloric sphincter in stomach⁷ⁱ, anal sphincter in anus and urethral sphincter in urinary bladder^{7j}. Hence we can compare Sushir Snayu with sphincters.

C) On the Basis of importance of Snayu in Shalya Shastra ²ⁱ: Sushruta stated that if one has clear knowledge about Bahya and Abhyantar Snayu , then only one can remove the deep seated foreign body . With the above reference, we can say that the word Bahya & Abhyantar have been used in the context of Snayu. In modern anatomy, only muscles are grouped as superficial and deep. Thus we can correlate Baahya Snayu as the superficial and Abhyantar Snayu as deep group of muscles.

d) On the basis of importance of Snayu in clinical aspect: In Snayugat Vata, Abhyantarayama, Bahyayama, Kubjata, Kriyahani are the common symptoms^{4a}. In Pakshaghata, after Vata Prakopa there is Sira and Snayu Sankochan which leads to Vadha of that particular part^{4b}. Even in paralysis there is a total loss of voluntary motor function that results from damage to nervous or muscle tissue⁸. When we go through all these above aspect we can say that the basic structure affected here is the muscle tissue because, basically here the Kriyahani (deformity or paralysis⁸) can be seen which is the main disorder of muscle.

e) On the basis of Marma: Aani, Vitap, Kakshadhar, Kurch, Kurchshir, Basti, Kshipra and Vidhur. These are the Snayu Marmas²ⁱ. Most of the Snayu Marmas are also the vViklyakara marmas^{2k}. Vaghbata explains Sanyu Marma Vidhalakshanas as bending of the body, convulsions, very severe pain, inability for riding, sitting etc³. By this we can say that whenever Snayu Marma is affected then there is Vikalata in body. The Vikalata (deformity or paralysis⁸) is a condition, which involves muscles. So Snayu is more comparable with muscles.

Discussion :

On the basis of literary research :

1. When we go through the word Peshi then its functions are stated as covering of various structures like Sira, Snayu, Asti etc. When we correlate this to the modern literature then they are the fascia, intermuscular septum, fibrous capsule, periostium etc.
2. When we go through the Sthana and Sankhya of Peshi. Sushruta mentioned that there are Peshis in Stana (breast), Yakruta (liver), Pliha (spleen) etc. But during dissection no

muscles observed at these sites. So Peshi cannot be the muscle. So by this we can observe that where there are no muscles, Sushruta never mentioned about any Snayu.

3. According to Dalhanacharya Akunchan, Prasaran, Utkshepana, Apakshepana etc. are the functions of Sanyu.²⁹ Contraction^{7k} (Akunchan) is the basic function which is performed by the muscle as per modern literature.
4. The function of Snayu is contraction and hence it can be identified as the muscle. So Snayu here is comparable with muscles not with the ligaments.
5. When we go through word meaning of different types of Snayu then the Pratanvat means tendons, Vrutta means long and rounded, Pruthula means flat and broad & Sushir means sphincters, which are the types of muscles (on the basis of shape).
6. When we consider the neck region here Sushruta mentioned 4 Peshis & 36 Snayus, when we go through the modern literature there are near about 40 muscles present in this region. If we see the no. of muscles, this no. matches more with no. of Snayu than that of Peshi.

2) On the basis of cadaveric study :

- A] The bigger muscles consist separate bellies which look like separate muscles, so Sushruta might have counted them as separate muscles (Snayu). In cadaveric study we counted the separate bellies as separate muscles.

However group of smaller muscles look like a single muscle, so Sushruta might have counted them as single muscle (Snayu). In cadaveric study, we counted them as separate muscles as per modern anatomy.

- B] While counting in limbs, the muscles and tendons are counted separately. Because the Pratanvat Snayu (muscles along with the tendons) are present in Shakha and Sandhi according to the Sushruta. And keeping in mind the Sankhya in this particular site muscles and tendons are counted separately.

- C] Where as counting the Snayu (muscles) of limbs some of the muscles are repeated because if we count the muscles region wise and dissect the limbs part wise then they look as though separate structure which even Sushruta might have also done.

The muscles which were counted are listed below in the table:

Region	No. of Snayu ²¹	No. of muscle & tendon ⁷¹	Description ⁷¹
Shir	34	50	Muscles present above the border formed by the floor of mouth, till posterior occipital protuberance on both sides were counted.
Griva	36	45	Muscle present above the suprasternal notch in central and clavicle on the both side were counted.
Ura	30	44	The number vary here with large extent because the intercostals (external, internal & intimi) Muscles fibers are counted separately according to the modern where Sushruta has considered them as a single muscle.
Prusta, Kati & Parshwa	200	201	Muscles of back, abdomen, pelvis, iliac region & along with the sphincters are included.
Adhoshakha Vankshan	20	19	Muscles of perineum, pelvis region along with tendons of psoas major, psoas minor and illiacus are included (because this tendon attaches to the femur).
Uru	80	84	Muscles & tendons of femoral & gluteal region.
Janu	20	20	Muscles which surrounds the knee joint were included
Jangha	60	68	Muscles of leg along with their tendons are included
Gulpha, Padtal & Kurch	60	66	Muscles of plantar and dorsal aspect of foot and tendons coming from above are included.
Anguli	60	62	As we can see there are no muscles but only the tendons are present in the phalanges. So only the tendons which attach to phalanges are included.
Urdhwa Shakha Vankshan	-	-	When we consider one vankshan Pradesh such site is incomparable in urdhwa shakha. So we omit here the 20 snayus imentioned in vankashan Pradesh.

Bahu	80	46	Muscles of arm, some of the scapular muscle and their tendons, which are attached to the humerus are included.
Kurpar	20	18	Muscles which surround the elbow joint were included.
Prakosht	60	98	Muscles and tendons of forearm are included.
Hastatal, Manibandh & Kurch	60	82	Muscles of palmar and dorsal aspect of hand and tendons coming from above are included
Anguli	60	50	As we can see there are no muscles, but only tendons present in the phalanges so only the tendons which attach with the phalanges are included.
Total	900	953	

CONCLUSION :

By considering all the points regarding Snayu mentioned in Ayurvedic literature & then correlating it with modern texts & cadaveric study, we may conclude that Snayu mentioned by the Sushruta are actually the muscles and tendons.

ACKNOWLEDGMENT :

We are thankful to Bharati Vidyapeeth deemed University, Principal- B.V.D.U. College of Ayurved, Pune. for their support to promote us. We are grateful to Dr. Hanumant Kulkarni for his valuable inputs.

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Experiment**Study Of Relation Between Kapha - Pradhan -
prakruti, Pulse Rate & Nadi Gati In Females
According To Ayurveda & Modern Science.**

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ABSTRACT :

The objective of this topic was study of relation between kapha-pradhanprakruti ,pulse rate & nadigati in females .According to Ayurved Samhitas references regarding prakruti–kaphapradhanprakruti,nadigati were studied. Prakruti of the volunteers was done with the help Special Prakruti Parikshan Proforma. At the same time references regarding pulse-pulse examinationwere also studied from modern texts.

Keywords : Prakruti, Pulserate, Nadigati, Health

INTRODUCTION :

Ayurveda, the Indian traditional system of medicine describes a unique concept “prakruti” (constitution), which is genetically determined, categorising the population into several subgroups based on phenotypic characters like appearance, temperament and habits. The concept is claimed to be useful in predicting an individual’s susceptibility to a particular disease, prognosis of that illness and selection of therapy.

Ayurveda attributes these constitutional characteristics of an individual to the preponderance of certain “doshas”.Based on the predominance of individual doshas, there are three major types of prakruti named after predominant dosha, viz., vata, pitta and kapha.

The prakruti is believed to be determined at the time of conception and is influenced by the the dietary habits and lifestyle of the mother.According to Ayurveda ,when we are examining nadi with three fingers (Tarjani,madhyama&Anamika) it shows vata,pitta&kaphadoshadhikya respectively.

Pulse is meant the expansion and elongation of the arterial walls passively produces by pressure changing during systole and diastole of ventricle.It is pressure wave created by ventricle,while ejection of blood into fully distended aorta and then propagated as a wave through the blood column towards the periphery.

AIM AND OBJECTIVES :**AIM :**

Study of relation between kapha-pradhanprakruti,pulse rate & nadigati in females according to Ayurveda & modern science.

OBJECTIVES :

- The concept of Sharir Prakruti –kapha-pradhan-Prakruti, from Ayurvedic Samhitas, was studied in detail and the references were compiled.
- The concept of Nadi-Nadigati from Ayurvedic Samhitas, was studied in detail and the references were compiled.
- The pulse rate from modern text was studied and references were compiled.
- The relation between kapha-pradhanprakruti, pulse rate & nadigati were studied statistically

MATERIALS :

1. Ayurvedic Samhitas.
2. Modern Texts and Techniques.
3. Prakruti Parikshan Proforma.

Inclusion Criteria :

Study consist of 60 females from 18 to 24yrs age group.

Exclusion Criteria :

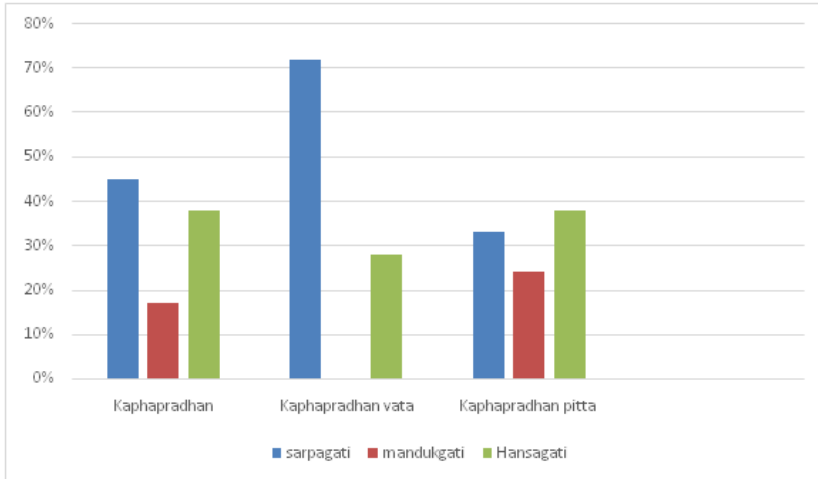
Students suffering from any major illness.

METHODOLOGY :

- 60 female volunteers between the age group of 18-24yrs were selected for the study.
- Sharirprakruti-parikshan was done with the help of Prakruti –parikshan proforma.
- Nadigati of each volunteer was also carried out.
- pulse rate of each volunteer was carried out..
- To avoid bias same time ,place, and pattern was maintained.
- A comparative study was done with the help of collected data such as Sharirprakruti, nadigati and pulse rate.
- Statistical analysis was done with the help of collected data.

➤ OBSERVATION :

KAPHADHIKYA	SARPAGATI.	MANDUKGATI	HANSAGATI
60FEMALES	27 (45%)	10(17%)	23(38%)
KAPHADHIKYA VATA	SARPAGATI.	MANDUKGATI	HANSAGATI
18 FEMALES	13(72%)	0(0%)	05(28%)
KAPHADHIKYA PITTA	SARPAGATI.	MANDUKGATI	HANSAGATI
42FEMALES	14(33%)	10(24%)	18(43%)

STATISTICAL ANALYSIS :**CONCLUSION :**

1) Study shows in Kapha-pradhanprakruti:

- Sarpagati was 47%
- Mandukgati is 17% and
- Hansagati was 38%.

2) KaphadhikyaVata prakruti :

- Sarpagati was 13 %
- Mandukgati is 0 % and
- Hansagati was 05 %.

3) Kaphadhikya Pitta Prakruti:

- Sarpagati was 14 %
- Mandukgati is 10% and
- Hansagati was 18 %.

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Experiment**"Effect Of Nadi Shodhan Pranayam In Regulation Of Breath"**

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ABSTRACT :-

Regulation of breath or the control of Prana is the stoppage of inhalation and exhalation, which follows after securing that steadiness of posture or seat. Svasa' means inspiratory breath and 'Prasvasa' is expiratory breath. Control of Prana means control of mind. Mind cannot operate without the help of prana. The chief aim of Pranayama is to unite the Prana with the Apana and take the united Pranapana slowly towards the head. The effect or fruit of Pranayama is Udghata or awakening of the sleeping Kundalini. The first pranayama practise is nadi shodhana pranayama ,(alternate nostril breathing). Nadi is a tubular organ of the body,like an artery or vein for the passage of Prana. Pranayama remove all sorts of diseases, improve health, energise digestion, invigorate the nerves, straighten the Sushumna Nadi, remove Rajas and awaken Kundalini. Practice of Asanas and Pranayama best ows good health and steady mind. Pranayama in its popular and preparatory form may be practised by every one in any posture .whatsoever, sitting or walking; and yet is sure to show its benefits. The breath rhythmical, steady the nerves and the mind and allow the Sushumna Nadi to flow, which will be beneficial for meditation. The five Koshas will vibrate rhythmically. All the muscles are relaxed. All the nerves are toned. Rhythm and harmony are established in the entire being. Mind is calmed, Circulation is promoted. So, in this paper explained that Nadi shodhan pranayam is useful to control the breath.

Keywords : Nadishodhan, Pranayama

INTRODUCTION :-

Regulation of breath or the control of Prana is the stoppage of inhalation and exhalation, which follows after securing that steadiness of posture or seat, Asana. Thus is Pranayama defined in Patanjali Yoga Sutras. Svasa' means inspiratory breath and 'Prasvasa' is expiratory breath. Breath is external manifestation of Prana, the vital force. Breath like electricity, is gross Prana. Breath is Sthula, gross. Prana is Sukshma, subtle. By exercising control over this breathing you can control the subtle Prana inside. Control of Prana means control of mind. Mind cannot operate without the help of Prana. The chief aim of Pranayama is to unite the Prana with the Apana and take the united Pranapana slowly towards the head. The effect or fruit of Pranayama is Udghata or awakening of the sleeping Kundalini. There are the two nerve-currents one on either side of the spinal column. The left one is called Ida and the right is known as Pingala. The first pranayama practise is **NADI SHODHANA PRANAYAMA**,

(Alternate nostril breathing) . It activates and harmonises “ida” and “pingala” nadis. Object is purification of nerves.

AIM & OBJECTIVE

To evaluate effect of nadi shodhan pranayam in regulation of breath.

MATERIAL AND METHOD :-

Regulation of breath or the control of Prana is the stoppage of inhalation and exhalation, which follows after securing that steadiness of posture or seat. Pranayama is the control of the Prana and the vital forces of the body. It is regulation of the breath. This is the most important step. The aim of Pranayama is the control of Prana. Pranayama begins with the regulation of the breath for having control over the life-currents or inner vital force. Pranayama is regarded lengthy or subtle according to its three components, the external, the internal and the steady; the retention processes are modified by the regulations of space, time and number. Nadi is a tubular organ of the bdy, like an artery or vein for the passage of Prana. Nadi has three layers (as an electric wire). Inner most layer-Sira ;middle-Dhamani ;outer -Nadi .A little obstruction in the nerves-discomfort and paralyse a limb or organshodhana means Purifying or cleaning. Nadi shodhan pranayam it activates and harmonises “ida” and “pingala” nadis.

TECHNIQUE :-

- Sit in a comfortable posture.
- Keep the back erect and rigid.
- Lower the head to the trunk. Rest the chin in the trunk b/w the collar bones- jalandara banda
- Stretch the left arm. Rest the back of left wrist on left knee. Perform jnanamudra with left hand.
- The right arm at elbow. Bend the index and middle finger towards the palm. Ring and little finger towards the thumb.
- Place the right thumb on right side of nose in the fatty tissue, little and ring finger on left side of nose below nasal bone.





- Press the ring and little finger to block the left side of the nose.
- Exhale completely through right nostril.
- Inhale slowly through right nostril, by closing left (pooraka).
- Release the pressure of ring and little finger on left nostril, exhale slowly through left nostril (rechaka). Now inhale through left nostril (pooraka).
- Exhale through rt nostril.
- Complete one cycle.

RHYTHUM OF BREATHING :-

- Exhale through rt nostril.
- Inhale through rt nostril.
- Exhale through lft nostril.
- Inhale through lft nostril.....so on.
- Do 8-10 cycle at a stretch
- Breathing should be silent (not forced or restricted in anyway).
- The flow must be smooth, with no jerk throughout.
- Always use chest and diaphragm muscles.
- If one nostril is blocked, perform breathing balancing exercise before commencing.

Best time : 4 - 6 am

POINTS TO BE NOTED (Precautions) :-

- Inhalation and exhalation from each side should be of same time.
- Don't attempt to hold the breath after exhalation..

- Always conclude with shavasana ,Never breathe through mouth.
- The effects of pranayama breathing on the organs are almost instantaneous. Therefore it is extremely important, to practice pranayama breathing exercises only under the supervision and guidance of a trained yoga instructor
- . There should be no forced or strained breathing during the exercise, as this can prove harmful to the body.
- If during the exercise, you feel your body shaking involuntarily or that your muscles have become tense, stop the exercise and breathe normally.
- If you suffer from high blood pressure, you should avoid Alternate Nostril breathing.

OBSERVATION AND RESULT :-

- The body becomes lean, strong and healthy. Too much fat is reduced.
- There is lustre in the face. Eyes sparkle like a diamond. The practitioner becomes very handsome.
- Voice becomes sweet and melodious. The inner Anahata sounds are distinctly heard. The student is free from all sorts of diseases. He gets established in Brahmacharya. Semen gets firm and steady.
- Nourishment by extra supply of oxygen.
- Brain centers are activated.
- Clears pranic blockages.
- Spiritual awareness.
- Balance ida and pingala nadi.
- Steady practice arouses inner spiritual light, happiness and peace of mind.

CONCLUSION :-

Nadi shudhi pranayama, mainly expiratory exercises, improved lung function subjectively and objectively and should be regular part of therapy.

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Experiment**A Survey Study Of Palitya With Respect To
Doshaj Prakruti In Male**

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ABSTRACT :

In modern era due to different kind of stress and changing life style graying of hair i.e. Palitya occur in early age. Description of Kesha is mention in Samhitas as per Prakruti. Reference of Palitya is directly mentioned only in Pitta Prakruti. Therefore, to study the Palitya in all Dosha Adhikya Prakruti this topic is selected.

In survey study consent taken from 100 male volunteers in group of 20 to 40 yrs. Kesha Parikshan (by HWS) and assessment of Prakruti was done. Out of 100 volunteers; 26 are found of Vata Doshadhikya; 56 are found of Pitta Doshadhikya and 18 are found of Kapha Doshadhikya. In score 1- 9 volunteer (score 1 is not considered under Palitya); in score 2- 81 volunteer; in score 3- 10 volunteer; No individual found with score 4 and 5. For further study 91 volunteer are selected showing Palitya.

In Vata Doshadhikya Prakruti: due to Ruksha, Parush and Chala Gunas. In Pitta Doshadhikya Prakruti: due to Ushna Tikshna Guna. In Kapha Doshadhikya Prakruti: Palitya less found due to predominance of Prithvi Mahabhut.

It is concluded that Palitya more found in Pitta Doshadhikya than Vata Doshadhikya and Kapha Doshadhikya Prakruti. Palitya not found in Vatadhikya Kapha and Kaphadhikya Vata Prakruti; whenever there is combination of Pitta Dosha as Pradhan or Anubhandha Dosha more Palitya is found. Other factors like Chemical shampoo, Hair dye/colour, and Spicy food and stressful life style are more prone to Palitya.

Keywords : Palitya, Prakruti, Hair gray, Hair whitening score.

INTRODUCTION :

Prakruti is the factor which originates in a person right from the time of conceptions; it determines the physical and mental attribute of man. It shows many characters according to Prakruti and "Palitya" is one of them. Palitya i.e. graying of hair is seen according to Prakruti. In the modern era due to different kind of stress and changing

life style graying of hair i.e. Palitya occur in early age. Reference of Palitya is directly mentioned only in Pitta Prakruti but not in Kapha and Vata Doshaj Prakruti. Therefore, to study the Palitya in all Dosha Adhikya Prakruti this topic is selected.

METERIAL AND METHOD :

- In survey study consent taken from 100 male volunteers in group of 20 to 40 yrs.
- Kesh Pariksha done by prepared Kesh Parikshan Proforma.
- Assessment of Prakruti according to Ayusoft C-DAC.
- Sort out volunteers as per Vatadhikya, Pittadhikya and Kaphadhikya Prakruti.
- Estimation of extent of Palitya by HWS i.e. Hair whitening score-(anadolu kardiyol derg.2012 pubmed) was defined according to Hair Whitening Score Scale.

Table no.1: Hair Whitening Score Scale

Sr. No.	Colour of hair	Score
01.	Pure Black	1
02.	Black > White	2
03.	Black = White	3
04.	White > Black	4
05.	Pure White	5

Extent of gray/white hairs was defined (1: pure black; 2: black>white; 3: black=white; 4: white>black; 5: pure white)

RESULT AND DISCUSSION :

Table 2: Palitya as per Doshadhikya and HWS (Hair whitening score)

Prakruti ↓ Score	Vata Doshadhikya		Pitta Doshadhikya		Kapha Doshadhikya		Total
	VP	VK	PV	PK	KV	KP	
Score 1	-	2	3	2	1	1	09
Score 2	21	-	23	22	-	15	81
Score 3	3	-	2	4	-	1	10
Score 4	-	-	-	-	-	-	-
Score 5	-	-	-	-	-	-	-
Total	26		56		18		100

- **Score 1:** Out of 09; 2 individual are found of Vata Doshadhikya Prakruti; 5 of Pitta Doshadhikya Prakruti and 2 of Kapha Doshadhikya Prakruti.
- **Score 2:** Out of 81; 21 individual are found Vata Doshadhikya Prakruti; 45 of Pitta Doshadhikya Prakruti and 15 of Kapha Doshadhikya Prakruti.
- **Score 3:** Out of 10; 3 individual are found Vata Doshadhikya Prakruti; 6 Pitta Doshadhikya Prakruti and 1 of Kapha Doshadhikya Prakruti.
- **No individual found with score 4 and 5.**
- **Score 1 represent pure black hair i.e. no Palitya is present. The number of volunteer having scored 1 i.e. 09 excluded for further study.**

Table 3: Proportion of occurrence of Palitya according to Doshadhikya Prakruti

Prakruti	VP	VK	PV	PK	KV	KP	Total
Frequency	24	0	25	24	0	16	91
Proportion	0.24	0	0.25	0.24	0	0.16	0.91

This table shows that proportion of Palitya in Vatadhikya Pitta and Pittadhikya Kapha is same is 0.24; in Pittadhikya Vata is 0.25; in Kaphadhikya Pitta is 0.16. In Vatadhikya Kapha and Kaphadhikya Vata proportion is 0.

Table 4: Other factors related to Palitya (Premature Graying of Hair) :

Other factors	Vata Doshadhikya		Pitta Doshadhikya		Kapha Doshadhikya		Total
	VP	VK	PV	PK	KV	KP	
Genetic Factor	1	-	-	1	-	-	02
Hair Dye/ Hair colour	19	-	17	13	-	9	58
Chemical Shampoo	25	-	24	23	-	15	87
Boring Water	15	-	12	12	-	6	45
Spicy and Salty food	11	-	14	16	-	12	53
Stressful life style	12	-	14	14	-	12	52
Smoking	8	-	6	3	-	5	22

This table shows the other factor like chemical shampoo, hair dye/colour, spicy food and stressful lifestyle etc.enhances Palitya.

Table 5: Percentage of Palitya due to other factor in Prakruti:

Factors	Genetic factor	Hair Dye	Chemical Shampoo	Boring Water	Spicy Food	Stressful lifestyle	Smoking
(freq.)	2	58	87	45	53	52	22
VP	1	19	25	15	11	12	8
VK	-	-	-	-	-	-	-
PV	-	17	24	12	14	14	6
PK	1	13	23	12	16	14	3
KV	-	-	-	-	-	-	-
KP	-	9	15	6	12	12	5

This table shows there is no proportion of other factor in Vatadhikya Kapha and Kaphadhikya Vata Prakruti.

Doshadhikya And Dosha Anubhandha Prakruti:

- **Score 2:** Out of 81 individual 45 has been found of Pitta Doshadhikya Prakruti and 21 of Vata Doshadhikya Prakruti; 15 of Kapha Doshadhikya Prakruti. Palitya less found where Anubandh of Kapha Dosha is present .This may be due to Snigdha, Sthir, Manda Gunas of Kapha Dosha which are responsible for stability of hair and slow down the process of hair graying.
- **Score 3:** Out of 10 individuals 6 has been found of Pitta Doshadhikya; 3 of Vata Doshadhikya and 1 of Kapha Doshadhikya. In Pitta Doshadhikya Prakruti Kshipra Palitya is mentioned. Which indicate that graying starts early and faster in Pitta Doshadhikya Prakruti.

Doshadhikya Prakruti :

Pitta Doshadhikya Prakruti- In Pitta Doshadhikya Prakruti Palitya has found more than Vata Doshadhikya and Kapha Doshadhikya Prakruti. It may be due to Ushna Guna and predominance of Teja Mahabhut. In the process of graying Tikshna Guna of Teja Mahabhut is responsible for graying. Pitta is responsible for conversion, which facilitate metabolic activity. So, it is responsible for early graying of hair.

Vata Doshadhikya Prakruti- In Vata Prakruti Ruksha, Parush and Chala Gunas are responsible for Ruksha Kesha, Sphutita Kesha, Alpa Kesha as mentioned in Samhitas which facilitate process of Palitya. So, Palitya is found in Vata Doshadhikya Prakruti.

Kapha Doshadhikya Prakruti- It may be due to Snigdha, Manda and Sthir Guna of Kapha Dosha which gives stability. Predominance of Prithvi Mahabhut is also present in Kapha Dosha. Kesha are also Parthiv. So, they retain/sustain hair more than Vata and Pitta Doshadhikya Prakruti.

Other Factor Responsible For Premature Gray Hair :

- **Genetics** influence the hair graying because Kesha from Pitruj Bhava; **Hair dye/colour** having hydrogen peroxide which damages the hair; **Chemical shampoo** also contains Kshar, Tikshna Dravya which cause Rukshata in Kesha; **Boring water** is hard water contains Amla, Kshara Dravya and increase Ushna and Tikshna Guna which tend to Pitta Prakopa.; **Spicy food** having Lavana Rasa. Due to Ushan and Tikshna Guna it cause Pitta Prakopa; **Stress** level promotes production of hydrogen peroxide; the excess hydrogen peroxide then accumulates within the hair follicles, causing melanocyte death. **Smoking**: Effect of cigarette smoke on the micro vascular of dermal hair papilla, smoke genotoxicants causing damage to DNA of hair follicle and cause ageing.

CONCLUSION :

- Palitya is found more in male having Pitta Doshadhikya Prakruti than Vata Doshadhikya and Kapha Doshadhikya Prakruti.
- Whenever there is combination of Pitta Dosha as Pradhan or Anubhandha Dosha more Palitya is found.
- Palitya is not found in Vatadhikya Kapha and Kaphadhikya Vata Prakruti.
- Other factors Like Chemical shampoo, Hair dye/colour, Spicy food And Stressful lifestyle are more prone to Palitya.

ACKNOWLEDGEMENT :

I am pleased to express my gratitude towards my Guide Dr. Mrs. Sarita S. Bhutada. Her encouragement, motivation, guidance and support towards my work. Without her guidance I am not able to do this work.

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Experiment**To study the concept of DantaDhavan as an Upakrama of Dincharya with special reference to DantaShodhanChurna**

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ABSTRACT :

In day today life, however due to lack of time and negligence; Oral hygiene is not properly maintained. Habits like tobacco chewing, smoking etc. have increased incidences of diseases pertaining to oral cavity. Dantadhavana (brushing teeth) helps in prevention of Mukhadaurgandhya (bad odour from mouth), Asyavairasya, Dantamala (debris), Dantamalinta (plaque) and Aruchi. The DantaShodhanChurna, mentioned in SushrutaSamhita has been used for medicinal purpose since centuries for maintenance of oral hygiene. A randomized control trial on 40 healthy individuals with unhygienic oral conditions, between the age group of 20-50 years of both the sex was carried, which were divided into two groups each containing 20 individuals. The Group A advocated Dantadhavana with DantaShodhanChurna showed better result than those in Group B using KhadirChurna for Dantadhavana. DantaShodhanChurna mixed with TilaTaila and Madhu having Katu, Tikta, KashayaRasa helps in Pacifying the kaphaDosh while UshnaGuna help in pacifying the VataDosh. 25% cases of Group A have shown good response, 55% shown moderate response, and 20 % shown mild response. In Group B, 15% have shown good response, 40 % shown moderate response and 45% shown mild response.

Kew words : Dantadhavana, DantaShodhanChurna, MukhaSwasthya

INTRODUCTION :

MukhaSwasthya (oral hygiene) has gained importance now a days, because Mukha(oral cavity) is such Anga, which is exposed to many risk factors in day-to-day life.

In day today life, however due to lack of time and negligence; Oral hygiene is not properly maintained. In slum areas due to poor hygiene, there are same problems. Now a day's many people are suffering from dental problems, because of lack of knowledge of "Dantaswasthya". Today tarter, calculus, gingivitis these are common oral health problems. Hence, DantadhavanaUpakrama mentioned in Dinacharya (daily regime) can play important role in present situation.

Dantadhavana helps in prevention from Mukhadaurgandhya (bad odour from mouth), Asyavairasya, Dantamala (debris), Dantamalinta(plaque) and Aruchi^{[1][2]}. One should clean his Danta (teeth) by using these Dantapavana (plant twigs) twice daily (morning & evening) by

using these herbs like Vata, Asana, Arka, Khadir, Karanja, Karvir, Irimed, Apamarga, Malti and which have similar properties.^{[3][4]}It should have Kashaya, Madhura, Tikta and Katu rasa.^[5]

The DantaShodhanChurna, mentioned in SushrutaSamhita has been indicated for the purpose of Dantadhavan. The DantashodhanChurna has a multiple drug preparation i.e. Shunti, Maricha, Pippali, Twaka, Ela, Patra, Tejbal, Saindhanamak, TilaTaila and Madhuetc.^[6]hence present study was undertaken to understand the concept of DantaDhavan as an Upakrama of Dincharya with special reference to DantaShodhanChurna.

AIM :

To study the concept of DantaDhavan as an Upakramaof Dincharyaw.s.r. to DantaShodhanChurna.

METHODOLOGY :

Details of Clinical study :

Clinical trials on 40 healthy individualswith unhygienic oral conditions between the age group of 20-50 years of both the sex was carried out. They were divided into two groups each containing 20 individuals.

Procedure :

Procedure for Group A : The DantaShodhanChurna (Churna of size 180 μ m) 4 grams mixed with 1ml of TilaTaila and 1 ml of Madhuand then paste is prepared and given for individuals of group A for cleaning the teeth by rubbing gently with the help of finger in morning and in night (after meal).^[7]

Procedure for Group B : The KhadirChurna (Churna of size 180 μ m) 4 grams was given to individual of group B for cleaning the teeth by rubbing gently with the help of the finger in morning and in night (after meal).

Time : In Morning & at night (after meal)

Quantity : 4 grams

Preparation of drug:

DantaShodhanChurna was prepared from dry forms of Shunthi, Maricha, Pippali, Twaka, Ela, Patra, Tejbal and Saindhalavana is also added to it. The finely powdered raw material was passed through sieve number 85 and particle size of Churna was 180 μ m (Protocol for testing, Pharmacopoeial laboratory for Indian medicines, Dept of Ayush).

DRUG REVIEW:**Table no 1:** Summary of DantashodhanChurna

Drug	Latin Name	Rasa	Virya	Vipaka	Guna	Doshakarma
Shunthi	Zingiberofficinale	Katu	Ushna	Madhur	Laghu	Vatakaphahara
Maricha	Piper nigrum	KatuTikta	Ushna	Katu	Laghu	Kaphavatahara, Chedana,Ruchya
Pippali	Piper longum	Katu	Ushna	Katu	Laghu, Ruksha	Kaphavatahara, Sulaprasamana, Ruchya
Twaka	Cinnamomumz	Katu,	Ushna	Katu	Ruksha,	Kaphavatahara, Kanthasuddhikara, Ruchya
Ela	Elettariacardam omum	Katu	Shita	Katu	Laghu, Ruksha	Kaphavatahara, Rocana,Dipana.
Patra	Cinnamomumta mala	Katu	Ushna	Katu	Tikshna Laghu	Kaphavatahara, Ruchya
Tejbal	Zanthoxylumar matum	Katu, Tikta	Ushna	Katu	Ruksha	Kaphavatahara, Ruchya,Pachana
Saindhav Namak	Sodichloridium	Madhur	Ushna	Madhur	Tikshna, Laghu	Tridoshanashak
TilaTaila	Sesamumin dicum.	Tikta, Kashaya	Ushna	Madhur	Guru, Snigdha	Vataghna, Dahanashak
Madhu	-----	Madhur Kashaya	Ushna	Madhur	Ruksha	Kaphahara
Khadir	Acacia Catechu wild	Tikta, Kashaya	Shita	Katu	Laghu, Ruksha	Kapha - Pittahara, Dantya

PROCEDURE FOR DATA COLLECTION :

A standard case paper regarding oral health with informed consent letter was prepared and observations were noted accordingly.

Both groups were examined time to time and follow up was taken on 7th day, 15th day, 30th day, 45th day (Post treatment)

STATEMENT OF LIMITATIONS :**Inclusion criteria :**

- Individuals with Lakshanas – Asyavairasya, Dantamalinta, Mukhadaurgandhya and Dantamala were included.
- Individuals between the age group of 20-50 years were included.
- Individuals of both the sex were included.

Exclusion criteria:

- Contraindication for Dantadhavana-Ajirna, Vamathu, Shwas, Kasa, Jwar, Ardit, Trushna, Mukhapaka etc.^[8]
- Individuals suffering from stomatitis, oral cancer and major oral diseases, accidental dental injuries were excluded.
- Individuals suffering from any systemic disease were excluded.

ASSESSMENT OF PARAMETERS**Table no 2:** Gradation for Dantamala (Debris)

Grade	Symptoms
0	No debris or stain present
1	Soft debris covering not more than one third of the tooth surface, or presence of extrinsic stains without other debris regardless of surface area covered
2	Soft debris covering more than one third, but not more than two thirds, of the exposed tooth surface
3	Soft debris covering more than two thirds of the exposed tooth surface

Table no 3: Gradation for Dantamalinta (Plaque)

Grade	Symptoms
0	No plaque.
1	A film of plaque adhering to the free gingival margin and adjacent area of the tooth. The plaque may be seen in situ only after application of disclosing solution or by using the probe on the tooth surface
2	Moderate accumulations of soft deposits within gingival pockets seen by naked eyes.
3	Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

Table no 4: Gradation Mukhadauryagandha (Freshness Of Mouth):

Grade	Symptoms
0	No odor present
1	rarely noticeable odor
2	Clearly noticeable odor.
3	Strong offensive odor.

Table no 5: Gradation for Asyavairasya

Grade	Symptoms
0	Proper taste perception, enjoys taste of the food
1	often complains regarding the taste of food
2	Shows disinterest towards food
3	Often skips meal

Table no 6: Gradation for Criteria for assessment of overall responses

Based on the changes in the signs and symptoms the cure rate was classified into

Grade	Symptoms
Good response	Above 76 % relief in overall features.
Moderate response	51%- 75% relief in overall features.
Mild response	26%- 50% relief in overall features
No relief	Below 25% relief in overall features

OBSERVATION& RESULTS

Age wise Distribution:

Out of 40 patients, 27 (67.5 %) were in the age group of 20-30 years, 08(20 %) were in the age group of 31-40 years, 5 (12.5 %) were in the age group of 41-50 years.

Table no 7: Showing incidence of age in both groups.

AGE	Group A	Group B	Total	
	No of cases	No of cases	No of cases	%
20-30	14	13	27	67.5 %
31-40	04	04	08	20 %
41-50	02	03	05	12.5 %

Prakruti wise Distribution:**Table no 8:** showing incidence of Prakruti in both group

Prakruti	Group A	Group B	Total	
	No of cases	No of cases	No of cases	%
VP	4	5	9	22.5%
PK	3	4	7	17.5%
VK	4	3	7	17.5%
KP	2	3	5	12.5%
KV	3	2	5	12.5%
PV	4	3	7	17.5%

Distribution according to frequency of cleaning**Table no 09 :** showing incidence of frequency of cleaning.

Frequency	Group A	Group B	Total	
	No of cases	No of cases	No of cases	%
Once	15	14	29	72.5%
Twice	5	6	11	27.5%

Statistically analysis of Result :**Table no 10 :** Showing statistically analysis of Result

		Mean (B.T.)	Mean (A.T.)	% relief	S. D.	T Value	T table value	P value
Dantamala	Group A	0.850	0.250	70.58 %	0.680	3.943	2.093	0.0009
	Group B	0.80	0.40	50 %	0.502	3.559	2.093	0.0021
Mukhadaurgandhya	Group A	1.1	0.35	68.18 %	0.716	4.682	2.093	0.0002
	Group B	0.8	0.35	56.26 %	0.604	3.327	2.093	0.0035
Dantamalinta	Group A	0.95	0.250	73.68 %	0.801	3.907	2.093	0.0009
	Group B	0.75	0.350	53.34 %	0.598	2.99	2.093	0.0075
Asyavairasyata	Group A	1.55	0.35	77.42 %	0.767	6.990	2.093	< 0.0001
	Group B	1.30	0.40	69.23 %	0.640	6.282	2.093	< 0.0001
Oral Hygiene Index	Group A	1.350	0.350	74.08%	0.562	7.958	2.093	< 0.0001
	Group B	1.0	0.35	65%	0.502	5.339	2.093	< 0.0001

DISCUSSION :**DISCUSSION ON OBSERVATION:**

Age: In this study more number of cases (67.5%) was observed under the age group of 20-30 years. The incidence of improper dental hygiene was seen more in Adolescents, may be due to negligence or lack of time regarding oral hygiene.

Sex: As for sex is concerned in present study, it is observed that 62.5% of the individuals were male and 37.5% of the individuals were female. This may be because of the increased number of male in the population or may be the males have smoking and tobacco chewing habits more than females.

Prakruti: Prakruti wise distribution shows 9 individuals were of VatakaphaPradhanPrakruti while 7 were of KaphaVataPradhanPrakruti. As Vata is predominant in teeth and Kapha also being Sthana in oral cavity vitiation of both these Doshas leads to various diseases of oral cavity.

Vyasana: The present study shows, 22(55%) individuals had habit of tea, 9 (22.5%) had tobacco chewing habit. After intake of such items if mouth is not washed properly, there will be growth of bacteria S. Mutans which are responsible for plaque accumulation.

Frequency of cleaning:

Observation shows 72.5% (29) individuals clean their teeth only once in a day and 11(27.5%) individuals clean their teeth twice in a day. These are alarming figures in themselves. It shows people are less concerned about oral health.

DISCUSSION ON RESULT**Dantamala :**

There were significant changes seen in both the groups at 5% level of significance since t value are greater than table value of t in both group. P values are < 0.05 in both groups. Mean B.T in Group A was 0.850 that reduced to 0.250 where as in Group B mean B.T was 0.80 which was reduced to 0.40. Group A has shown 70.58 % relief and Group B has shown 50% relief.

Since DantaShodhanChurna having properties like Katu, Tikta&Kashaya Rasa, TikshnaGuna and TridoshaSamshanana karma it reduces dental debris –Dantamala. The rubbing of the Churnawith the finger helps in removing the food debris stuck in the teeth.

Mukhadaurgandhya :

Mean B.T in Group A was 1.1 that reduced to 0.35 where as in Group B mean B.T was 0.8 which was reduced to 0.35. Group A has shown 68.18 % relief and Group B has shown 56.26% relief.

The active ingredient of this Churna i.e. Shunthi, Maricha, Pippali, Twaka, Ela and Patra helps in freshness up the breath and protects the gums from other infections.

Dantamalinta :

Group A has shown 73.68 % relief and Group B has shown 53.34 % relief.

DantashodhanChurna having tiksna&Ushna properties helps in reducing the dental plaque. The rubbing of the Churnawith the help of finger removes food particles and plaque and lead

to regeneration of healthy gingival tissues.

Asyavairasyata :

Group A has shown 77.42 % relief and Group B has shown 69.23 % relief. The Katu, Tikta, Kashaya Rasa helps in pacifying the Kapha Dosha thereby it removes the Dosha from the oral cavity and it also increases taste recognizing power.

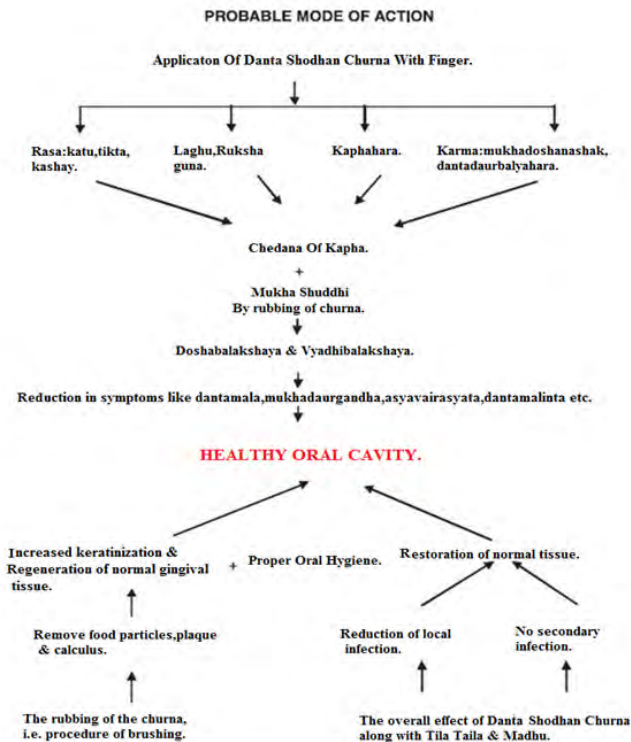
Oral Hygiene Index :

Group A has shown 74.08% improvement and Group B has shown 65 % improvement. Better results were seen in the Group A in maintenance of oral hygiene and removing of Danta and Mukhagata Malas.

Overall effect :

25% cases of Group A have shown good response, 55% shown moderate response, and 20 % shown mild response. In Group B, 15% have shown good response, 40 % shown moderate response and 45% shown mild response.

The Group A advocated Dantadhavana with Dantashodhan Churna shown better result than those followed Khadir Churna for Dantadhavana. This may be because rubbing of pest of Dantashodhan Churna which have multiple drugs and having Katu, Tikta, Kashaya Rasa and Ushna Virya and Vata-Pittahara Guna of Tila Taila and Kaphaghna Guna Madhu.



CONCLUSION :

DantaShodhanChurnamixed with TilaTaila and Madhu havingKatu,Tikta, Kashaya Rasa helps in Pacifying the kaphaDosha while UshnaGuna help in pacifying the VataDosha, thereby removing the Doshas from the oral cavity and it also increases taste recognizing power.The ingredient of Churna like Shunthi,Maricha,Pippali,Twaka, Ela and Patra helps in freshness up the breaththroughout the day.The ingredient of the Churna like Tejabal also strengthens the teeth and gums.The rubbing of the Churna along with Tila tail and Madhui.e. procedure of brushing with help of finger, helps in removing the food debris which stuck in the teeth.The Madhuis also ingredient ofDantaShodhanChurna due to which kapha mainly gets reduce and by which it helps in reduction in MukhaRoga& maintaining oral hygiene.

The Group A advocated Dantadhavana with DantashodhanChurna shown better result than those followed KhadirChurna forDantadhavana.

Hence from the study it is concluded that, Dantadhavana is an important Upakrama of Dincharyaand DantashodhanChurna is important preparation for Dantadhavanamentioned in Samhitas which should be used regularly, in order to prevent Mukharogas and to maintain oral hygiene.

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Experiment :

Study The Concept Of Danta Dhavana Upakrma Of Dinacharya W.s.r. To Asana (pterocarpus Marsupium) Kastha Churna

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ABSTRACT :

Oral hygiene has become an alarming health issue throughout the world. As per the WHO report, Worldwide, 60–90% of school children and nearly 100% of adults have dental cavities. Severe periodontal (gum) disease, which may result in tooth loss, is found in 15–20% of middle-aged (35–44 years) adults. Habits like tobacco chewing, smoking etc. have increased incidences of diseases pertaining to oral cavity.

Dantadhavana (brushing teeth) prevent us from Mukhadaurgandhya (bad odour from mouth), Asyavairasya, Dantamala (debris), Dantamalinta (plague). The Asana KasthaChurna is indicated in Samhita's for Dantadhavana purpose. A randomized controlled clinical trial on 60 healthy individuals between the age group of 20-50 years of both the sex was carried out. They were divided into two groups each containing 30 individuals. Follow-ups taken time to time and observation noted. Asana Kasthachuran having Tikta, Kashaya rasa, Katuvipaka helpspacifying the dosha's from the oral cavity. The Group A advocated Dantadhavana with Asana KasthaChurna showed better result than those compared to Group B advocated with colgate powder.

Keywords : Dantadhavana, Asana KasthaChurna, MukhaSwasthya, oral hygiene

INTRODUCTION :

Good oral hygiene helps to prevent dental problems - mainly plaque and tartar (calculus) which are the main causes of gum disease and caries (tooth decay). Habits like tobacco chewing, smoking etc. have increased incidences of diseases pertaining to oral cavity.

In A nationwide survey by AC Nielsen highlights the opinion among many Indians that the nation is smiling less and majority of the surveyed dentists also believe that poor oral hygiene could be one of the reasons. Today tarter, calculus, gingivitis are the common oral problems.

Oral hygiene is the practice of keeping the mouth, teeth, and gums clean and healthy to prevent dental problems by removing plaque and bacteria which includes brushing the teeth, DantadhavanaUpakrama (brushing teeth) mentioned in Dinacharya (daily regime) of Ayurveda, can play important role in present situation. One should clean his Danta (teeth) by using Dantapavana (plant twigs) twice daily (morning & evening) by using various herbs like

Vata, Asana, Arka, Khadir, Karanja, Karvir, Irimed, Apamarga, Maltietc. It should have Kashaya, Madhura, Tikta and Katu rasa.

The present study was undertaken to assess the effect of Asana ksthachurna in maintenance of oral hygiene and thereby preventing diseases arising from unhygienic oral conditions.

AIM& OBJECTIVE :

AIM :

- Study the Concept of DantaDhavanaUpakrmaof Dincharyausing Asana (Pterocarpusmarsupium) KastaChurna.

OBJECTIVES :

- Details study of the concept of dantadhavan from various literatures.
- Details study of Asana ksthachurna (dravyas).

METHODOLOGY :

Details of Clinical study :

Clinical trials on 60 individuals between the age group of 20-50 years of both the sex was carried out. 60 individuals were divided into two groups each containing 30 individuals.

Group A : 30 individuals were given Asana KastaChurna for Dantadhavana.

Group B : 30 individuals were given Colgate Powder for Dantadhavana.

Procedure :

Procedure for Group A: TheAsanaksthachurna (churna of size 180 μ m) 4 grams given for individuals of group A for cleaning the teeth by rubbing gently with the help of finger in morning and in night (after meal).

Procedure for Group B: The colgate powder 4 grams was given to individual of group B for cleaning the teeth by rubbing gently with the help of the finger in morning and in night (after meal).

Time : In Morning & at night (after meal)

Quantity : 4 grams

Preparation of drug :

Asana kasta churna was prepared from shushka(dry form)of asana. the finely powdered raw material was passed through sieve number 85 and particle size of churna was 180 μ m (Protocol for testing, Pharmacopoeial laboratory for Indian medicines, Dept of Ayush).

Follow up :

Both groups were examined time to time on 7th, 15th, 30th day and 45th day (Post treatment)

Statement of limitations :**Inclusion criteria :**

- Individuals with Lakshanas – Asyavairasya, Dantamalinta, Mukhadaurgandhya and Dantamala were included.
- Individuals between the age group of 20-50 years were included.
- Individuals of both the sex were included.

Exclusion criteria :

- Contraindication for Dantadhavana-Ajirna, Vamathu, Shwas, Kasa, Jwar, Ardit, Trushna, Mukhapaka etc.
- Individuals suffering from stomatitis, oral cancer and major oral diseases, accidental dental injuries were excluded.
- Individuals suffering from any systemic disease were excluded.

ASSESSMENT OF PARAMETERS**Table no 1:** Gradation for Dantamala (Debris)

Grade	Symptoms
0	No debris or stain present
1	Soft debris covering not more than one third of the tooth surface, or presence of extrinsic stains without other debris regardless of surface area covered
2	Soft debris covering more than one third, but not more than two thirds, of the exposed tooth surface
3	Soft debris covering more than two thirds of the exposed tooth surface

Table no 2: Gradation for Dantamalinta (Plaque)

Grade	Symptoms
0	No plaque.
1	A film of plaque adhering to the free gingival margin and adjacent area of the tooth. The plaque may be seen in situ only after application of disclosing solution or by using the probe on the tooth surface
2	Moderate accumulations of soft deposits within gingival pockets seen by naked eyes.
3	Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

Table no 3: Gradation Mukhadauryagandha (Freshness Of Mouth):

Grade	Symptoms
0	No odor present
1	rarely noticeable odor
2	Clearly noticeable odor.
3	Strong offensive odor.

Table no 4: Gradation for Asyavairasya

Grade	Symptoms
0	Proper taste perception, enjoys taste of the food
1	often complains regarding the taste of food
2	Shows disinterest towards food
3	Often skips meal

Table no 5. Oral hygiene index

OHI-S = Debris index score +calculus index score.

Grade	Score
0	0.1 - 1.2
1	1.3 - 3.0
2	3.1 - 6.0

OBSERVATION& RESULT :

Data analysis consisted of two parts, first part to describe the characteristic of the study subjects by using descriptive methods viz general points like Age, Sex, Prakrutietc. second part consisted of comparisons of pre treatment measurements of the outcome with that of post treatment measurements where we used inferential methods and statistics. Statistical analysis was done for the results using **Wilcoxon Signed rank test** at 5% level of significance.

Statistically analysis of Result :**Table no 6 :** Showing statistically analysis of Result

Lakshana		Mean (B.T.)	Mean (A.T.)	% relief	P value
Dantamala	Group A	1.967	0.6333	67.79 %	< 0.0001
	Group B	2.033	0.7667	62.29 %	< 0.0001
Mukhadaur gandhya	Group A	1.667	0.5667	66 %	< 0.0001
	Group B	1.767	0.7000	60.37 %	< 0.0001
Dantamalinta	Group A	1.933	0.6000	68.96 %	< 0.0001
	Group B	2.000	0.7333	63.33 %	< 0.0001
Asyavairasyata	Group A	1.933	0.7000	63.79 %	< 0.0001
	Group B	1.933	0.8000	58.62 %	< 0.0001
Oral Hygiene Index	Group A	1.667	0.6000	64 %	< 0.0001
	Group B	1.700	0.7333	56.86 %	< 0.0001

DISCUSSION :**Discussion on observation :****According to age group :**

In this study more number of cases 41(68.33%) was observed under the age group of 20-30 years.

The incidence of improper dental hygiene was seen more in Adolescents, may be due to negligence or lack of time.

According to Sex :

As for sex is concerned in present study, it is observed that 40(66.66%)of the individuals were male and 20(33.33%) of the individuals were female.

This may be the males have smoking and tobacco chewing habits more than females.

According Prakruti :

Prakruti wise distribution shows more patients 11 (18.33%) were of Vata Pitta pradhan and VataKaphapradhan. 10(16.66%) were KaphaVatapradhan and Pitta Vatapradhan. 9(15%) were Pitta Kaphapradhan and Kapha Pitta pradhan

As Vata is predominant in teeth and Kapha also being Sthana in oral cavity vitiation of both these Doshas leads to various diseases of oral cavity.

According to Vyasana :

The present study shows, 34(56.66%) individuals had habit of tea, 9 (15%) were tobacco chewing.

After intake of such items if mouth is not washed properly, there will be growth of bacteria S. Mutans which are responsible for plaque accumulation.

According to frequency of cleaning :

Observation shows 55(91.66%) individuals clean their teeth only once in a day and 5 (8.33%) individuals clean their teeth twice in a day.

These are alarming figure in themselves. It shows people are less concerned about oral health.

Discussion on results**Dantamala :**

Group A has shown 67.79 % relief and Group B has shown 62.29% relief.

Since Asana having tikta&kasaya rasa, Rukshaguna and Sleshmapittahar karma it reduces dental debris –Dantamala.

The rubbing of the churna with finger helped in removing the food debris stuck in the teeth.

Mukhadauryagandha :

Group A has shown 66 % relief and Group B has shown 60.37% relief.

Due to Tikta, kasaya rasa and laghu,rukshguna and by rubbing the churna on teeth Chhedan of Kapha and Mukhashudhi occurs

The active extracts of the drug Asana (propterol) helps in freshens up the breath, protects the gum from other infections.

Dantamalinta :

Group A has shown 68.96 % relief and Group B has shown 63.33% relief.

Asana having ruksh properties helped in reducing the dental plaque. The rubbing of the churna with finger remove food particles and plaque and lead to regeneration of healthy gingival tissues.

Asyavairasya :

Group A has shown 63.79 % relief and Group B has shown 58.62 % relief.

The Tikta, Kasaya Rasa helps in Pacifying the kaphaDosh while katuvipak help in pacifying the VataDosh, thereby removing the Doshas from the oral cavity and it increases taste recognizing power.

Oral hygiene index :

Group A has shown 64 % improvement and Group B has shown 56.86% improvement.

Better results were seen in the Group A in maintenance of oral hygiene and removing of Danta and MukhagataMalas.

The Tikta, Kasaya Rasa helps in Pacifying the kaphaDosha while katuvipak help in pacifying the VataDosha, thereby removing the Doshas from the oral cavity.

The Sleshmpittahar action of Asana helps in maintaining the hygiene of the oral cavity.

Over All result :

The Group A advocated Dantadhavana with Asana kashtachurna shown better result than those followed Colgate powder for Dantadhavana.

This may be because rubbing of powder with Asana kashtachurna which have Tikta, Kasaya Rasa, Katuvipak.

The active extracts of the drug Asana (propterol ,lupeol) which have antimicrobial action

PROBABLE MODE OF ACTION.

Asana (Pterocarpusmarsupium) having Tikta, Kasayarasa ,Katuvipak and Sleshmapittahar karma.

Due to katuvipak, Tikta, kasaya rasa and by rubbing the pest (i.e.-churna) with help of finger on teeth, Chhedan of Kapha and Mukhashuddhioccurs.

This leads to Doshabalakshaya and vyadhibalakshaya and reduce symptoms like Dantamala, Dantamalinta, Asyavairasya, Mukhadaurgandhya etc.

Asyavairasya : The katuvipak, Tikta, Kasaya Rasa helps in Pacifying the kaphaDosha while RukshGuna help in pacifying the kaphaDosha, therefore it removes the Doshas from the oral cavity and ultimately it increases taste recognizing power.

Dantamala : Since Asana kashchurnaTikta&kasaya rasa, and Sleshmapittahar karma it reduces dental debris –Dantamala.

The rubbing of the churna with help of finger removes the food debris stuck in the teeth.

Dantamalinta : Asana having Tikta and Kasaya Rasa and RukshaGuna helped in removing the dental plaque. The rubbing of the churna with finger remove food particles and plaque and lead to regeneration of healthy gingival tissues.

Mukhadaurgandhya : The active extracts of the drug Asana (propterol) helps in freshness up the breath, and protects the gum from other infections.

CONCLUSION

The study was aimed to evaluate the concept of DantadhavanUpkarmaof Dincharya to Asana

kasthachurna (Pterocarpus marsupium) for Danta Dhavan.

The following conclusions are drawn after considering the clinical aspects and theoretical facts.

Dantadhavana is one of the important procedures of Dinacharya for maintaining the health of oral cavity.

Dantadhavana also gives strength to the gingiva, tooth and other structures in the oral cavity.

The Asana (pterocarpus marsupium) katha churana having kashya, tikta rasa, and Laghu, rukshaguna, katuvipak.

The tikta, kashya rasa helps in Pacifying the kapha Dosh, and removing the Doshas from the oral cavity it maintain oral hygiene and reduces mukharogas and also it increases taste recognizing power.

The rubbing of the churna with help of finger helps in removing the food debris which stuck in the teeth.

The active extracts of the drug Asana (propterol) helps in freshens up the breath, protects the gum from other infections.

The Group A advocated Dantadhavana with Asana kasthachurna shown better result than those followed Colgate powder for Dantadhavana.

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Experiment :

Study Of Garbhashay And Infertility In Vata Pradhan Prakruti

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Abstract

Purpose : Nowadays, infertility is most upcoming challenge in modern era. The incidence of infertility is increasing due to stressful lifestyle, habits like smoking, alcohol consumption. Exponent of Ayurved have predominantly stressed the healthy status of Garbhashaya for normal conception and development. In the Ayurvedic perspective, the Prakruti can play important role while determining causes of infertility. Prakruti is a cluster of physical and mental characters based on the predominant dosha at the time of conception which remains unchanged throughout the life. The present study was done to see correlation between Prakruti and Garbhashaya(garbhashayya) in Vata-pradhan females. The comparative study of Garbhashaya and Endometrium was done in the research work.

Method : The study has been conducted on 65 married females of age group 18-30 and having regular menstrual cycle with help of Prakruti parikshan patrak as per Ayussoftware. Out of which 30 cases found as Vata-pradhan prakruti. Basal body temperature method was selected to record the day of ovulation. With the help of Ultrasonography, size of uterus, endometrial thickness, condition of ovary and if any pathology was detected was considered under the study.

Result: In this research work 65 cases were taken. Out of that 30 cases were assessed as Vata-pradhan prakruti (46.15 %), 7 cases as Pitta-pradhan prakruti (10.76%), 28 cases as Kaphaprdhan prakruti (43.70%). The values of endometrial thickness were compared and statistical analysis was done. The p value is 0.43 which is more than 0.05 of the threshold value which was not significant. The average thickness of endometrium was 6.7mm which was underneath the normal value. This suggests that the thickness of Garbhashayya is responsible for implantation of embryo.

Conclusion: The structural changes of uterus causes infertility. According to Prakruti it was seen that the percentage of infertility was more in Vata-pradhan prakruti

Key Words : Prakruti, Garbhashaya, Garbhashayya, Uterus, Endometrium

INTRUCTION :-

In this endeavour Ayurveda primarily focus on prevention of diseases through life style modifications & interventions based on the fundamental concept of Tridosha & Prakruti, play

an important role.

Prakruti is one among the ten folds of examination of a patient which gives an idea about qualitative status of health. Prakruti helps to determine the general built and character of an individual which is important in detecting Vyadhi and predicting prognosis of it in addition to plan the treatment accordingly. According to Ayurved, Tridosha namely Kapha, Vata & Pitta the three functional humours are responsible for three universal functions in the body namely Generations (**Anabolism**) organization (**metabolism**) and Destruction (**Catabolism**) contributes for Psychological as well as physical personality development from the time of zygote formation exhibiting a very specific structure – function – behavior pattern & trait of a person known as **Prakruti** in Ayurved .

According to WHO, positive reproductive health of a woman is a state of complete physical, mental and social wellbeing and not merely absence of disease related to reproductive system and function. The endometrium is the special epithelial lining of the uterus which lies above the level of internal os. The endometrium of the body of the uterus can be divided in to two zones- a superficial termed the **functional layer** and a deeper one termed the **basal layer** which lies adjacent to the myometrium.

Endometrial thickness of 8 to 10 mm is the normal response of endometrium to progesterone.

Aim.

To study the Garbhashaya in Vatapradhan prakruti.

Objective :-

- 1) To make a Comprehensive literary review on Garbhashaya in comparison with uterus. Assessment of Prakruti.
- 2) To study the relation of Garbhashya and Endomentrium obtained from ultrasonography
- 3) To see the relation between Prakruti and Infertility.

Materials

Source of Data –In the research work diagnosed cases of infertility taken from streeroga & prasutitantra OPD of **B.V.D.U. C.O.A & Hospital, Pune, Maharashtra, India.**

Inclusion Criteria.

- Patient – Age group 18-30 years.
- Females having regular menstrual cycle.

Exclusion Criteria.

- Patients suffering from major illness & congenital deformity.

Assessment Criteria.

- Vatapradhan prakruti assessed with the help of Lakshana mentioned in the classics.
- Endometrial study obtained with the help of ultrasonography.
- Correlation between endometrial thickness and prakruti were assessed

Assessment Criteria of Prakruti.

- Random prakruti parikshan of 65 married females of age group 18-30 yrs done with the help of prakruti parikshan patrak.
- 30 cases were found as Vata-pradhan prakruti.
- Menstrual history of those cases were taken.
- Selection of basal body temperature method was used for recording the time of ovulation.

Results

Assessment criteria for prakruti parikshan was as per Ayusoft.

- Out of 65 cases 30 cases were assessed as **Vata – Pradhan (46.15%)**
- 07 cases were assessed as **Pitta- Pradhan (10.76%)**
- 28 cases were assessed as **Kaph-Pradhan (43.70%)**

Discussion -**Discussion on Prakruti**

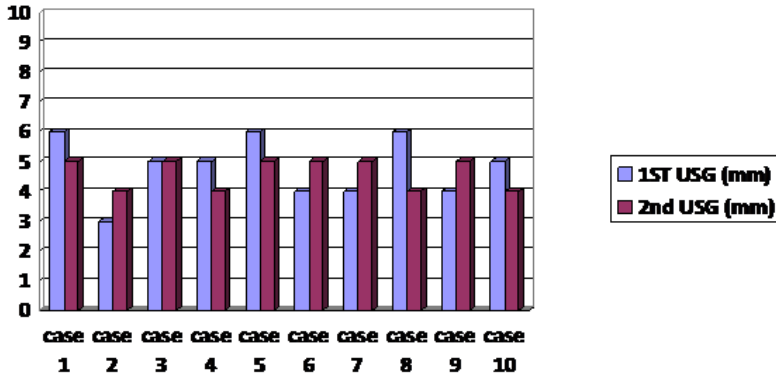
The characteristic features of each Prakruti assessed during the study conducted were found to have been in concurrence with those mentioned in the classics.

Discussion on comparative study of two USG finding

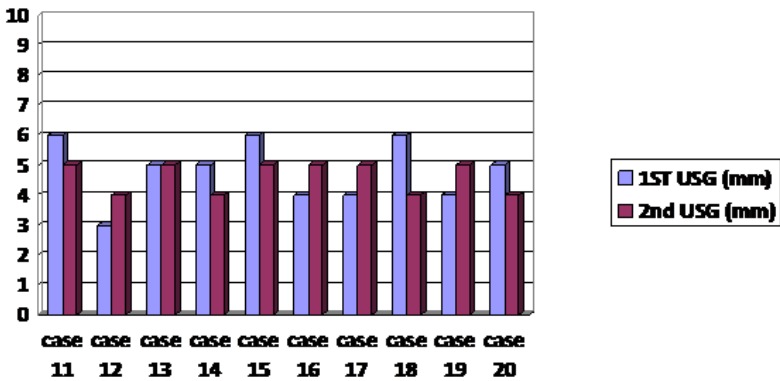
- Status of endometrium was studied.
- The values of endometrial thickness were compared.
- The statistical analysis was done with paired t test.
- The p value was **0.43** which was more than **0.05** hence it was not significant. Therefore Null Hypothesis was accepted i.e. relation between Vata-pradhan prakruti and infertility was proved. (The average thickness of endometrium is **6.7 mms**)
- The structural changes of Uterus result in imbalance of normal functioning of Uterus causing infertility and other health problems.
- The '**Ashay- Sampat**' (well being of Garbhashay) is one of the essential factor for the conception and normal development of Garbha.

GRAPHICAL COMPARISON OF 1ST & 2ND U.S.G. Case 1-10 Endometrium in mm.

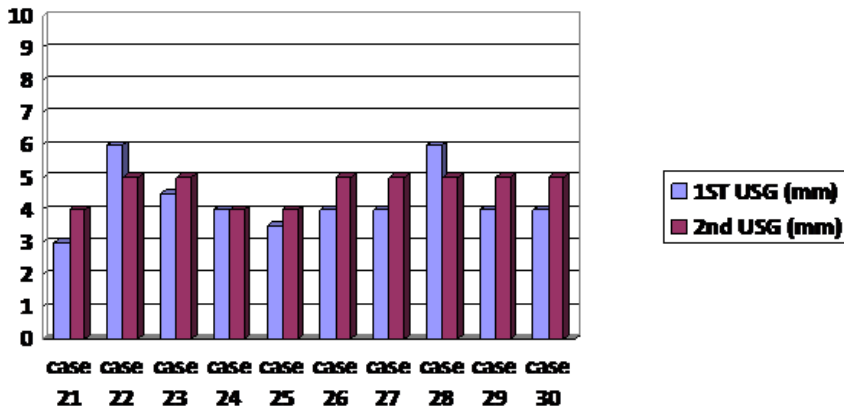
CASE 1-10



CASE 11-20



CASE 21-30



Conclusion

- Prakruti plays a measure role in the management of infertility especially in **Vata- Pradhan Prakruti**.
- The study reveals that the thickness of endometrial layer is responsible for the implantation of fertilized ovum.(Garbha).

Acknowledgement

The author acknowledges the facilities and support received from **Bharati vidyapeeth Deemed University's Chancellor, our competent oracle Dr. Patangrao Kadam, Vice-chancellor Dr. Shivajirao Kadam, Secretary Dr. Vishwajit Kadam and sincere thanks to the Principal and Dean Dr. Abhijit Patil, Professor and Head of the department of Stree-rog & Prasutitantra Dr. Mrs. Swati Mohite .**

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Experiment :

“Study Of Agni Parikshan In Dwandwaj Prakriti”

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ABSTRACT :

The objective of present study was agni parikshan in dwandwaj prakruti. According to Ayurved Samhitas references regarding prakruti and agni were studied. Prakruti of the volunteers was done with the help special Prakruti Parikshan Proforma. At the same time agnivinichaya was also studied.

Keywords : Prakruti, Agni Health

INTRODUCTION :

Ayurved is an applied science which deals with every aspect of human life. Basic principals of Ayurveda mainly concern with sharir kriya, gives knowledge about dosha, dhatu and mala. There are different types of prakruti e.g. doshaj, manas etc. For studying predominance of dosha in the individual, study of prakruti is very important and useful.

By the union of shukra (sperm) and shonita (ovum),the foetus is formed. At the time of conception the doshas which are in dominance state are responsible for prakruti of the respective foetus and at the same time the hereditary factors are transferred by shurka and shonita in that foetus. This prakruti of the foetus remains same till death.

By knowing about one's prakriti and agni a physician is able to guide the individual for his health complaints and help him to lead a healthy and enthusiastic long life. Since the many changes have happened in the human beings lately,it is important to think about our agni(digestive power) and our prakriti(constitution). Hence an attempt is made here to throw more light on Agni and Prakriti and their present status.

AIM AND OBJECTIVES :

AIM :

Study of agni parikshan in dwandwaj Prakruti.

OBJECTIVES :

- The concept of Sharir Prakruti –Dwandwaj Prakruti, from Ayurvedic Samhitas, was studied in detail and the references were compiled.
- The concept of Agni from Ayurvedic Samhitas, was studied in detail and the references were compiled.

- To note the present changed food and eating habits; and its effect on body constitution.

MATERIALS & METHODS :**MATERIALS :**

- Ayurvedic Samhitas.
- Modern text & techniques.
- Prakruti parikshan proforma..
- Agni parikshan proforma.

INCLUSION CRITERIA :

- Study contains 60 volunteers divided into following 6 groups.
- 10 volunteers Vata-Pittaj,
- 10 volunteers -Vata Kaphaj
- 10volunteers Pitta Kaphaj,
- 10 volunteers Pitta-Vataj,
- 10 volunteers Kapha-Pittaj,
- 10volunteers Kapha-Vataj prakruti.

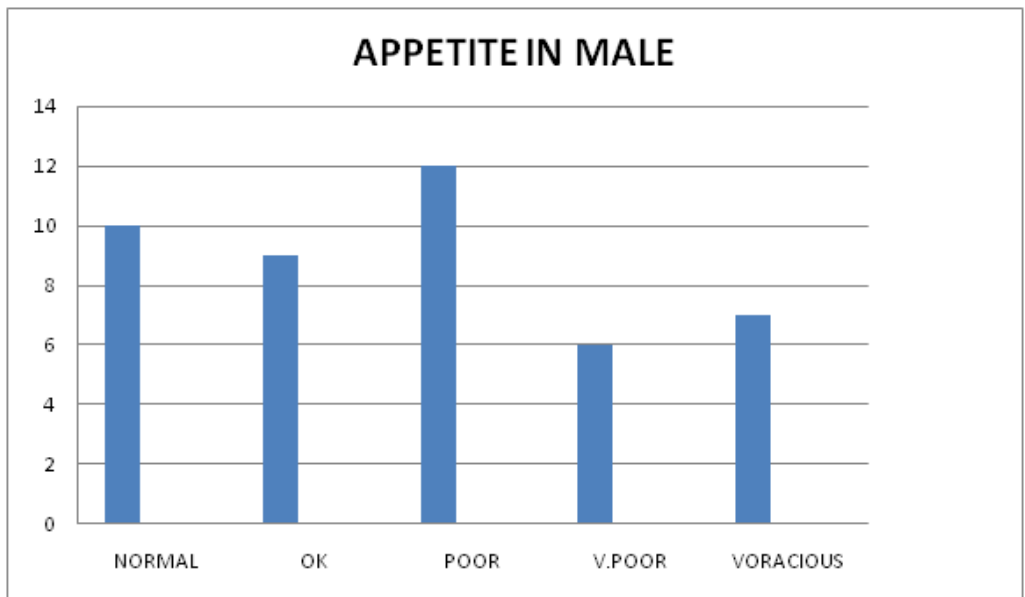
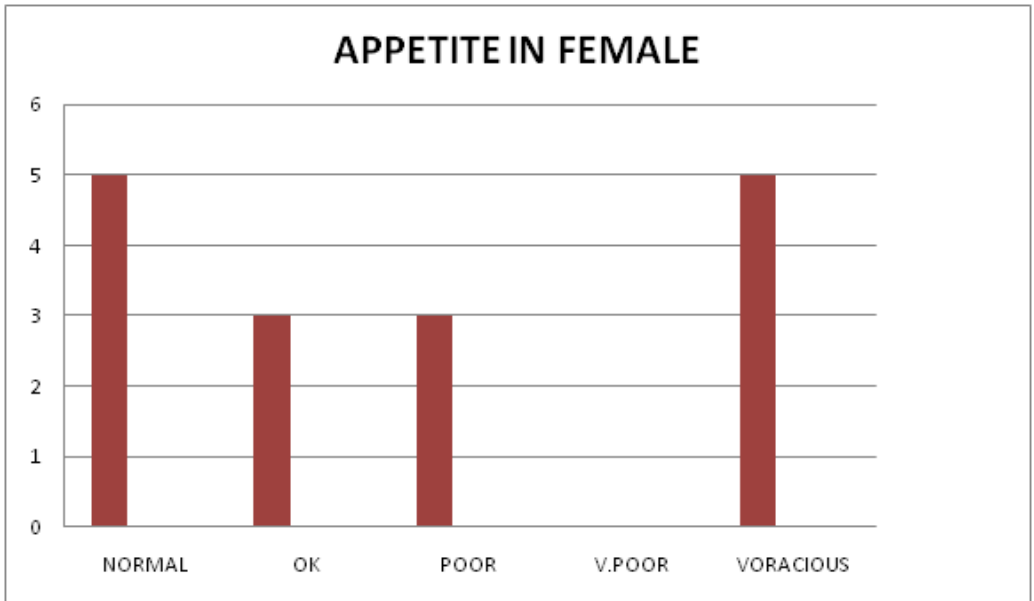
EXCLUSION CRITERIA :

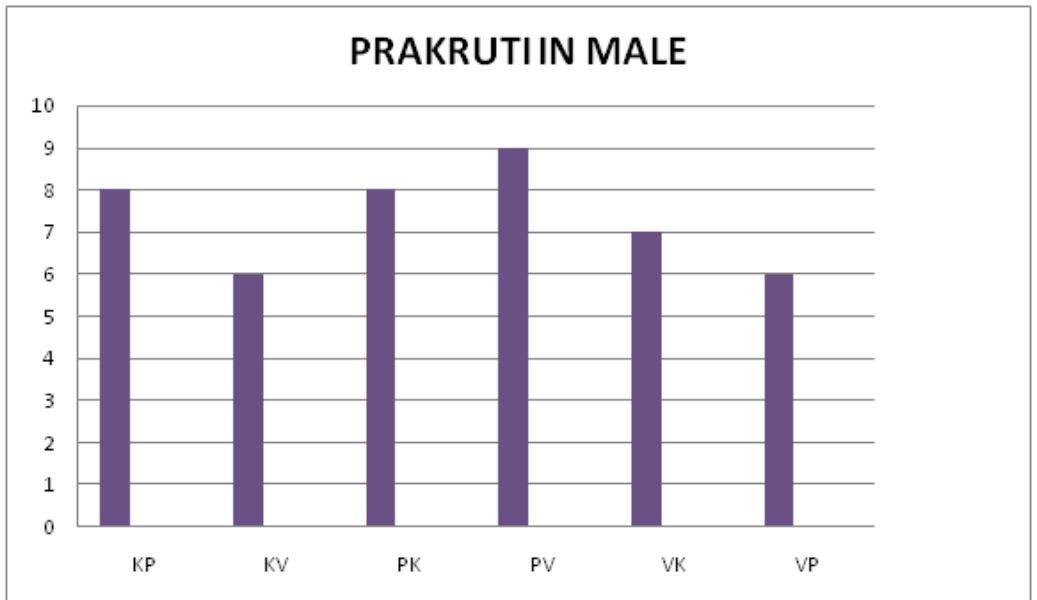
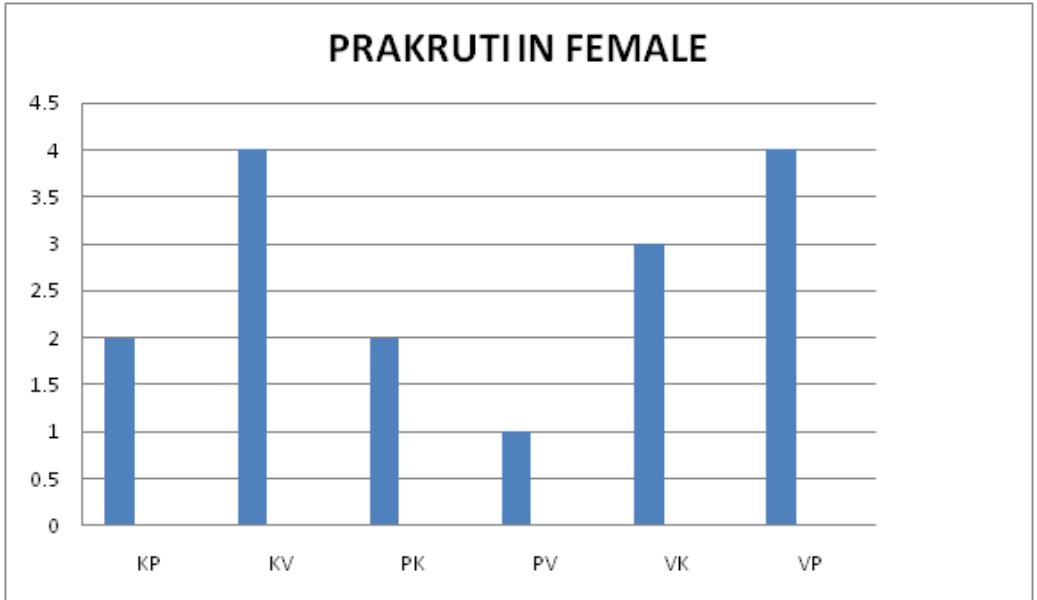
- Volunteers suffering from any major illness.

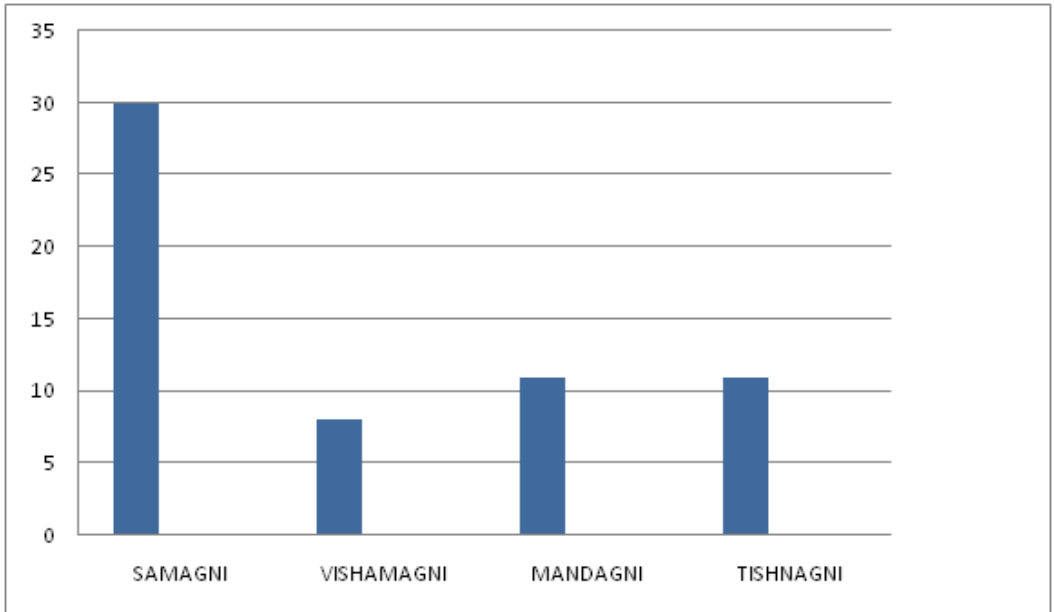
METHODOLOGY :

- 60 volunteers between the age group of 40-60yrs were selected for the study.
- Sharir prakruti parikshan was done with the help of Prakruti parikshan.
- Agni parikshan of each volunteer was carried out with the help of special Agni parikshan. proforma.
- Detail scrutiny of above was studied under six groups.
- Statistical analysis was done with the help of collected data.

· OBSERVATION & STATISTICAL ANALYSIS :







DISCUSSIONS :

In the present study Agni means the digestive power of a living thing, here it is the human digestive power. Since the digestion takes place in the 'Jathar' (stomach) which requires presence of agni, the digestive fire in stomach is called a 'Jatharagni', 'Bhootagni', 'Pakwagni' or Koshthagni. The pachak (stomach and small intestine) has 13 Jatharagni (digestive enzymes or "fire") that occur in four different states: samagni, Visamagni, Tikshanagni and Mandagni. Samanagni is the state of complete balance. All three doshas: vata, pitta and kaphha are in total balance. When Agni is disturbed by Vata, the condition is known as Vishamagni. When Pitta affects Agni, the condition is known as Tikshagni. When Kapha affects Agni, the condition is known as Mandagni.

CONCLUSIONS :

From the present study it was found out that-

- Out of 60 participants 27 had normal type of appetite.
- Remaining 33 had poor, very poor or voracious appetite.
- Females have more stable appetite as compared to men.
- Overall it appears that more persons suffer from 'Agni' and appetite problems.
- Only 11 had solid excreta and the rest had problems of defecation.

As per statistical data it is concluded that type of agni is independent on the predominance of dosha in prakruti.

This means the recessive dosha also plays an important role defining the type of agni. For exam. Vata prakruti had hard stool and Vishamagni.

But this we don't observed in vata pitta or vata kapha prakruti where agni type can be other than Vishamagni that is agni is dependent on different type of dosha prakruti.

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Statement by the Publisher [From IV (Rule 8)]

Statement about ownership and other particular about the newspapers to be published in the first issue every year after the last day of February.

1. Name of Publication : Deerghayu International
2. Place of Publication : 36, Kothrud Gaonthan, Opp. Mhatoba Temple,
Bodhi Vruksha, Navaghraha Hanuman, Pune - 411 038.
3. Period of Publication : Quarterly
4. Printer's Name : Dr. P. H. Kulkarni
5. Publisher's Name : Dr. P. H. Kulkarni
Nationality : Indian
Address : As above
6. Editor's Name : Dr. P. H. Kulkarni
Nationality : Indian
Address : As above
7. Names and address of individuals who own the newspaper and partners or Shareholders holding more than one percent of the total capital : P. H. Kulkarni.

I Dr. P. H. Kulkarni hereby declare that the particulars given above are true to best of my knowledge and belief.

Date : 1st April 2015

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Experiment :

To Study The Effect Of Bhujangasana And Gomukhasana In Management Of Prushtashula

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Abstract :

Man has changed his habits of eating, sleeping and travelling. The sedentary life style and improper sitting postures leads to inappropriate muscle tension and ligament creep. Due to such improper postures vitiation of vatadosha gets localized in PrushtaPradesha (thoracic vertebral area) characterized by Shula (pain) and produces restricted movement of Prushta, leading to Prushtashula or Prushtastambha (back ache). Bhujangasana and Gomukhasana are the important asana's described in yogic science. Bhujangasana and Gomukhasana create relaxation of spine, back and shoulder muscles which stimulate the nervous system & also improve flexibility of spine. [3] Bhujangasana gives better relief than Gomukhasana in Prushtashula. Whereas the Combined effect of Bhujangasana and Gomukhasana was better than individual effect

Key words: Yoga, Bhujangasana, Gomukhasana, Prushtashula,

INTRODUCTION :

Yoga and Ayurveda have inseparable relationship both illuminate the basic laws and principles governing life on earth. They look at human beings from the same holistic angle. Ayurveda is the science of life or longevity. Yoga is the science of linking the individual self with the universal self; both the sciences aim at developing the physical, mental, intellectual, emotional and spiritual levels of human being.

Man has changed his habits of eating, sleeping and travelling. The sedentary life style and improper sitting postures create pain in neck, shoulder, back, lower back region and lifestyle disorders. Luxurious stressful lifestyle and lack of exercise results in unequal and inappropriate muscle tension and ligament creep due to wrong postures. Fear, anxiety, tension also subject the muscles to unnecessary contraction and spasms. The above coupled with lack of proper exercise causes muscle dysfunction.

Prushtashula has been given as Laxana of VataPrakopa. This Vata produce certain types Vyadhis according to Sthana of VataDosh. Vitiated Vata gets localized in PrushtaPradesha characterized by Shula and produces restricted movement of Prushta i.e. PrushtaStambha.

[1]

Asana is capacity to hold still for a long time in a composed and peaceful state, with minimum energy expenditure.^[2]Asana is physio-psyche-spiritual postures.

Bhujangasana and Gomukhasana are the important asana's described in ancient text. Bhujangasana is mentioned in the GherandaSamhita and Gomukhasana is mentioned in GherandaSamhita and HathayogaPradipika. Their importance is also mentioned in texts of many scholars of yoga. It creates exercises of spine, back and shoulder muscles which stimulate the nervous system & also improve flexibility of spine.^[3]

AIM :

To study the effect of Bhujangasana and Gomukhasana in management of Prushtashula.

METHODOLOGY :

Clinical trials consisting of 3 groups, each consisting of 20 individuals between the age group of 30-50 years of both the sex was carried out.

- Group A was advised with Bhujangasana.
- Group B was advised with Gomukhasana.
- Group C was treated with both asana.

Period of study : 45 days

Yoga Module adopted

Asana : Bhujangasana and Gomukhasana.

Time: Around 6-7 a.m. in Morning.

Around 6-7 p.m. in Evening.

Standard Operational Procedure:

Total time for procedure was 10-15mins. (Relaxation + Asana)

Division of which is as follow.

- Stretching exercise for 2-3 mins
- Omkara chanting for 1-2 mins.
- Procedure time for one Asana is 8-10mins. (Approximately 10 rounds of each asana for Group A & B and Approximately 5 rounds of each asana for Group C)
- Step wise procedure of asanas was carried out as per the text.

Technique of Bhujangasana^[4]

1. Take prone lying position, legs together, toes together, hands by the side of the body, palms facing upward and forehead resting on the ground.

2. Fold hands at the elbows, place palms on the ground near each side of the shoulder, thumb should be under the armpit.
3. Bring chin forward and place it on the ground. Gaze in front then raise the head and bend the neck backward as far as possible. During this attempt chest is kept close to the ground.
4. When the head is swung backward, slowly raise the chest using deep muscles of the back.
5. Support the rising thorax with your hands, gradually increasing the angle between your arm and forearm.
6. Asana is complete when the whole spinal column makes a deep curve. Maintain this position from 30 to 60 seconds.
7. Then efface the spinal curve and bring down the chest gradually until the forehead touches ground.

Technique of Gomukhasana^[5]

1. Sit in Dandasana (Staff Pose), Slide your left foot under the right knee to the outside of the right hip. Then cross your right leg over the left, stacking the right knee on top of the left, and bring the right foot to the outside of the left hip.
2. Inhale and stretch your right arm straight out to the right, parallel to the floor then sweep the arm behind your torso.
3. Roll the shoulder back and down, then work the forearm up your back until it is parallel to your spine. The back of your hand will be between your shoulder blades.

Follow up :

Follow up of treatment was done periodically (every 7 days up to total 30days) and post treatment follow up was done on 45thDay.

Statement of limitations:**Inclusion criteria :**

- Patients having complaint of Prushtashula were included.
- Patients between age group of 30 to 50 years were included.
- Patients were selected irrespective of sex and socio-economical status.

Exclusion criteria:

- Handicapped individuals.
- Secondary cases of Prushtashula were excluded.
- Patients having T.B. of spine, Bamboo spine, Ankylosing spondylitis, malignancy and

accidental cases were excluded.

- Patients suffering from any other systemic diseases like CCF, CRF etc. were excluded.

Assessment criteria

Symptoms were taken as parameters for assessment and gradation of Stambha, Toda, Ruka of Prushta (upper back) region.

Prushtashula measured by visual analogue score (VAS) for assessing pain (RUKA).



Table 1: Assessment criteria

Ruka(Pain Level): VAS	
Grade – 0	No Pain (0-1)
Grade – 1	Mild Pain (2-4)
Grade – 2	Moderate Pain (5-7)
Grade – 3	Severe Pain (8-10)
General function ability :	
Grade – 0	Complete ability to carry on all usual duties without handicap.
Grade – 1	Adequate normal activity despite handicap of discomfort or limited joint movement.
Grade – 2	Limited only to little or none of the usual occupation or self care.
Grade - 3	Bedridden or confined to wheel chair, little or no self care.
Stambha (Stiffness) :	
Grade – 0	0 – 5 minutes.
Grade – 1.	5 minutes to 2 hours
Grade – 2	2 hours to 8 hours.
Grade – 3	More than 8 hours.

Toda (Pricking Sensation) :	
Grade – 0	No pricking sensation
Grade – 1	Mild pricking sensation
Grade – 2	Moderate pricking sensation
Grade – 3	Severe pricking sensations

OBSERVATION :**Age, Sex and Prakruti :**

Age, Sex and Prakruti (body type) wise distribution of patients is depicted in Table 2, Table 3 and Table 4 respectively.

Table 2 : Age Wise Distribution

Age	Group A		Group B		Group C		Total	
	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
30 – 35	3	15	7	35	6	30	16	26.66
36 – 40	1	5	2	10	6	30	9	15
41 – 45	9	45	7	35	6	30	22	36.66
46 - 50	7	35	4	20	2	10	13	21.66

Table 3: Sex Wise Distribution

Sex	Group A		Group B		Group C		Total	
	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
Male	14	70	18	90	12	60	44	73.33
Female	6	30	2	10	8	40	16	26.66

Table 4: Prakruti Wise Distribution

Prakruti	Group A		Group B		Group C		Total	
	No of cases	%	No of cases	%	No of cases	%	No of cases	%
VP	6	30	6	30	5	25	17	28.33
PK	3	15	3	15	1	5	7	11.66
VK	2	10	4	20	4	20	10	16.66
KP	2	10	2	10	5	25	9	15
KV	3	15	2	10	1	5	6	10
PV	4	20	3	15	4	20	11	18.33

Table 5: Observations on Rukaand Stambha

	B.T.		A.T.		% Relief	Wilcoxon Signed Rank Test Z	P value
	Mean	SD	Mean	S.D.			
Effect on Ruka(Pain)							
Group A	1.90	0.5525	0.75	0.5501	60.52	-3.906 ^a	.000
Group B	1.55	0.6805	0.65	0.5871	59.37	-3.755 ^a	.000
Group C	1.85	0.3663	0.55	0.6048	70.28	-3.839 ^a	.000
Effect on Stambha(Stiffness)							
Group A	1.200	0.6958	0.500	0.5129	58.33	-3.500 ^a	.000
Group B	1.550	0.6863	0.700	0.4701	54.83	-3.900 ^a	.000
Group C	1.500	0.6882	0.500	0.5129	66.66	-3.542 ^a	.000

Table 5 contains the effect on Ruka (Pain) and Stambha (Stiffness). P Value is significant for Ruka and Stambha as it less than 0.05. In Ruka, Group A, B and C had shown 60.52 %, 59.37 % and 70.28 % relief respectively. For Stambha, Group A, 58.33%, Group B, 54.83 % and Group C, 66.66%.

Table 6: Observation on Toda and G.F.A.

	B.T.		A.T.		% Relief	Wilcoxon Signed Rank Test Z	P value
	Mean	SD	Mean	S.D.			
Effect on Toda (Prickling sensation)							
Group A	0.500	0.6069	0.200	0.4103	60	-2.121 ^a	.000
Group B	0.450	0.8255	0.200	0.4103	55.55	-2.236 ^a	.000
Group C	0.650	0.7451	0.200	0.4103	69.23	-2.714 ^a	.000
Effect on G.F.A. (General Function Ability Test)							
Group A	0.4	0.48936	0.15	0.36635	62.5	-2.000 ^a	0.046
Group B	0.35	0.48936	0.15	0.36635	57.14	-2.000 ^a	0.046
Group C	0.5	0.51299	0.15	0.36635	70	-2.646 ^a	0.08

Since P-Value is less than 0.05 we conclude that, all three Groups are significantly effective on Toda. For Toda, Group A showed 60% relief, Group B 55.55% and Group C 69.23% relief. For G.F.A., Group A showed 62.5 % improvement, Group B 57.14 % and Group C 70 %. Hence we conclude that Group C gave better relief than Group A and Group B.

DISCUSSION :

In this study it was found that 36.66% of total patients were from the age group of 41-45 and 58.32% patients were more than 40 years old. Muscle irritation and joint dysfunction occur significantly after long standing history of improper sitting posture and stressful nature of work hence develops mostly after 40 years of age. Here the present data signifies age factor in Prushtashula in accordance with textual references. [8]

In this study it was found that 73.33% were male and 26.66% were female. Here study reveals those males are more susceptible for Prushtashula than female.

This is due to significant strenuous activity and inadequate rest patterns in males. This is also due to the fact that more number of male has computer job or desk job, which is the main causative factor of upper back pain.

It was found that 28.33% of total patients were of vata pitta Prakruti and 73.82% of total patients had VataDoshainvolvement in their Prakruti. Hence it confirms that People with involvement of VataDosha in their Prakruti are more susceptible for disorders of VataVyadhi like Prushtashula.

Observation for Group A showed 60.52 %, for Group B 58.06 and Group C 70.27% relief in Ruka. Muscle irritation, strain and joint dysfunction cause pain. Due to Sthiratwa and VatashamanaGuna of Asana, aggravated Vata subsides and pain reduces.

Observation for Group A showed 58.33 % for Group B 54.83 % and Group C 66.66% relief in Stambha. When vitiated VataDosha affects the Prushta, the Shoshana of Mamsa, Snayu, Kandaractc. takes place because of its Khara, Kathina and RukshaGuna and Person feels Stambha. Gentle stretching of muscles and joints, releases muscle tension and increases flexibility thus helps in removal of stiffness.

Observation for Group A showed 60 % for Group B 55.55 % and Group C 69.23 % relief in Stambha. Continuous following of asana lead to postural corrections, relaxation of muscles and normal flow of vata in Prushta Pradesh. Thus aggravated VataGuna like Chala, Ruksha, Toda are reduced.

Group C showed 70 % improvement in general Function ability. Ruka, Stambha, Toda hampers the ability of muscles and affects the overall function level. By performing the asana superficial muscles relax and after holding the position gradually nervous system relaxes and stimulate Golgi tendon reflex responsible for relaxing muscles and also relaxes deep muscles. [9] This relaxation allows flexing of muscles and one can stretch muscle without effort even more.

Overall result :

It was seen that Bhujangasana gives better relief than Gomukhasana in Ruka, Stambha, Toda and G.F.A. The combined effect of Bhujangasana and Gomukhasana was better than individual effect in Ruka, Stambha, Toda and General functional ability.

CONCLUSION :

Muscle irritation and joint dysfunction occur significantly after long standing history of improper sitting posture and stressful nature of work hence Prushtashula develops mostly after 40 years of age. Prushtashula affect the spine flexibility, stability & strength which can cause pain, discomfort & stiffness. Bhujangasana and Gomukhasana are easy to practice and they relax not only superficial but also the deep muscles which also have major role in back pain. Due to Sthiratwa and VatashamanaGuna of Asana, aggravated Vata subsides and VataPrakopaGuna like Ruka, Toda, and Stambha were reduced. Group A showed better relief than Group B whereas Group C showed better relief than both Group A& B in Ruka, Stambha, Toda and GFA. Bhujangasana gives better relief than Gomukhasana in Prushtashula. Whereas the Combined effect of Bhujangasana and Gomukhasana was better than individual effect.

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Review :

Diet Essential To Maintain Liver Health

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ABSTRACT

There is threat for life especially liver disorders. Junk food foods are hazardous to health. Liver is the main organ for digestion and metabolism. Various diseases like Diabetes, Fatty liver disease, Liver cirrhosis, Cancer, etc. are upcoming. Increased risk of obesity, cardiovascular disease, chronic fatigue, headaches, digestive problems, allergies are the diseases related to liver. Diet is the only way to maintain liver health in healthy persons and in persons with liver disorders.

Yakrit, pleeha and raktavahinya are the moola of raktavahastrotas. When raktadhatu vitiated number of diseases are formed like kustha, visarp, pidika ,raktapitta, pleeha and yakritrog, vidradhi, kamala. To avoid vitiation of rakta and raktavahastrotas , we have to avoid the causes related to diet to maintain the liver health. Ayurved has described classification of the food in 12 class in annapan vidhi and its rasa, virya, vipak and prabhav have been mentioned. Pathyakar ahar to maintain liver health with number of foods in each class and apathyakar ahar is also explained in detail.

Keywords - Liver, liver health, rakta, raktavahastrotas, pathyakar and apathyakar aahar

Introduction

With increasing burdens of modernization, lifestyle, it is becoming threat for life and becoming cause of especially liver disorders. Various new entities are coming out as dietary items, e.g. junk food, cold drinks etc. These foods are really hazardous to health. Liver is the main organ for digestion and metabolism. Various diseases like diabetes, fatty liver disease, liver cirrhosis, cancer etc. are becoming threat to human life. With diseases related to liver there is risk of obesity, cardiovascular disease, chronic fatigue, headaches, digestive problems, allergies and many other ailments.

The recent advances in research in food , nutrition and herbal medicine has supported the old facts what Ayurveda has already mentioned in various texts. Only need is to understand the basic thoughts and principals behind various aspects regarding diet and lifestyle mentioned in Ayurveda and also its correlation with newly defined facts.

Signs and symptoms of liver dysfunction will make us alert about the forthcoming liver ailments. Wherever diet is concerned it is to be in healthy persons and in persons with liver disorders.

Liver is the largest gland and one of the vital organs of the body. It performs many vital metabolic and homeostatic functions are as follows

1) Metabolic functions

Metabolism of carbohydrates ,proteins ,fats ,vitamins and many hormones is carried out in the liver.

2) Secretion of Bile

Liver secretes bile, which contains bile salts, bile pigments ,cholesterol ,fatty acids and lecithin.

The functions of bile are mainly due to the bile salts. The bile salts are required for digestion and absorption of fats in the intestine. Bile helps to carry away waste products and breakdown fats, which are excreted through faeces or urine. There are different functions of the bile as digestive, absorptive, excretory, laxative, antiseptic action, choleric action, maintenance of pH in gastrointestinal tract ,prevention of gallstone formation, lubrication and cholagogue function.

3) Excretory Function

Liver excretes cholesterol, bile pigments, heavy metals (like leads ,arsenic and bismuth),toxins ,bacteria like typhoid and virus through bile.

4) Inactivation of Hormones and Drugs

Liver catabolizes the hormones such as growth hormone,parathormone ,cortisol ,insulin,glucagon and estrogen.It also inactivates the drugs particularly the fat soluble drugs.The fat soluble drugs are converted into water soluble substances which are excreted through bile or urine.

5) Defensive and detoxification functions

The reticuloendothelial cells (kupffer's cells) of the liver play an important role in the defence of the body. Liver is also involved in the detoxification of the foreign bodies.

Liver and Detoxification

Phase one pathway

Cytochrome P – 450 system – converts toxic chemicals into less toxic chemicals. This is achieved by various chemical reactions such as oxidation, reduction, hydrolysis, hydroxylation. During this process free radicals are produced which if excessive, can damage liver cells. Antioxidants such as vitamin C and E and natural carotenoids reduce the damage caused by free radicals. If antioxidants are lacking, toxic chemicals become far dangerous. Excessive amounts of toxic chemicals such as pesticides can disrupt P-450 system.

Phase two pathway

This is called conjugation pathway whereby liver cells add another substance e.g. glycine or a sulphur molecule, to a toxic chemical or drug to render it less harmful. This makes toxin or drug water soluble so it can then be excreted from the body via watery fluids such as bile or urine. Through conjugation, liver is able to turn drugs, hormones and various toxins into excretable substances. For efficient phase two detoxification, liver cells require sulphur containing amino acids such as taurine and cysteine. The nutrients glycine, glutamine, cholin and inositol are also required for detoxification.

The phase two enzyme systems include both UDP – glucuronic transferase (GT) and glutathione – S – transferase (GSH-T). Glutathione is most powerful internal antioxidant and liver protector. It can be depleted by toxins / drugs passing through liver and fasting or starvation.

By the above discussion it shows that liver performs many vital metabolic and homeostatic functions.

Ahara

Charaka, the use of wholesome diet is prime reason for the growth and development of the body, on the opposite, unwholesome diet causes several diseases. Ahita, Viruddha, Asatmya, Apathya Ahara have been accepted as a vital role in the manifestation of liver diseases..

Matravat Ahara

Ahara taken in proper quantity, will lead to proper digestion and will improve strength and complexion of body. Aharmatra will be decided as per the Agnibala of the individual person. Excessive intake of food will cause many diseases especially related to liver.

Viruddha Ahara

Viruddha Ahara may act adversely on the body after digestion, as they are opposed to the body system.. Viruddha Ahara, could not easily digest and assimilate due to its nature, causing various purulent Ama in Rasa, thereby resulting in diseases. Though it is a fact that the usage of any Viruddha Ahara at just single time may not cause the disease. For disease manifestations continued and regular consumption must be there.

Mithya Ahara

Mithya Ahara means diet of improper food habits or not according to rules. Habitual intakes of food stuffs are always useful but improper way of consuming; make them always harmful to the body. Therefore they should be avoided. Common Mithya Ahara like: Adhyashana, Vishamashana, Atyshana Ahara are known to be responsible for the manifestation of diseases.

Raktavaha Strotas

The channels which supply nutrition to Raktadhatu is known as Raktavaha Strotas. Yakrit, Pleea and Raktavahinya are the Moola of Raktavaha Strotas. It is interesting to see both Rasa and Rakta Dhatu are circulated through Raktavahinya.

Charaka has defined number of etiological factors for the vitiation of Raktavaha Strotas. When Raktadhatu is vitiated number of diseases are formed likely Kustha, Visarpa, Pidika ,Raktapitta, Pleeha and Yakritrog, Vidradhi, Kamala etc.

Nidan in Rakta Dushti

1. Ati Amla, Lavana, Katu, Kshara, Madya Sevan
2. Ati Tikсна, Ushna, Madak Dravya Sevan
3. Kulattha, Masha, Nishpava, Tila taila, Pindalu, Mulak, Harit Varga, Dadhi, Amla Kanji, Dadhi ,Mastu, Sattu, Sura, Sauvira Sevana (alcoholic drinks) s
4. Jalaja, Anupa, Bileshaya, Prasaha Mansa Sevan
5. Viruddhar Sevan
6. Upaklinna, Puti Ahara Sevan
7. Drava, Snigdha, Guru Ahar Sevan
8. Matradhik ahar Sevan
9. Ajirne Bhojan, Adhyashan
10. Divaswapa, Adhik Krodha, Shrama, Santapa, Abhighata, Atap Vayu Sevan,
11. Swabhavatah Sharadi Rakta Dushti

As Yakrit is Moola of Raktava Strotas, vitiation of Rakta and Raktavaha Strotas leads to number of diseases related to Yakrit eg. Kamala, Yakrit Vruddhi, Pleeha Vruddhi, Udara and number of skin diseases hence to avoid vitiation of Rakta and Rakta Dhatu, we have to avoid the causes related to diet for vitiation of Raktavaha Strotas and to maintain the liver health.

Amlarasa- Amlarasa is Laghu Ushna and Snigdha in quality but if taken in excess leads to liquification of Kapha increases Pitta and changes quality of Rakta Dhatu .Lavan Rasa taken in excess leads to vitiation of Pitta increases Ushna Guna and quantity of Rakta Dhatu ,it is Tikshna in quality and hence leads to vitiation of Rakta Dhatu. Katu Rasa when taken in excess having Vayu and Agni in excess in it leads to burning in gastro intestinal tract and also leads to Vatavikara.

Hence it is important to give the food which will not vitiate Raktavaha Strotas and will be nutritious in normal liver and also in diseased liver.

12 Aharvarga

Ayurved has described classification of the food in 12 class in Annapan Vidhi and Rasa, Virya, Vipak and Prabhav have been mentioned. Pathyakar Ahar to maintain liver health with number of foods in each class and Apathyakar Ahar is also explained both, in an Ayurved and modern way.

Pathya

- 1) Shukadhanya - Gluten rich grains such as wheat, flour, or other whole grains increase the load on the liver's detoxification and enzyme production. Switch to alternative grains like quinoa, millet and buckwheat.
- 2) Shamidhanya – Moong is the best
- 3) Mansa- contraindicated but Ayurved prescribes Mansa as per Ayurved ideology. Ayurveda advocates Yakrut as organ for Mansa Rasa
- 4) Shaka- **Leafy Green Vegetables** are extremely high in plant chlorophyll's that absorb environmental toxins, increase bile production, neutralize heavy metals, chemicals and pesticides, which lowers the burden on the liver. And also source of glutathione that triggers toxin cleansing enzymes of the liver.e.g. spinach and lettuce.

Cruciferous Vegetables like broccoli and Brussels sprouts also increase the amount of glucosinolate (organic compounds) in our bodies that helps create enzyme production for digestion, **Beets and Carrots, tomatoes** are rich in Glutathione, a protein that helps detoxify the liver. Both are extremely high in plant-flavonoids and beta-carotene. In **Cabbage** and **Brussels sprouts**.The isothiocyanates made from cabbage's glucosinolates provides liver detoxifying enzymes that help flush out toxins

- 5) Phala- **Grapefruit** -Eating or drinking grapefruit juice can help your liver flush out carcinogens and toxins. This fruit is also high in both vitamin C and antioxidant properties.

Walnuts are also high in glutathione and omega-3 fatty acids, which help support liver through its cleansing process.

Apples-They are high in pectin and other chemicals essential to cleanse and release toxins from the digestive tract.

Asparagus- is a great diuretic helping in the cleansing process and sharing the detox load of the liver and kidneys.

- 6) Harita- Garlic helps liver activate enzymes that can flush out toxins. It also has a high amount of allicin and selenium, two natural compounds that aid in liver cleansing

Citrus Fruits -Lemons and Lime contain very high amounts of vitamin C, which helps stimulate the liver and aids the synthesizing of toxic materials into substances that can be absorbed by water.

- 7) Madya- Alcohol consumption makes liver disease worse. Avoid alcohol .
- 8) Jala varga- drinking plenty of water helps to ensure good liver health
- 9) Gorasa Varg- Godugdha in normal liver, Takra good for liver health.

Dadhi taken during night time without sugar,ghrit,Mugache varan, with Madhu and Awala. Consuming hot foods and taken by improper way may lead to diseases like

Jwar,Raktapitta,Visarp,Kushta,Pandu,Bhram and particularly Kamala.

- 10) Ekshu Vikar- Sharkara (sugars) to some extent and honey useful in all normal and diseased liver conditions.
- 11) Kruttan Varga- Mudga Yusha,Manda,Peya , Vilepi of rice is always Pathyakar. 12) Aharyog varga- **Turmeric** helps to digest fats and **stimulate production of bile**. It can also act as a natural form of detox . Green tea is full of plant antioxidants known as catechins helps functions of liver.

Cold -pressed organic oils such as olive, hemp and flax-seed are great support for the liver, providing the body with a liquid base that can absorb harmful toxins in the body.

Apathya

- Overexertion and overeating in diseased conditions
- Sodium (Table salt) and sodium containing food .
- Packaged snack foods like potato chips ,kurdure ,wafers etc
- Non vegetarian food
- Excess tea,and coffee,tobacco, smoking, pan-masala, cold-drinks etc.

Modern medicine has defined number of clinical conditions in Liver and Hepatobiliary System where food and food related part comes in the causative as well as curative and treatment way .It is of high worth to study few of the examples which are explained as follows.

1) Jaundice

Jaundice results from the accumulation of bilirubin – a product of heme metabolism- in the body tissues. Hyperbilirubinemia may be due to abnormalities in the formation,metabolism, and excretion of bilirubin.

Proteins and oily food should not be given in these states rather carbohydrates in the sugar form are indicated in these condition.

2) Alcoholic liver disease

Alcoholic hepatitis is characterized by acute or chronic inflammation and parenchmal necrosis of the liver induced by alcohol. Alcoholic hepatitis is often a reversible disease, is the most common precursor of cirrhosis and is associated with deaths as hepatitis c, which is the most common cause of cirrhosis.

Deficiencies in vitamins and calories probably contribute to the development of alcoholic hepatitis and its progression to cirrhosis.

3) Viral Infections

In acute hepatitis A strict isolation of patient is not necessary but hand washing after bowel movements are required.Vaccination against this is recommended for patients with chronic

Hepatitis B, chronic Hepatitis C and other Chronic liver disease. It is recommended for persons who are food handlers, because common source out breaks may instill from contaminated water or food, including inadequately cooked shellfish, Hepatitis E which is major cause of acute Hepatitis E is responsible for water borne Hepatitis outbreaks it may be spread by consuming organ meats.

4) Hepatotoxic food

Alcohol, Vitamin A in excess leads to liver disease which come under the group of direct hepatotoxic drugs. Alcohol also leads to macrovascular type of liver injury which leads to fatty liver.

Tobacco and cannabis smoking and Hepatic steatosis also appears to promote propagation of fibrosis, but coffee may lead to slow progression.

5) Non Alcoholic Fatty liver disease

Excessive dietary fructose consumption, starvation and refeeding syndrome, and total parenteral nutrition along with other number of reasons are responsible for Nonalcoholic fatty liver disease. (NAFLD). Soft drink consumption has been reported to be associated with NAFLD. Steatosis is nearly universal in the obese alcoholic persons.

6) Liver Cirrhosis

In liver cirrhosis the most important principle of treatment is abstinence from alcohol. The diet should be palatable, with adequate calories (25-35 kcal/kg body weight per day in those with compensated cirrhosis and 35-40 kcal /kg/d in those with malnutrition) and protein (1-1.2 g/kg/d in those with malnutrition) and ,if there is fluid retention ,sodium restriction. In the presence of hepatic encephalopathy, protein intake should be reduced to no less than 60-80 g/d. Vitamin supplementation is desirable.

7) Hemochromatosis

Is characterized by increased accumulation of iron as hemosiderin in the liver, pancreas, heart, adrenals, testes, pituitary and kidneys. Cirrhosis is more likely to develop in affected persons who drink alcohol excessively or have obesity-related steatosis. Affected patients should avoid foods rich in iron (such as red meat), alcohol, vitamin C, raw shellfish and supplemental iron.

8) Wilson Disease

The major physiologic aberration in Wilson disease is excessive absorption of copper from the small intestine and decreased excretion of copper by the liver, resulting in increased tissue deposition, particularly in the liver, brain, cornea and kidney.

Early treatment to remove excess copper is essential before it can produce hepatic or neurologic damage. Early in the treatment phase, restriction of dietary copper (shellfish, organ foods, nuts, mushrooms, and chocolate) may be of value.

9) Cholelithiasis

Gallstones are more common in women than in men and increase in incidence in both sexes and all races with aging. Obesity is a risk factor for gallstones particularly in women.

A low- carbohydrate diet, physical activity may help prevent gallstones. Consumption of caffeinated coffee appears to protect against gallstones in women, and a high intake of magnesium, and of polyunsaturated and monounsaturated fats reduces the risk of gallstones in men. A diet rich in fibre, a diet rich in fruits and vegetables and statin (cholesterol lowering agent) use reduce the risk of cholecystectomy, particularly in women.

Cheno- and ursodeoxycholic acids are bile acids that can be given orally for upto 2 years dissolve some cholesterol stones. Likewise in Ayurveda there is tradition to give Pitta from Pittashaya of hen, GoroChan along with number of herbal drugs which are Ashmaribhedan.

In a nutshell

Diet for liver health

- Eat plentiful amounts of raw vegetables and fruits, especially dark leafy vegetables and orange and red colored fruits. Forty percent of diet should consist of raw vegetables and fruits.
- Avoid fats that present a high workload for liver such as dairy products, processed vegetables, deep fried foods, foods that are not fresh and contain rancid fats, preserved meats and fatty meats. In those with a dysfunctional liver, avoid animal milks and substituting them with oats, rice, almond or soya milk.
- Eat good fats which contain essential fatty acids found in cold pressed vegetable and seed oils, fish, flaxseed, raw nuts and legumes. Seeds such as flaxseeds can be added to cereals, smoothies, fruits and vegetables. Replace butter with nut, spare honey.
- Avoid artificial chemicals and toxins such as insecticides, pesticides, artificial sweeteners, colouring, flavouring agents, preservatives, etc.
- Avoid alcohol particularly more than two glasses of wine or beer. Drink tea or coffee not more than two cups.
- Eat diverse range of proteins from grains, raw nuts, seeds, legumes, eggs, seafood, chicken, fresh red meats mostly of lean animals. In vegetarians, supplements of vit B 12, taurine, carnitine to avoid poor metabolism and fatigue. Take grains, nuts, seeds, legumes everyday for essential amino acids.
- Use natural sugars for from fresh fruits and juices, dried fruits, honey, fruits cakes, fruit jams, date sugar, maple sugar or syrup or rice syrup.
- Drink large amount of fluids like water, fruit juices, teas. Aim at minimum 2 litres of fluids daily and this will help avoid constipation and its related issues.
- Try to find organically grown fruits and vegetables and hormones and antibiotic free meat.

- Take freshly prepared food and avoid rancid food.
- Avoid overeating to reduce workload of liver as overeating may reduce capacity of liver to detoxify harmful substances efficiently.
- Eat foods that contain essential nutrients.

Food articles that contain essential nutrients

- Green vegetables contain vit K
- Bean, peas, lentils contain arginin which helps to detoxify ammonia
- Carrots, celery, beetroot, dandelion, apple, pear, wheat grass juice, spirulina, fresh fruits like citrus, kiwi contain antioxidants that have protective and cleansing action.
- Legumes, eggs, fish, garlic, onion, seeds and meat contain methionine essential for detoxification.
- Flaxseeds, oily fish, avocado, fresh raw nuts and seeds and seed oils contain fatty acids essential for detoxification.
- Garlic, onion, leeks, shallots, cruciferous vegetables contain natural sulphur essential for detoxification.

Conclusion

Diet is the only way to maintain liver health. Hitakar Ahara Sevan will not cause any disease and will maintain health. So always Hitakar Ahara is to be consumed by Swastha person and those suffering from liver disorders.

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Review :

Conceptual Study of Dysfunctional Uterine Bleeding (DUB) in Ayurvedic perspectives

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ABSTRACT

Dysfunctional Uterine Bleeding is excessive uterine bleeding where no organic cause can be detected. It is caused by endocrine dysfunction i.e. imbalance in Pituitary-ovarian axis. DUB is more functional disease than structural. Modern science mainly concentrates on tackling the physical problems of DUB. But, psychological aspect is often neglected. Treatments like Uterine curratage, antifibrinolytic agents, androgen steroids, thermal ablation are the temporary and symptomatic treatments. But for long-lasting and effective management Sharir kriyatmak adhyayan of DUB is necessary. This article is focused on probable Nidanpanchak of DUB.

Key words- DUB, Rasa, Raja, and Mind.

REVIEWED REPORTS

INTRODUCTION

The god has blessed the female with the most valuable gift of motherhood. The preparation of motherhood starts with puberty and ends with menopause. The menstrual cycle which involves the shedding of endometrium which was prepared in the anticipation of providing a bed for the fertilized gamete, when fails, result into the manifestation of "Masanumasik Rajapravrutti" means "Aartavpravartana". The word Aartav denotes two meanings one of them is AntahPushpa and another one is Bahirpushpa. Both Antah and Bahirpushpa are interrelated. Bahirpushpa is outward manifestation of appropriate work of Antahpushpa which is necessary for conception. Here, the present study deals with Bahirpushpa i.e. menstrual blood.

MODERN REVIEW

Menstruation is a normal physical specific property of a female and so, it is called as monthly period. Now days, due to changing lifestyle & unhealthy diet of women, they face

Stress, over exertion, and many health problems. Because of this, many females suffer from menstrual disturbance like DUB (Dysfunctional Uterine Bleeding) i.e. excessive uterine bleeding where no organic cause can be detected. The nature of bleeding is one of menorrhagia, polymenorrhoea, metrorrhagia and continuous bleeding preceded by amenorrhoea. Menorrhagia is cyclical bleeding at normal intervals which is excessive in amount or duration, for example 5/28 or 8/28 days. Menorrhagia is generally caused by conditions affecting the uterus and its

vascular apparatus, rather than by any ovarian disturbance. It occurs if the bleeding surface (that is the area of the endometrium) is increased. Different terminologies described below. (Table 1)

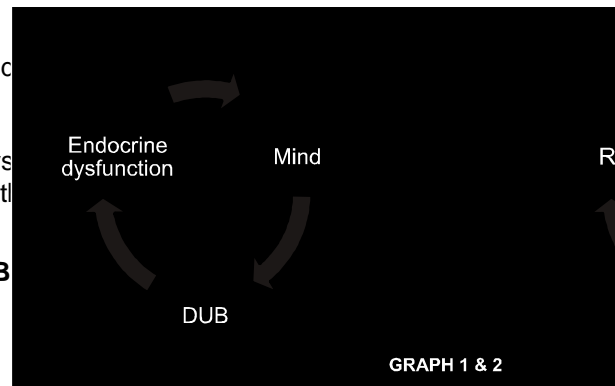
Terms	Interval	Duration	Amount	Duration
Menorrhagia	Regular	Prolonged	Excessive	5/28 or 8/28 days
Polymenorrhoea	Frequent	Normal	Normal	5/21 days
Polymenorrhagia	Frequent	Prolonged	Excessive	9/20 & 12/20 days
Metrorrhagia	Irregular	Prolonged	Normal	Irregular

The emotional and personality changes may be very common in DUB and PMS (Pre-Menstrual syndrome) patients showing following signs and symptoms -

1. Depression can be severe enough for suicidal feelings
2. Irritability or aggression
3. Anxiety
4. Mood swings
5. Tiredness
6. Poor concentration
7. Short-tempered and strike out verbally and
8. Less desire for intercourse.

Pathology :- DUB is caused by Endocrine dysfunction. The vascular system is perhaps affected by Sympathetic anxiety and under nutrition.

Which suggest that there is **a relation of DUB**



AYURVEDIC REVIEW

According to Ayurveda, DUBI.e Ati-Raja-strava can be correlated with following vyadhis

Kriyatmak vikruti-

- | | | |
|---------------------|---------------------|------------------|
| 1) Pittajrajodushti | 2) Raktajrajodushti | 3) Raktapradar |
| 4) Pittajyonivyapad | 5) Asrujayonivyapad | 6) Raktaja Gulma |
| 7) AdhogaRaktapitta | 8) Pittavruttaapan | |

Rachnatmak vikruti -

- | | |
|---------------|-----------------|
| 1) Yoni Arsha | 2) Raktaj Gulma |
|---------------|-----------------|

Vyadhis are :-

Pittajrajodushti - Here Raja becomes abnormal due to Pitta. The color is slightly yellowish and bluish. Raja is discharged with burning pain. It is sticky in nature with foul smell.

Pittajyonivyapad - Excessive bleeding per vaginal, but it is accompanied by burning at vagina, rise in temperature, liquid consistency i.e. no clotting with foul smell.

Raktajrajodushti- In this condition, Raja derives abnormally from its source. Bleeding is in excess. It foul smells and is accompanied with signs and symptoms of pitta dushti.

Asrujayonivyapad- In this condition, blood is disordered by deranged Pitta. There is excessive bleeding per vaginal. Even though conception takes place, the ovum can't get embedded due to this bleeding. The condition resembles Endometriosis of ovary giving rise to polymenorrhoea.

Raktapradar- A condition associated with severe bleeding may be accompanied with menstruation or may not be. This is called as Raktapradar or Asrugdar. According to doshadhikya, it is of four types.

- VatajRaktapradar**- In this, bleeding is blackish in color, with foam and is accompanied with severe backache, pain in groin and pelvic region. The bleeding occurs repeatedly but less in quantity.
- PittajRaktapradar**- Uninterrupted, excessive bleeding is a main feature of this condition with allied symptoms of Pitta dushti explained as above.
- KaphajRaktapradar**- Clots of blood are seen in bleeding. It is somewhat pale in color slippery, accompanied with dull aching pain, nausea, vomiting, cough and dyspnea.
- SannipatikRaktapradar**-In this condition, there is severe bleeding causing rapid emaciation. Along with blood, mucous is also shed off. The discharge has an offensive odour and is yellow in color with signs of anemia, rise in temperature, weakness, thirst, burning.

Adhoga Raktapitta - There is severe bleeding from either urethra, anus or vagina due to increase dravata of Pitta.

Pittavrut Apan - Dark yellow colored urine and stool, heat in anal region and excess menstrual discharge are the symptoms of PittavrutApan.

Raktagulma - In fact, amenorrhea is said to be the main symptom of Raktagulma. But if one goes through the references as regards the treatment of Raktagulma, it suggests that the Raktagulma during its course is accompanied with bleeding per vagina at one or the other stage. Charaka had mentioned two different types of conditions viz 1.Raktagulma with amenorrhea 2.Raktagulma with bleeding, accordingly the treatment differs.

Yoni arsha - It is the structural deformity, having symptoms of bleeding.

Probable Nidanpanchak of DUB i.e. Ati-raja-strava

● **Hetu** :-

1) Aaharajhetu :

Rajadushti because of Rasadushti:- Atiguru, atisheeta, atisnigdhaahar like cheese, butter, paneer, curd, cold coffee,etc.-milkproducts, cakes. Viruddhaahar- milkshakes, fish and milk in combinations. Adhyashan, Pramitashan, Vishamashan. Pathyakaraahar but Atichintan-causing Rasadushti leading to Rajavikritis like Atyartav, Dushtaartav, anartav (continuous bleeding preceded by Amenorrhea).

As sthan of Pitta Dosh is Rasa Dhatu: Ushna, vidahi, kshar, amla, lavan, katu rasa Pradhan dravyas like Pickels, papad, sauce, fermented products, Chinese food, fish, etc.

2) Viharajhetu :- IUCD's, excess use of contraceptive pills, use of tampons causing Rajovegavrodha, exertion during menses, Panchakarma vyapad, not following Rajaswala paricharya, etc.

3) Manashetu :- Chinta, Shoka, Bhaya, Krodha, Asamadhan, Dukhha.

According to Yogaratnakar, Ajirna, Viruddhaahar, Adhyashan, Garbhapat, Atimaitun, Atiadhva, Atishoka, Karshyata, Diwaswap, Abhighat, etc. are the causative factors.

● **LAKSHAN** :-

Sthanik Lakshan- Atirajastrav, Ushnarajastrav, Grathila krushna-pita pichhil Rajastrav according to doshadhikya, Yonidaah, Kati, parshva, prushtha, shronishool

Sarvadehic Lakshan- Gaurav, Angamarda, Shirashool, Aalasya, Malavsthambh, Inc.Hrutspanda, Twakrukshata, Gani, Ajirna, Ashradhha, Aasyavairasya, Panduta, Shabdasahishnuta, Hrullas, Inc.Trushna, Krushangada / Sthaulya (Su.Su.15/32).

● **SAMPRAPTI** :-

“Aartavam tu aagneyam”

1. As explained above, various factors can create an imbalance of the Pitta dosha. Pitta is analogous to Rakta. Aggravated Pitta causes Raktadhatu dushti. Dushit Raktamoves towards

katipradesh and causes imbalance of Apana Vatadosha. Apanavata dosha controls the flow of the menstrual blood through Artavavahisrotas. Dushit Apanvayu along with dushit Raktaincrease the menstrual blood, which leads to Atirajastrav.

2. One of the sthan of Pitta Dosh is Rasa. Hence Pittavrudhikara ahar causes Atirajastrav, Pittajrajovrudhi, Raktajrajovrudhi, Adhogaraktapitta, Asrujayonivyapad.

3. Dushti of Rasa causes Sthaulya or Karshya (Su.su.15/32) Hence, in practice we see that most of the patients having gynecological problems are Sthula or Atikrusha. e.g. in PCOD, in Menorrhagia.

4. Females who frequently do Atishoka, Krodha, Chinta vitiates Vata, Pitta doshas and are more prone to DUB. (Rasa-Hruday-Mana relation)

● DOSHA SAMBANDHA :-

1. Rasa-Raja and Vatadosha :-

1. Prana-It takes care of emotional aspects like mood swings, anxiety and depression.
2. Saman-Its existence is not limited to GI tract but upto Shukra, Aartava and Ambuvahastrotas. (Ash.Sa.Su.20)
3. Vyana- Aggrevated Vyana Vayu causes mental disorders; dushti of it is seen in PMS (premenstrual syndrome). (Ash.Hru.Ni.16/25)
4. Apan-It functions for menstrual flow.

2. Rasa-Raja and Pitta dosha :-

1. Pachak Pitta-All conversions occur in it. e.g. Hormone metabolism.
2. Ranjak Pitta-Its function is to stain whitish rasa into reddish color whose location is Aamashay.
3. Sadhak Pitta-It functions for implementation of wishes of mind, dushti of it is seen in Dysfunctional uterine bleeding.

3. **Rasa-Raja and Kaphadosha:-**Dushti of them leads to Amenorrhoea, Polycystic Ovarian Syndrome.

● PATHYAPATHYA :-

Pathya- Ahar : Shali, godhum, mudga, Krushara, Shrungatak, methika, aardrak, krushnatil Kokam, Aamalaki, Draksha, Narikel, kushmanda, Godugdha, Goghruta, Takra.

Vihar: Rajaswala Paricharya Abhyanga, Vyayam, Udhvartana, Swapnaharsha, Sukhashayya, Achintan, Vyavayviram, priyadarshan.

Stress, tension and negative mental feelings increase Vatadosha. Hence, relaxation is the best treatment. Yoga and meditation should be added to your daily routine. Taking purgatives (laxatives) for 2 days before the scheduled start of menstruation can alleviate disturbed Vata.

CONCLUSION

Atiraja strav lakshan is associated with lakshanas of Rasa Dhatu Kshaya, Rasa pradoshaja vyadhi lakshanas, Rasa dhatu madhyama or hina sarata lakshana. Females having Rasa Dhatudushti lakshanas are more prone to symptoms of PMS.

Females who frequently do Atichinta, Shoka, Krodha leads to Vata, Pittadushti; are more prone to DUB (Rasa-Hruday-Mana sambandh, Graph 2). Hence, Santarpan of Mana is essential along with Doshaj Chikitsa.

ACKNOWLEDGMENT

Special thanks to guide **DR. KAVITA INDAPURKAR** and also thanks to **Bharati Vidyapeeth College of Ayurved.**

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Review :

Study Of Varunamulatwak Kashay In Urolithiasis (mutrashmari)''

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Dr. B. B. Kadalaskar, M.d.phd Pgdha (Kc)
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ABSTRACT :

The disease Mutrashmari is one among the Ashta- mahagadha (Eight fatal conditions) formed in the urinary system. Based on its clinical features, it is compared to Urolithiasis. Urolithiasis or renal calculi are crystal aggregations of dissolved materials in the urine and hence the process is called urolithiasis. The sequence of formation of urinary stone involves urinary saturation, urinary supersaturation, nucleation, crystal growth, crystal aggregation, and urinary stone formation. Increased incidence of Urolithiasis in this industrialized world is associated with improved standards of living and is strongly associated with race, ethnicity and region of residence. Urinary stones are typically classified by their location or by their chemical composition (calcium-containing, struvite, uric acid, or other compounds). In humans, calcium oxalate is a major constituent of most urinary stones. About 80% of those with kidney stones are men. Men most commonly experience their first episode between 20-30 years of age, while for women the age at first presentation is somewhat later. The identification of common, modifiable risk factors for Urolithiasis may result in new approach for treatment and prevention. A number of herbs and their combinations have been claimed to have beneficial effects in urolithiasis. .In this study, the drug Varunamulatwak kashay a drug mentioned in Ayurvedic classics was selected. These drugs are easily available, economical and are easy to administer, which are having anti-inflammatory, diuretic and Antilithic properties. Hence it was concluded that traditional ayurvedic management is effective and have no adverse effects on the patients of Mutrashmari.

Keywaords : Varun Mula Twak, Mutrashmari

INTRODUCTION :

The disease Mutrashmari is one among the Ashta- mahagadha (Eight fatal conditions) formed in the urinary system(1,2). There is no satisfactory definition of Ashmari available in any Ayurvedic texts. But, it can be defined as "AshmariMutrakrichhraSyat"(3).It is correlate to urolithiasis. Urolithiasis (from Greek oûron, "urine" and lithos, "stone") is the condition where urinary stones are formed or located anywhere in the urinary system.. In India, approximately 5-7 million patients suffer from stone disease and at least 1/1000 of Indian population needs hospitalization due to kidney stone disease. Thus, the disease is as widespread as it is old, particularly in countries with dry, hot climate .Urinary stones are formed because of metabolic disturbances like hypercalciuria, hyperoxaluria, cystinuria, etc. Sometimes, urinary stones

are formed because of chronic urinary tract infections (UTI). Urinary stones can be calcium stones, cystine stones, uric acid stones, or struvite stones. They typically form inside the kidney (nephrolithiasis), ureter (urolithiasis), or urinary bladder. These calculi can vary in size and shape and when they grow up to 2.3 mm, they can cause obstruction of the ureter. This may lead to obstruction with dilation or stretching of the upper ureter and renal pelvis as well as spasm leading to severe episodic abdominal pain, which may be associated with nausea and vomiting. At present, no medical therapy is available for dissolution or displacement of renal stones.. Males are more frequently affected than the female and their ratio is 4:3 .Crataevanurvala is commonly known as Varuna. Varuna is one of the best litholytic herbs and has been used throughout the ages for the treatment of urolithiasis and crystalluria. . MaharsiSusruta has mentioned varuna as a litholytic agent in treating kapha and vata varieties of asmari (calculi). It is an appetizer, febrifuge, diuretic and litholytic in properties. It is used in diseases like urinary disorders, urinary calculi. The bark of the tree is an important drug for problem affecting the kidneys and bladder. In Ayurveda, the bark of the Crataeva has been traditionally used to heal kidney stones for more than 3,000 years. The plant part used for the medicinal purpose includes Leaves, stem bark and Root bark (4).

The bark is used in the urinary disorders including kidney and bladder stones, antiemetic, and calculous affections and as an antidote in snakebite (4). In this study the 'Varunamulatwakkwatha', which is mentioned in Chakradatta text 34/25 (5), was selected for the study, which is easily available and more effective.

ETYMOLOGY :

"AshmanamRatiDadatiitiAshmari"(6), means the formation and presentation of a substance like stone. "Ashma" means "stone"- "Rati" means "to present".

AIMS AND OBJECTIVES :

1. To evaluate efficacy of Varunamulatwakkashay in mutrashmari. 2. To study side effect if any.

MATERIAL AND METHOD :

Varunamulatwakkwatha- This is the drug used in the study.

INGREDIENTS :

Latin name : CrataevaNurvela

Family : Capparidaceae

Common name : Varun

English name : Three leaved caper

Habitat: throughout India

Macroscopic identification :

A moderate sized deciduous tree. Bark gray, smooth horizontally wrinkled. Leaves trifoliate.

Flowers are white, or cream in color and are present as many flowered terminal corymbs. Fruit is multiple seeded, ovoid berries. Seeds are embedded in yellow fleshy pulp

Parts used : bark, leaves and root bark

Actions and uses in ayurveda: asmari, mutrakrichha, gulma, vidradhi

Photochemical: saponins, tannin, flavonoids, glucosinolates, plant sterols, including lupeol

Properties and action:

Rasa : tikta, kasaya.

Guna : laghu, ruksha

Virya : usna

Vipaka : katu

Karma : bhedi, deepana, vatslesmahara

Indications : urinary infections, renal calculi, rheumatism and ascites

Preparations : extract, decoction, and churn

Varunamulatwak [11] + Shigrumula [11] + Water.

PREPARATION OF VARUNAMULATWAK KWATH :

Varunamulatwak + Shigrumula ! Added 32 parts of water ! Boild in Mandagni(low flame) ! Reduced for ¼ part ! Kwatha(decoction) is preparid ! (Varunamulatwakkwatha)

DOSAGE :

45 ml of kwatha both the times is advice after meals for 45 days (7)

VARUN IMAGES :



OBSERVATIONS AND RESULTS :

The efficacy of Varunamulatwakkashaya in Kidney & urinary disorders, Prostate enlargement, Urinary tract infection, Flushes out small stones from the kidney & urinary tract gives relief in associated symptoms such as pain, pus, RBCs in urine relief of Pain, Haematuria,

Dysuria , Size of calculi and Number of calculi was highly significant. It is more effective in nutrashmari . The bark is used in the urinary disorders including kidney and bladder stones, antiemetic, and calculous affections and as an antidote in snakebite (4).

CONCLUSION :

Following conclusion were drawn, Varunamulatwakkwathawas capable of reducing number of stone and more effective in urolithiasis.

PRECAUTION :

The patient was advised to drink 3-4 litres of water per day and to consume suitable diet with proper sleep and excretion of natural urges. Patients were advised to avoid milk, tomato, cauliflower, spinach, fish and meat (incompatible diets and regimen) during the period of treatment (8).

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Review :

Non-alcoholic Fatty Liver Disease (Hepatic Steatosis) - In Ayurved Perspective

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ABSTRACT

Non-alcoholic fatty liver disease is the extra fat in liver cells not caused by alcohol. People who are overweight or obese or have diabetes, high cholesterol or high triglycerides develops NAFLD. Patients may lead for advanced hepatic fibrosis and may cause cirrhosis over time and also to liver cancer or liver failure. The risk of fatty liver in persons with metabolic syndrome is higher. Non-alcoholic steatohepatitis (NASH) is the most extreme form of NAFLD.

Number of etiological factors vitiate Medovaha Strotas and helps in disease process of Medorog. where symptoms are seen likely as vitiation of mamsadhatu. By the vitiation of meda austoninditiya vyadhi and premonitory signs and symptoms of prameha and symptoms of prameha itself and also atiswed-granthivruddhi galaganda, arbud etc. are seen. If Sthaulya is left untreated, prameha, pramehapidika, udar roga, vatavikara, kamala etc. are seen as upadrava. Treatment is described in Charak sutrasthan and aimed to treat sthaulya along with pathyapathyas related to aahar and vihar.

In Ayurveda treatment is available for NAFLD. Its therapeutic approaches and preventive measures have found to be helpful in the treatment.

Keywords : Non –alcoholic fatty liver disease, obesity, Meda, Medodusti, Medorog, Sthaulya, Lakshane, Updrava, Samprapti, Chikitsa, Pathapathya

Introduction

Liver disease related to alcohol consumption fits into 1 of 3 categories: fatty liver, alcoholic hepatitis, or cirrhosis. Fatty liver, which occurs after acute alcohol ingestion, is generally reversible with abstinence from alcohol and is not believed to predispose to any chronic form of liver disease if abstinence or moderation is maintained. Non-alcoholic fatty liver disease (NAFLD) is the buildup of extra fat in liver cells that is not caused by alcohol. It is normal for the liver to contain some fat. However, if more than 5% - 10% percent of the liver's weight is fat, then it is called a fatty liver (steatosis).

Patients with NAFLD are asymptomatic or have mild right upper quadrant discomfort. Hepatomegaly is present in upto 75% of patients, but stigmata of chronic liver disease are uncommon. Rare instances of sub acute liver failure caused by previously unrecognized NASH have been described.

NAFLD tends to develop in people who are overweight or obese or have diabetes, high

cholesterol or high triglycerides. Rapid weight loss and poor eating habits also may lead to NAFLD. Causes of NAFLD are obesity (present in $\approx 40\%$), diabetes mellitus (in $\approx 20\%$), hypertriglyceridemia (in $\approx 20\%$), corticosteroids, amiodarone, diltiazem, tamoxifen, irinotecan, oxalipatin, highly active antiretroviral therapy, toxins (vinyl chloride, carbon tetrachloride, yellow phosphorus), endocrinopathies such as

Cushing syndrome and hypopituitarism, polycystic ovary syndrome, hypobetalipoproteinemia and other metabolic disorders, obstructive sleep apnea, excessive dietary fructose consumption, starvation and refeeding syndrome, and total parenteral nutrition.

Genetic factors including polymorphisms of the gene that encodes apolipoprotein C3, are likely to play a role.

The risk of NAFLD is increased in persons with psoriasis and appears to correlate with the activity of psoriasis. Soft drink consumption has been reported to be associated with NAFLD.

Steatosis is nearly universal in obese alcoholic patients and is a hallmark of insulin resistance (metabolic syndrome), which is characterized by obesity, diabetes, hypertriglyceridemia, and hypertension.

The risk of fatty liver in persons with metabolic syndrome is 4 to 11 times higher than that of persons without insulin resistance. Physical activity protects against the development of NAFLD.

A swollen liver may cause scarring over time and may even lead to liver cancer or liver failure. In addition to macrovesicular steatosis, histologic features may include focal infiltration by polymorphonuclear neutrophils and Mallory hyaline, a picture indistinguishable from that of alcoholic hepatitis and may cause the liver to swell referred as nonalcoholic steatohepatitis (NASH). In patients with NAFLD, older age, obesity and diabetes mellitus are risk factors for advanced hepatic fibrosis.

Laboratory Investigations

May show mildly elevated aminotransferase (Alanine aminotransferase (ALT, SGPT, GPT) and alkaline phosphatase levels; however laboratory values may be normal in up to 80% of persons with hepatic steatosis. The ratio of ALT to AST (Aspartate aminotransferase, SGOT, GOT) is almost always > 1 in NAFLD, but it decreases to < 1 as advanced fibrosis and cirrhosis develop. ANuclear or smooth muscle antibodies and an elevated serum ferritin level may each be detected in one-fourth of patients with NASH.

Imaging

Macrovascular steatosis may be demonstrated on USG, CT or MRI. Magnetic resonance spectroscopy allows hepatic fat content to be quantitated and transient elastography to assess liver stiffness can be used to estimate hepatic fibrosis.

Percutaneous liver biopsy is diagnostic and is the standard approach to assessing the degree of inflammation and fibrosis. The histologic spectrum includes fatty liver, isolated portal fibrosis, steatohepatitis and cirrhosis.

A risk score for predicting advanced fibrosis, known as BARD, is based on body mass index > 28 , AST/ALT ratio ≥ 0.8 and diabetes mellitus. It has a 96% negative predictive value

.Another risk score for advance fibrosis based on age, hyperglycemia, body mass index, platelet count, albumin, and AST/ALT ratio has a predictive value of over 80 %.

A clinical scoring system to predict the likelihood of NASH in morbidly obese persons includes six predictive factors: hypertension, type 2 diabetes mellitus, sleep apnea, AST > 27 units /L, ALT >27 units/L and non-black race.

Treatment

Treatment consists of removing or modifying the offending factors.

Weight loss

Dietary fat restriction and

Exercise (through reduction of abdominal obesity)

These often lead to improvement in liver tests and steatosis in obese patients with NAFLD.

Various drugs are under study

- 1) Thiazolidinediones- reverse insulin resistance and shows improvement in both serum aminotransferase levels and histologic features of steatohepatitis but lead to weight gain.
- 2) Vit E – also appears to be of benefit to reduce oxidative stress
- 3) Metformin- reduces insulin resistance, improves abnormal liver chemistries but may not reliably improve liver histology.
- 4) Pentoxifylline- which inhibit tumor necrosis factor, improves liver biochemical test levels but is also associated with a high rate of side effects, particularly nausea.
- 5) Ursodeoxycholic acid- 12-15 mg/kg/d has not shown results in biochemical and histologic improvement in patients with NASH but may be effective when given in combination with vit E.
- 6) Hepatic steatosis due to total parenteral nutrition may be ameliorated –and perhaps prevented –with supplemental cholin
- 7) Drugs under study
 - a) Orlistat-an inhibitor of gastrointestinal lipases,
 - b) recombinant human leptin,
 - c) glucagon –like protein-1-receptor agonists, which promote insulin secretion
 - d) L-carnitine- which regulates the turnover of fatty acids in phospholipid membranes
 - e) Omega-3 fatty acids- which alter hepatic gene expression to favour fatty acid oxidation over lipogenesis
 - f) losartan- an angiotensin antagonist
- 8) Statins – not contraindicated in persons with NAFLDs
- 9) Gastric bypass may be considered in patients with a body mass index >35 and leads to improvement in hepatic steatosis.

Medorog

Medadhatu

Meda is a substance which is Snigdha, Sandra and Shlakshna in nature and is like ghee. After metabolism of food Asaharasa is formed and it is made after formation of the Mansa Dhatu. The substance which has Snigdhatva property, is called Meda. There are many oily substances in the body like Vasa, Majja etc. It is the fourth Dhatu, which performs the Dharan Karm- supports the body, mind and life. By Meda Dhatu the body's Snehan is done it becomes stable and Asthi Dhatu is nourished. Snehan is the very important function of Meda Dhatu. Meda helps in the formation of Sira and Snayu. Sira and Snayu are formed by Mansa Dhatu and Meda is responsible for this unification.

Medovaha Srotasa

The channels which supply nutrition to Medodhatu is known as Medovaha Srotasa.

Moolasthanas of Medovaha Srotas :

Charaka - Vrikka and Vapavahana

Sushruta - Vrikka and Kati

Vagbhat - Vrikka and Mamsa

The three have considered collectively that Vrikka is one of the Moola of Medovaha Srotas but Vapavahana, Kati and Mamsa are mentioned as second Moola separately. Preference given by Sushruta and Vagbhat is more anatomical while Charaka's consideration is a physiological one. There is lot of difference of opinion related to the organ 'Vapavahan' which Charaka has considered as second Moola Sthan. Chakradatta in his critic has nomenclatured and described Vapavahn as Signdhavartika and Tailavartika. And also has mentioned Udar as its anatomical site. Hence it can be said that the organ behind Aamashaya and in between Yakrut and Pleeha which is Agnyashaya can be taken as Vapavahan. A lot and thorough research is needed in this regard.

Vitiation of Medovaha Srotas

Following are the reasons which vitiates Medovaha Srotas and thus helps in the disease process.

- 1) Sedentary life style
- 2) Sleeping during day time
- 3) Heavy meals esp. rich in fats
- 4) Alcoholic drinks
- 5) Sleeping immediately after meals

SAMPRAPTI

The following factors play an important role in Samprapti of Medoroga

- Doshas
 - Kapha- Kledaka?
 - Pitta- Pachaka
 - Vata- Samana & Vyana
- Dushya : Rasa and Meda Dhatu?
- Agni : Jatharagni, Bhutagni?

Samprapti (Schematic Presentation)

Madhura, Guru, Sheet, Sneha & Sleshmala Ahara,

Atisampurna Ahara, Adhyasana, Diwaswapna, Avyayama etc.and Achinta, Harsa etc

↓ ← Rasa and Medadhatvagni

Mandagni & Production of Ama ! Circulating Ama

↓

Medagnimandya

Conversion of Madhura Anna in to Meda & Sneha ← More increased Meda Dhatu
due to over nourishment

↓

Kapha Vriddhi

↓

Medovaha Srotodushti & Avarodhatmaka Pravritti (Uttaradhatu Poshana Avarodha Chala Guna savarodha)

↓

Medodusti Lakshane

Medodusti Lakshane

When Meda is vitiated symptoms are seen likely as vitiation of MansaDhatu. Along with premonitory symptoms of Prameha (symptoms of prediabetes), symptoms of Prameha itself and Atisthulata (obesity) ,excessive hunger (polyphagia) ,excessive thirst (polyurea) and difficulity in sex indulgence (impotence) are also found.

1) Vitiation of Mansa Dhatu

By Medodushti we found symptoms and signs as Mansadushti .Number of diseases are caused by the vitiation of Mamsa (muscle tissue). Granuloma ,myoma,piles,Galashaluk (uvilitis), Galshundika (tonsillitis),sloughing of flesh, Alaji (boils), goiter, cervical adenitis and inflammation of epiglottis.

2) Vitiation of MedadhatuWhere we find Austoninditiya - Vyadhi and premonitory signs and symptoms of Prameha and symptoms and signs of Prameha itself.

Atisthaulya

Person having pendulous appearance of Sphika , Udara and Stana due to excess deposition of Meda along with Mansa Dhatu and also having an abnormal distribution of Meda with

reduced zeal towards life is called Atisthula

The Pratyatma Lakshana of Sthaulya has been enlisted by Charaka who has described 8 specific symptoms which are as follows

- (1) Alpayushi- Life expectancy get decreased because other Dhatus could not get nourished properly.
- (2) Javoparodha - Early manifestations of ageing
- (3) Krucchavyavayata - Difficulty to perform sexual act and impotency, this again related with depletion of Sukra i.e. Shukra Abahutvat.
- (4) General Debility - This results because of the deranged metabolism owing to malnourishment of the Dhatus.
- (5) Daurgandhya -Bad odour is the result due to excessive sweating and combustion of Meda.
- (6) Svedabadha -Excessive sweating results because of the excessive Meda and Kapha. Patient is intolerable to exercise.
- (7) Kshuditmatram – Excessive hunger
- (8) Atipipasa- excessive thirst Number of other symptoms of Sthaulya has been described by other treaties also.

Sthaulya Updrava

Charaka has not described the Updravas separately but he has mentioned that if Sthaulya is left untreated, many diseases may arise from it.

Updravas mentioned in the treaties are as Prameha, Pramehapidika, Jvara, Bhagandara, Vidradhi, Vatavikara, Udara roga, Kamala, Urustambha, Shwasa, Apachi, Kasa, Sanyasa, Kushtha, Visarpa, Atisara, Arsha, Shlipada, Mutrakricchra and Ajirna.

Symptoms of Prameha

Meda vitiation is common and dominant Dusya in the pathogenesis of Madhumeha .Kapha and Meda which have close resemblance in regard to functions as well as qualitative parameters. Both get vitiated more or less by same etiological factors.

In Madhumeha vitiation of Meda results by two way.

- (1) Qualitative : Abadha - Normal function of Meda is to produce unctuousness in the body along with Drudhatva i.e. compactness. So this Abadhatva causes derangement in the structure of Meda producing Shaithilya in the body.
- (2) Quantitative : Bahu - Here in the pathogenesis Meda is in excess quantity. This Medodhatu is Aparipakva. It obstructs the path of Vayu along with Kapha. This provoked Vata increases the Agni so patient unnecessarily eats more and more food causing excessive deposition of Aparipakva Meda. This in turns causes severe depletion of the other Dhatus and produces

various sign and symptoms.

From above description it is clear that vitiated Meda plays vital role in the progress of pathogenesis and affects the normal physiology of various body elements. and vitiation of Meda. This deranged Meda produces signs and symptoms. These are described as Medo Dosha.

The symptoms described in Ayurveda includes both, sign and symptoms. These are described as follows

1) General features of Prameha-

a) Urine Characteristics

Prabhutamutrata - Patient Voids urine more in quantity. This excess urine quantity is because of liquification of the Dushyas and their amalgamation.

Avilamutrata - Patient voids urine having hazy consistency or having turbidity. This characteristic feature of urine is because of the nexus between Mutra, Dushya and Dosha.

Picchila Mutrata -This character of urine specially at the time of diagnosis of the prameha which is either Vata or Kapha Dosha prominent.

b) Associated signs and symptoms

Sushruta in the treatment of Prameha asserted two types of Prameha along with their features as Sahaja Pramehi - Krisha (asthenic), Ruksha (dry body) , Alpashi (consumes less food), Pipasa (excessive thirst), Parisaranshila (restless always want to wonder) Apathyanimittaja -Sthula (obese), Bahuashi (consumes excessive food) , Snigdha (unctuous body texture), Shayyasanswapnasheela (like to sit down and sleep always) Kashyapa has also narrated symptoms like Gaurava (heaviness in the body), Baddhata (tightness) and Jadata (steadiness, laziness).

2) Premonitory features of Prameha- mentioned below

3) Specific symptomatology of Madhumeha Sharira Madhurya- The body of Madhumeha patient become Madhura Psychological Feature - Madhumehi patient prefers to have rest than walking, sitting than standing, lying down than sitting and sleeping than lying down. This manifestation is mainly because of the Alasya.

Premonitory signs and symptoms

The prodromal features are those, which appear before the onset of the disease that is before the involvement of the specific Dosha. Number of premonitory signs and symptoms are mentioned as follows – e.g.

1. Jatilibhavam Kesheshu– matting of the hair
2. Madhurya Masasya- sweet taste in the mouth
3. Karpadayo Suptatadaahi- numbness & burning sensation in hands & legs

4. Mukha Taalu Kantha Shosha-dryness of the mouth, throat & palate

Chikitsa

Treatment of diseases caused by the vitiation of Medodhatu is described in the 21st chapter of Charak Sutras than.

Both the types exceedingly corpulent as well as exceedingly emaciated persons suffer from some diseases or the other all the time, they are to be treated by slimming and nourishing therapies respectively. Heavy and non nourishing diet is prescribed for slimming in the case of the over corpulent .Light and nourishing diet for the nourishment of the slim.

For reducing over corpulence the following are the prescriptions par excellence :

- 1) Diet and drinks that alleviate Vata and Kapha which can reduce fat
- 2) Enema with drugs that are sharp ,ununctuous and hot
- 3) Unction with ununctuous drugs
- 4) Intake of Guduchi , Must ,Haritaki ,Bibhitaka and Amalaki
- 5) Administration of Takrarishtha
- 6) Administration of honey
- 7) Intake of Vidang ,Nagara ,Yavaksara ,powder of black iron along with honey and powder of Yava and Amalaki
- 8) Administration of Bilvapanchamula
- 9) Administration of Shilajatu
- 10)Administration of the juice of Agnimanth
- 11)Intake of Prasatika, Priyangu, SSyamaka, Yavaka, Yava, Jurnahva, Kodrava, Cakramudgaka, seeds of Adhaki, along with patola & Amlaki as food followed by honey water.
- 12)Alcoholic preparations that help that reduce fat, muscle & Kapha may be used as post prandial drinks.

The above are to be prescribed in proper dosage for the reduction corpulence. One desirous of reducing overcorpulence should indulge more and more in vigil, sexual act, physical and mental exercises.

Overall in Medorog particularly in Sthualya Aahar should be used which is heavy to digest and having less nutritional properties, so that person is not nourished. Though it should be Kapha and Mednashak still also have Vataghna properties. Basti should be used which are Ruksha and Ushna in quality and Ruksha Udhavartan should be used. Ratrojagar (sleeping late at night and less in duration), exercise, doing sex activity and having some kind of Chinta (stress)

should be increased over the time.

Aushadhi dravya-, Gomutra, Kumbha, Shilajatu, Triphala, Nimba, Kumbhajatu, Guggul Kalpa likely Triphala Guggul, Medohar Guggul etc.

Aahar - Jawar ,grain (old), Kulitha, Varai, Yava, Nachani etc.

Vihar - daily exercise which is consistent and persistent.

Apathya - Snigdha and Guru Anna (food which is heavy and oily), too much meals, rest, Diwaswap

Non alcoholic fatty liver disease which tends to develop in people who are overweight or obese or have diabetes, high cholesterol or high triglycerides is nothing but it is Medodusti which have symptoms like premonitory symptoms of Prameha (symptoms of prediabetes), symptoms of Prameha itself and Atisthulata (obesity) ,excessive hunger (polyphagia), excessive thirst (polyurea) and difficulty in sex indulgence (impotence).

It is not only that it shows hepatomegaly in 75% of patients and may lead to complications like cirrhosis etc. associated with liver which also presents with elevated aminotranferase (Alanine aminotranferase (ALT,SGPT,GPT) and alkaline phosphatase levels.

In Upadrava of Sthaulya if Sthaulya is left untreated, many diseases may arise which are as Prameha, Pramehapidika, Vatavikara, Udara roga, Vatavikara Shwasa, Kamala etc.

From all the above discussions it clearly shows that Non alcoholic Fatty liver disease which clearly resembles and can be correlated with Medodusti.Hence it can be concluded that NAFLD which is a very common liver disease and can easily be cured by the way of Ayurveda. Its therapeutic approaches and preventive measures have found to be highly beneficial in the treatment.

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Review :

Black Sesame (krishnatila) – A Review (semen Sesami Nigrum)

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ABSTRACT :- One of the oldest and first oil seeds known, sesame seeds are used in cooking as well as in traditional medicines for their nutritive, preventive, and curative properties. Probably understood as the word ‘taila” being derived from the plant name *tila*.

Though known for its therapeutic utility, today black sesame has restricted usage in religious ceremonies in country like India.

Sesame is grown primarily for its oil-rich seeds, The seeds are exceptionally rich in iron, magnesium, manganese, copper, and calcium (90 mg per tablespoon for unhulled seeds, 10 mg for hulled), and contain vitamin B1 (thiamine) and vitamin E (tocopherol). They contain lignans, including unique content of sesamin, which are phytoestrogens with antioxidant and anti-cancer properties. Among edible oils from six plants, sesame oil had the highest antioxidant content.

Sesame seeds are 25 percent protein and are especially rich in methionine and tryptophan, often lacking in adequate quantities in many plant proteins.

There have been more than 458 published, peer-reviewed studies referencing to black sesame, on almost over 40 different health conditions that may be benefited from the use of the it. about 20 distinct pharmacological actions it expressed by black sesame have been so far evaluated through these various researches.

KEY WORDS :- black sesame, krishnatila, sesame

INTRODUCTION :-

“Taking black sesame seeds can heal all the chronic illness after 100 days, improve skin tone on body and face after 1 year, reverse gray hair after 2 years, and regrow teeth after 3 years.” explained in the *Materia Medica*, largest and most comprehensive manuscript in the history of Traditional Chinese medicine (TCM).

Sesame is probably the oldest reported oil plant to the mankind. Open Sesame! The magic phrase from the age-old tales of ‘Ali Baba and the Forty Thieves’ opened the cave hiding the treasure of the forty thieves. The phrase highlights the fact that sesame was a valuable commodity in those days.

One of the first oil seeds known, sesame seeds are used in cooking as well as in traditional medicines for their nutritive, preventive, and curative properties.

Today KrishnaTila(black sesame) is only “remembered” in religious ceremonies, neglecting the many more valuable health and beauty benefits of consuming black sesame seeds.

Many Chinese stories of consuming black sesame seeds for attaining longevity and beauty even at an old age are quite popular in the region. The association of the sesame seed with longevity is similarly found in many early Hindu traditions and classical writings like Veda's and traditional Indian medicinal references (Ayurvedic classics), where the black sesame seed is considered a symbol of immortality and having rejuvenating qualities. Sesame oil mills are reputed to be magical places. Folklore beliefs suggest they are home to numerous spirits.

Studies on the nutritional value of the black sesame seed provide evidence supporting the Chinese use of the black sesame for their anti-aging effects.

The black sesame seeds are rich in B vitamins and iron, and deficiencies in these nutrients have been linked to premature graying of hair, memory impairments and hearing loss. It is also rich in calcium and zinc, important minerals for maintaining strong bones and preventing osteoporosis. The seed also contains substances known as sesamin and sesamol, which are found to increase vitamin E supplies (important for skin health) and lower cholesterol levels. This review deals with understanding the qualities and benefits of black sesame seeds.

SCIENTIFIC CLASSIFICATION :-

Botanical Source : Dry Seed of *Sesamum indicum* L

Latin Name : *Semen Sesami Indici*

Family : Pedaliaceae

Genus : *Sesamum*

Species : *S. indicum*

Synonyms : Benne Seed.

Eng.- Sesame, Gingelly. **Hindi**- El, Gingli. **Beng.**- Sanki til, Khaslatil, Raktatil, Til, Bhadutil, Krishna til, Kala til. **Guj.**- Tal. **Kan.**-Ellu, Wollelu, Achchellu, Valle-yanne, Yallu. **Mal.**-Ellu, Schit-elu, Mimakbijan, Nallenna, Karelluchitrallu, Karuthellu. **Mar**- Til, Tila. **Punj.**-Til, Tili, Kunjad. **Tam.**-Ellu, Nal-lenny, Yellu-cheddie, Nuvvulu, Ellu-ccteti. **Te1**.-Nuvvulu, Nuvvu, Manchinune, Pollanuvvulu. **Arab.**-Shiraj, Duhn. **Oriya**- Rasi, Khasa. **Pers.**-Roghen, Kunjed, Kunjad, Roghanekunjad, Roghaneshirin. **Santhal**- Tilmin,

Kat. Sing. - Tun-pattala, Tel-tala, Talla-atta.

Black Sesame is the dried ripe seed of *Sesamum indicum* L. (Fam. Pedaliaceae).

It spread through human intervention from East Africa to North Africa and eastwards to India

and China. All cultures gave it names that sound similar to sesame; for example in Arabic it is called *simsim*, in Aramaic *sums ma* and in Greek *sesamon*. It is likely that the name refers to sesame as an oil plant: the Accadian word *ḏamaḏḏammû* could be made up of *šamnu* = oil, fat and *šammum* = plant.

BOTANICAL DESCRIPTION:-

Probably originating in Asia, the Chinese used it 5,000 years ago, to make soot for the finest Chinese ink blocks. Records suggest cultivation of sesame in parts of India around 1600 BC. From there it was brought to Europe, grown in Egypt, and its value both medicinally and for cooking gradually spread throughout Europe.

Sesame grows best in sandy well-drained soil and a hot climate with moderate rainfall.

Sesame is an erect annual plant that can grow to a height of two meters. It bears elongated oval leaves on a stem which can be branched or unbranched, depending on the variety. Approximately six weeks after sowing, the sesame plant develops furry, tubular flowers reminiscent of a cornucopia in shape. The flowers can be white, yellow, pink or violet. They may be speckled and grow in groups of three in the leaf axils. The flowers are usually self-pollinated and in most cases only the middle fruit of the group fully ripens. The long taproot has many lateral roots. The plant is native to tropical and subtropical regions and needs much warmth and moisture for its growth and dry weather for the seed to ripen. When the seed capsules have turned brownish black they burst and release the ripe seeds, which may be white, light brown or black, again depending on the variety

The fruit, about 2.5 cm long, is an oblong capsule with small seeds. Each plant may grow 15-20 fruits, which contain 70-100 seeds each. Plants and fruits will reach maturity in 80-100 days after sowing.

The seeds are flat oval, about 3mm long and 2mm wide. Surface is black and smooth or with netted wrinkles. Tip has brown punctate hilum. Seed coat is thin. Cotyledons are two, white, and rich in oil. It has slight odour, sweet taste, and oil aroma.

There are mainly two types of sesame seeds used in different parts of the world, the black and white sesame seeds. Both of them contain almost the same composition. White sesame seeds are better for edible purpose whereas the black version is preferable if used for medicinal purpose.

Culinary uses :-

In Manipur (India) black sesame is used in the preparation of *Thoiding* and in *Singju* (a kind of salad). Thoiding is prepared with ginger and chili and vegetables are used in the spicy Singu dish.

In Assam, black sesame seeds are used to make *TilPitha* and *Tilorlaru* (sesame seed balls) during bihu.

In Japan whole seeds are found in many salads and baked snacks and tan and black sesame seed varieties are roasted and used to make the flavouring gomashio. *Gomashio* is also a part of the macrobiotic diet, where it is used as a healthier alternative to ordinary salt.

Chemical Composition :-

Chemical constituents in black sesame seeds are - around 55% fatty oil, sesamin, sesamol, sesamol(3,4-methylenedioxy-phenol), Fatty oil mainly contains approximately 48% oleic acid, 37% linoleic acid, palmitic acid, stearic acid, arachidonic acid, and glycerolipid of lignoceric acid which have antioxidant properties.

Black sesame also contains vitamin E, B-complex vitamins (especially niacin), phytosterols, lecithin, pedaliin, protein, oligosaccharides, planteose, sesamose, and small amounts of phosphorus, potassium and cytochrome C, folic acid, nicotinic acid, sucrose, pentosan and large amounts of calcium content.

A 1/4 cup serving of black sesame seeds provides almost 1.5 milligrams (mg), or 74 percent of the DV, for the trace mineral copper, and 2.8 mg (about 19 percent of the DV) for zinc.

Sesame seeds offer the highest phytosterol content (400 to 413 mg per 100 grams or 3.5 ounces) of all nuts and seeds.

Black sesame seeds are an extremely good source of calcium; studies have shown that one gram of seeds contains approximately 85 milligrams of calcium.

PHARMACOLOGICAL ACTIVITIES :-

Based on Chinese Materia Medica, it is sweet in flavor and neutral in properties. It covers three meridians of liver, spleen, and kidney. Based on theories in Traditional Chinese Medicine (TCM), it is believed that aging, the toils of life and worrying could bring about deficiencies in bodily functions. In particular, the "Liver" and "Kidney" come to be deficient in "Jing" and "Blood". This deficiency in turn brings about aging-related symptoms like blurry vision, graying of hair, ringing in the ears, as well as weakness in the bones and joints.

Black sesame provides the nutrients needed to correct such a "Liver-Kidney" deficiency, helping the body to delay the onset of aging-related symptoms, also reversing the symptoms after they arise.

The content of vitamin E contained in this black sesame is the highest in all foods of plant origin. Vitamin E can promote cell division and delay cell senescence which is well understood. Long-term use can counteract or neutralize the accumulation of cell senescence substance of "radicals" and then delay aging and extend life expectancy. Vitamin E is also associated with healthy skin.

The Chinese believe that the nutrients in black sesame seeds can help to correct a bodily deficiency (in *Ying* and *Xue* of the *Gan* and *Shen*) brought about by aging, worrying and the

toils of life, which in turn bring about aging-related symptoms like graying hair, blurry vision and ringing in the ears.

Sesame seeds are rich in substances known as sesamin and sesamol, which can help lower cholesterol levels. The black sesame seeds also contain magnesium, which help to reduce blood pressure. Black sesame seeds are rich in phytosterols. Phytosterols are plant compounds very similar in structure (chemical) to cholesterol. Consuming dietary phytosterols not only decreases blood cholesterol levels but reduces the risk of developing certain types of cancer. Fatty oil contents in the black sesame lubricate intestines and relieve constipation.

These substances belong to a group of fibers called lignans (flaxseeds are another rich source of lignans). Lignans are rich in dietary fiber and have a cholesterol-lowering effect. The fiber, lignans (antioxidants) and various nutrients (e.g. phytosterol, calcium) found in the black sesame seed have protective benefits against the development of various cancers, such as colon cancer. The sesamin found in sesame seeds is said to protect the liver against damages by free radicals in the body.

Calcium and zinc present in black sesame seeds can help nourish the bones thereby preventing osteoporosis. The black sesame seeds are rich in B vitamins and iron, deficiencies of which can lead to the premature graying of hair, poor memory and hearing loss.

Magnesium and calcium are important essential minerals that help regulate blood pressure, reduce the likelihood of developing tension and migraine headaches (triggered by blood vessel spasms), reduce the occurrence of airway spasms in asthmatics and regulate sleep patterns, especially in women suffering from menopause-induced sleep disturbances.

Few researches on black sesame

- a. A randomized, placebo-controlled human study of chemical weapons injured patients found that boiled water extracts of black sesame seed reduced respiratory symptoms, chest wheezing, and pulmonary function test values, as well as reduced the need for drug treatment.
- b. Animal research has found that black sesame seed oil has significant inhibitory effects against colon cancer in rats, without observable side effects.
- c. A study, in human subjects, found that boiled water extracts of black sesame seed have relatively potent antiasthmatic effect on asthmatic airways.
- d. A study on 35 opiate addicts found black sesame seed as an effective therapy in long-term treatment of opioid dependence.

Dosage :-

The typical dosage of black sesame seeds is 9-30 grams per day, ground into a powder and

taken alone or in combination with other herbs.

AYURVEDIC REVIEW :-

The classical texts of Ayurveda have described medicinal properties of sesame. It is known as "tila" in Sanskrit, "til" in hindi. Ayurveda classics describe three varieties of sesame based on colour of seeds. They are "Raktha(red), Krishna(black) and shweta (white)". Krishna tila or black sesame seeds are considered to have excellent medicinal properties and are recommended in Ayurveda for treatment purpose and as a rejuvenating drug.

Qualities of Krishna tila (black sesame)

Rasa : Madhura, Katu, Tikta

Guna : Guru, Snigda

Virya : Ushna

Vipaka : Madhura/ Katu

Properties :

Acharya Charaka has mentioned properties of Tila as which promotes longevity and preserves youth; strengthens the body and boosts its resistance.

AcharyaSusruta has highlighted Tilataila (sesame oil) as one of the best amongst all herbal oils and described it as Brmhana – bulk promoting, Suksma (subtle), Prinana (endows satiety), Vrishya (aphrodisiac), Tvakprasadana (skin tonic), Medhya (enhances retention power).

As per BhavaprakashNighantu the chief properties of tila oil are a hair tonic, galactotogue, an appetizer general tonic, digestant and it is used in skin diseases, wounds, anorexia and dental diseases.

In VagbhataSamhita (AshtangaSamgraha&Ashtangahridaya), use of KrushnaTila (black sesame seeds) has been indicated for the purpose of Rasayana. Under the description of various rasayanadravyas (drugs), Acharyavagbhata mentions about the use of Krishna tila i.e. black sesame seeds as rejuvenating drug, regular use of which along with water helps in nourishing the body and thereby strengthening the teeths.

दिनेदिने कृष्णतिलप्रकुञ्चं समश्नतां शीतजलानुपानम् ।

पोषः शरीरस्य भवत्यनल्पोदृढीभवन्त्यामरणाद्वादन्ताः ।।

अष्टसङ्गहृदये (उत्तरस्थानम्) ३९/१५८

CONCLUSION :-

Sesame seeds are one of the oldest and first oil seeds known to mankind have been used for centuries in cooking as well as in traditional medicines for their nutritive, preventive, and curative properties. White sesame seeds are better for edible purpose whereas the black

sesame is preferable if used for medicinal purpose. From Far East countries like Japan to countries like China, India and Egypt, Greece etc. show evidences of black sesame seeds medicinal utility from ages. Decades of research activities and more than 458 published, peer-reviewed studies referencing to black sesame have proved its nutritive efficiency and its capability in about 20 distinct pharmacological actions it expressed which have been evaluated so far. Even traditional medicine like Ayurveda and Traditional Chinese medicine (TCM) provide historic references of use of black sesame seeds (Krishna tila) as rejuvenating drug (rasayanadravya).

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Review :

Conceptual study of Virechana karma by Trivrut Leham in vyanga.

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In today's world people are very conscious regarding their skin & external appearance. So, patchy, pigmented skin may reduce the level of confidence of the patient. Hence there is a great need to correct skin disease. Aim is to assess the effect of Virechana karma by Trivrut Leham in Vyanga. Objectives are to analyze reduction of lakshanas of Vyanga according to gradation. All the references regarding Vyanga and Virechana karma are collected from Bruhat Trayi and compilation is done. Vata and Pitta get aggravated by mamsika and ahara's as well as vihara's. Hetu produces Tanu, Shyava varna, niruja mandal on the face to be termed as "Vyanga". It is also Rakta pradoshage Vyadhi, and it is produced by vitiation of Vata & Pitta dosha. So, Virechana can cause apatarpan of the patient. So, Avelha kalpana can be used which will prevent apatarpan. In Virechana Vata, Pitta and Rakta dosha's nirharan can be done. Hence the Virechana Karma are given by Trivrut Leham in Vyanga. Trivrut Leham having madhur and kashay rasa and property of Virechana karma so, Trivrut Leham is used for Virechana of Vyanga.

We can discuss that Vyanga's varna, akar & Mandals are disappeared by using Virechana Karma with Trivrut Leham. We can conclude that Trivrut Leham can be used for the treatment of Vyanga.

Key words:- Raktapradoshage Vyadhi, Vyanga, Trivrut Leham, Virechana.

INTRODUCTION :-

Vata and Pitta get aggravated by shoka and krodha etc. produces tanu, shyava varna, niruja mandal on the face to be termed as "Vyanga".

Melasma is very common patchy brown tan, or blue-gray facial skin discoloration almost entirely seen in women in the reproductive years. Prevalance of melasma may be as high as 40% in female & 20% in males. According to W.H.O. Many causative factors are responsible for melasma i.e. Genetic factor 20-70%. 10-20% of contraceptive pills.

Whereas, such type of condition can be better treatable by the management and procedures mentioned in ayurvedic classics.

In this Vyadhi Rakta Dosha Dushti is present. Therefore all type of Rakta Dushti Acharya Charak has mentioned Virechana Chikista.

In Vyanga Virechana is given by Trivrut Leham. The Vyanga is produced by Vata & Pitta dosha. Virechana can cause apatarpan of the patient so, for Virechana karma aveleha kalpana is used which will prevent Vata Prakopa due to apatarpan. Trivrut Leham having madhur and kashya rasa and having property of rechana karma so, Trivrut Leham can be used for Virechana of Vyanga. *Even though Acharyas* have mentioned many Treatment modalities to cure of the *Vyanga*, first line of Treatment is *Shodhan* (Purification)Theraphy . As *Samprapti* of *Vyanga*, is *Pitta Pradhan&Raktapradoshaja*, *Virechana karma* is most suitable *Shodhan* for the disease. This process can be useful for elimination of *Pitta Dosha* along with *Kapha* and *Vata*. For the present study *Trivrrut Leham* is selected as a *Virechak Dravya* (Medicine for purgation) as it has got *Virechaka property* along with Vata-Kaphghna property.

Vyanga(Melasma) is one of the major illness of the present generation. There are various external treatments like application of cream are available but There is a need to find out efficient *Ayurvedic Panchakarma* modality for the treatment of *Vyanga* and to Prevent its recurrence.

REVIEW OF LITERATURE :-

The information about the concept of Virechana karma by Trivrut Leham in Vyanga. Are mentioned in Ayurvedic Samhita Granthas.

REVIEW OF DISEASE :-

Vyanga is under taken in *Kshudraroga*.

All Samhita explain that Vyanga can produce by Mansika, Ahara's & Vihara's hetu i.e.Shoka,Krodha,etc. that produce shava,tanu,niruja Mandal on the face.

Samprapti (Pathogenesis)

PROCEDURE REVIEW :-

Process of elimination of *Doshas* through *Adhobhaga* is known as *Virechana*. *Chakrapani* has commented the meaning of *Adhobhaga* as '*Guda*.' *Virechana* is the Procedure in which orally administered drug acts on internally vitiated *Doshas* Specially on *Pitta* and expels them out through *Guda Marga*. *Archarya Charak* has clearly mentioned the line of treatment in *Vyanga*. a patient should be given *Shodhan* therapies(Purificatory process) in the beginning and later *Nasya* with medicated oil and application of paste of drugs over the face. (Cha. Chi.26/262,263)6

AIM :-

To assess the effect of virchana karma by Trivrut Leham in vyanga.

OBJECTIVES :-

- To analyase reduction of lakshanas of vyanga according to gradation.

MATERIALS & METHODS :-

All the references regarding Vyanga and Trivrut Leham are collected from Bruhatrayi and laghutrayi and compilation is done.

About medicine :-

Trivrut Leham was taken from *Sahastarayogam*, is used for *kaphapittasan & vata shodhan*. So we are considering the above drug for *Vyanga*. it is having drug like *Trivrut (Operculina turpetham)*, *Shakra*, *Ghruta* Most of the *Drug* contents of *Trivrut Leham* has *Ushana*, *Teekshna* properties and *Adhobhaghar prabhav*. Hence it facilitates the *Virechana karma* due to *Pitta Virechana*, *Vyanga* can be cured.

METHODS :-

- Concept of *Virechana Karma*, *Vyanga* and *Trivrut Leham* is studied in detail.
- Collection of all the references is done and correlation between the data is done logically i.e. by using *Yukti Praman* (logical inferences).

RESULT :-

- On the basis of mentioned observations and discussions it can be concluded that *Vyanga* could be treated through *Virechan* with *Trivrut Leham*.

DISCUSSION :-

The *Amshamsha kalpana* of *Doshas* responsible for the formation of the Disease are because of the *Nidanas* responsible for the causation of *Vyanga*. the *Usna & Teekshna* Guna of *Pitta* increase. while the *Ruksha Guna* of *Vata* leads to Dryness in the face, *Rakta* dosha produces *Shava & Neela Varna* on the face. *Manas Hetu* plays very important role in arising *Vyanga*, because of *Chinta Shok*, *Krodha*, *Bhaya* all these are responsible to increase *Vata* and *Pitta (Bhrajak Pitta)* *Doshas*. In *Vyanga* mainly *Rasa*, *Rakta*, *Mamsa*, *Shukra Dushyas* are involved. In present study we can use *Virechan* as a *Shodhan* processure for *Vyanga*. *Virechana Karma* is a specific process for elimination of *Pitta Dosh* and is specially indicated for *Pitta Dosh*, *Pitta* predominant *Dosh*, *Pitta* connected with *Kapha & Vata & Kapha Dosh* which is situated in *Pitta Sthana*. Thus The scope of *Virechana* Therapy is wider amongst all the Therapies of *Panchakarma*. *Virechana* by eliminating *Pitta* of *Amashay* eradicates vitiated *Pittas* and by the subsidence of *Amashayastha Pitta* all the *Pittas* get themselves subsided.

Pitta and *Rakta* have *Aashray-aashrayi bhava* hence *Virechana* is also effective treatment in *Rakta dushti* avastha. According to *Acharyas* by *Virechana Karma* bala of *Indriyas* increases & *Buddhi prasadana* takes place. hence this process can helpful in *Vyanga* present due to *Mansik hetus*. *Virechana Karma* can help for *Vatanuloman*, *Pitta & Kapha Shodhan*. *Virechana* is mentioned as a *Shodhana* in *Dushti* of *Rasa*, *Rakta*, *Mamsa*, *Asthi*, *Majja* and *Shukra Dhatu*. Hence in majority of the *Dhatupradoshaja Vikaras*, *Virechana* is the better option.

Trivrut Leham is used as a *Virechak dravya* (medicine for purgation) in present study, which is mentioned in *Shastryoga*.

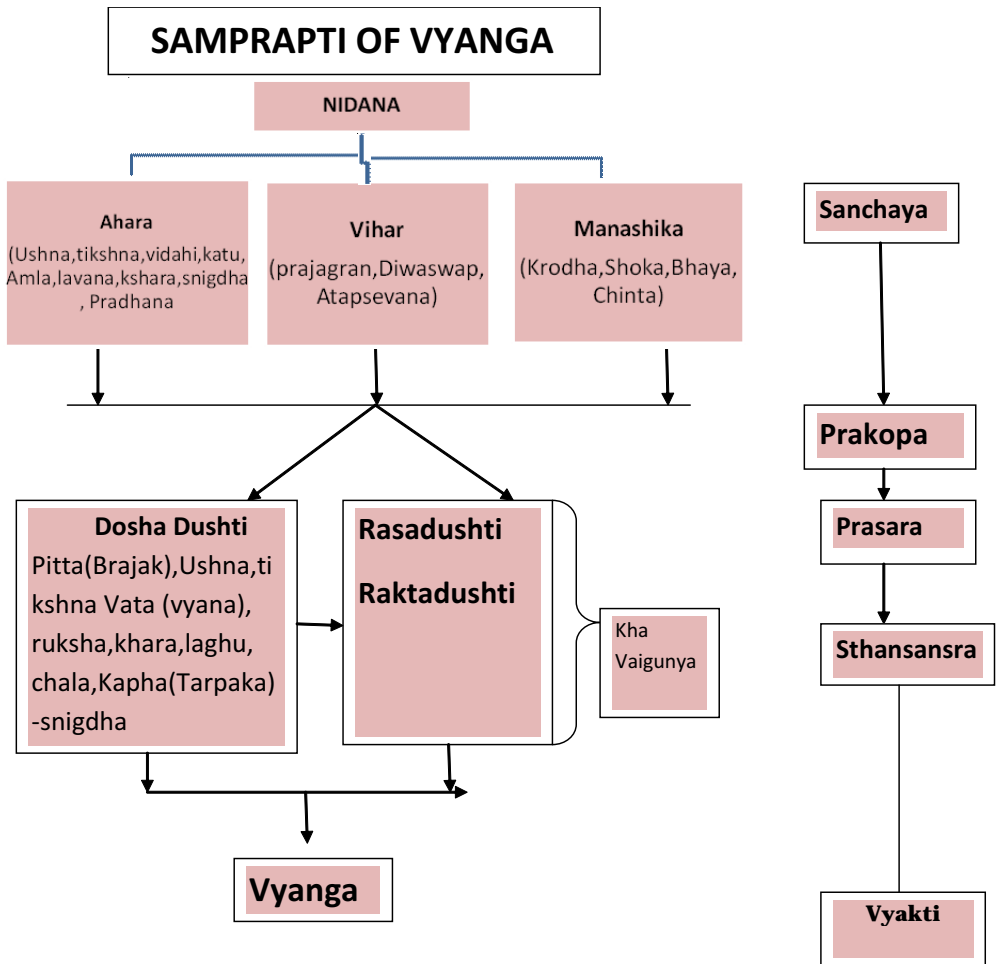


Fig.1 Samprapti (Pathogenesis) of Vyanga

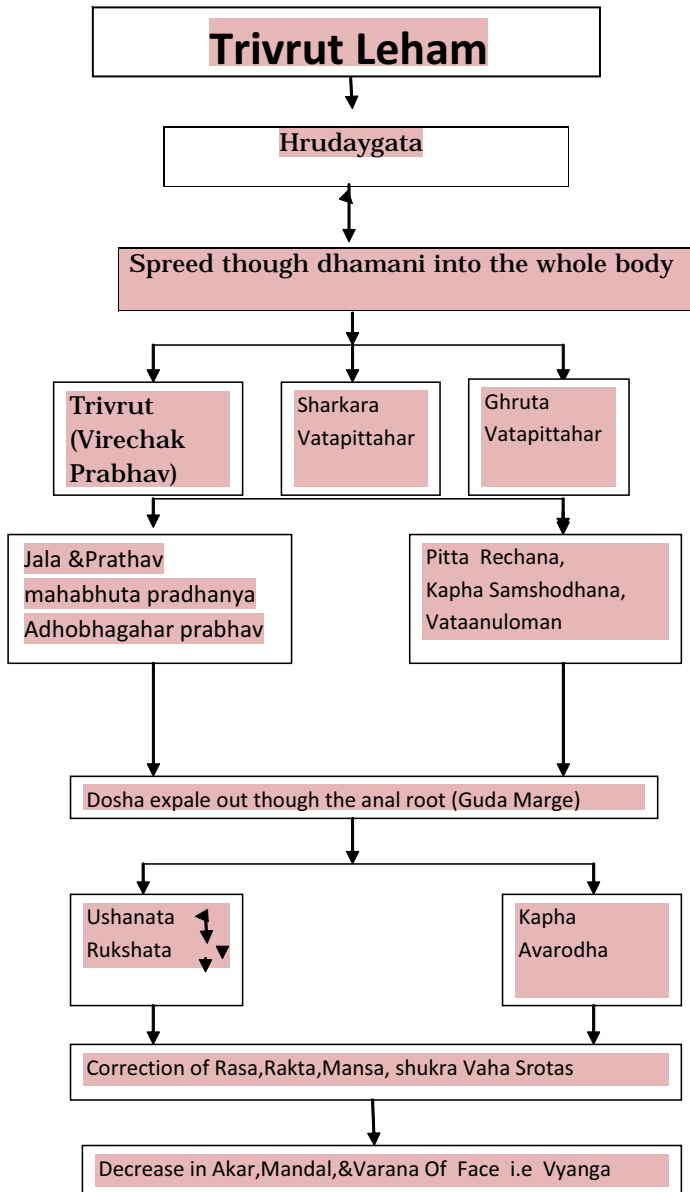


Fig.2 Samprapti Bhang of Vyanga

CONCLUSION :-

- 1) *Virechana Karma* (purgation) can definitely be used in *Vyanga (Melasma)*
- 2) The reduction in cardinal signs of *Vyanga lakshanas (Melasma)* can be effectively done.

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Review :

Role Of Dinacharya And Rutucharya In Premature Aging

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Abstract

Aging is classified as one of the natural and *yapya* (palliative) diseases in *Ayurveda*. In India 3.8% of the population are older than 65 years of age. According to an estimate the likely number of elderly people in India by 2016 will be around 113 million. Maintaining the vitality of youth and preserving quality of life has long been a quest of civilized man. Premature aging refers to the unnatural acceleration of the natural aging process. The aim of this conceptual article is to re-evaluate the role of *Dinacharya* and *Rutucharya* in prevention of factors responsible for premature aging.

Keywords : premature aging, *Dinacharya*, *Rutucharya*, *jara*, *vriddhavastha*.

Introduction

Ageing means growing old, maturing, progressive changes related to the passage of time. In India, the health care system is experiencing dramatic changes from what it was a few decades ago. While liberalization of the economy has expanded opportunities for employment and additional income, it has also brought with it urbanization and changes in lifestyles. India is undergoing rapid nutritional transition, resulting in excess consumption of calories, saturated fats, trans fatty acids, simple sugars, salt and low intake of fiber resulting in obesity.¹ Such dietary transition and a sedentary lifestyle have led to an increase in obesity and diet related non-communicable diseases like type 2 diabetes mellitus, cardiovascular diseases, etc. predominantly in urban, but also in rural areas. Recent projections by WHO shows that chronic diseases will be the biggest contributor to mortality in low-income countries before 2015 and in terms of disability of life years (DALYS) before 2030². Almost one-half (47 percent) of older Indians have at least one chronic disease such as asthma, angina, arthritis, depression, or diabetes.³ It has been estimated that a 2 percent reduction in chronic diseases death rates per year globally could result in saving about 36 million premature deaths by the year 2015⁴. Good health positively affects human capital, productivity and economic growth.

Unfortunately since we haven't found away to reverse mother time, so we have to grow old gracefully with *Ayurveda*. Maintenance of a healthy life by one's own right action is called *Swasthavritta* which means the regime of abiding one's own nature. *Rutucharya* and *Dinacharya* of *Ayurveda* have a lot of importance in the prevention of diseases.

Changes due to ageing process

No one knows when old age begins. The 'biological age' a person is not identical with his 'chronological age'. It is said that nobody grows old merely by living a certain number of years. Years wrinkle the skin, but worry, doubt, fear, anxiety and self-distrust wrinkle the soul.

Ayurveda takes a holistic approach toward the maintenance of *Dhatusamyā* (homeostasis), for which various principles have been described. According to the type of changes that occur, the lifespan has been divided into three parts, these are *bala*, *Madhya* and *jīva* or *vriddhavastha* (later stage of life). *Vriddhavastha* is characterized by decay in the body, *dhatu*, perception power of the *indriya*, potency, strength, speech, various mental and cognitive functions (e.g. memory, intellect, reception, analytic ability etc.). During this phase there is predominance of *vayudoshā*. Untimely ageing may result due to aggravation of *vata* and *pitta dosha*. Therefore, excessive utilization of all the causes of *vata-pitta* aggravation may lead to untimely ageing. The major physical changes seen at this time are wrinkling of skin, graying of hair, baldness and a diminishing ability to do physical work. The common problems of aged person are disturbances in general wellbeing, fatigue, cough, dyspnoea, anorexia, constipation, joint pain, sleep disturbance, and difficulty in adjustment to the weather.⁵

Prevention of premature aging

Carelessness regarding prescribed regimen of *tryopsthambha* (diet, sleep, and coitus), causes of *ojo-kshya* (deficient immunity), excessive and single use of *amla*, *lavana*, *katu*, *tikta*, and *kashaya rasa* in diet, *gramya-ahara* (a deficient and unplanned diet), indulgence in day sleep, daily coitus without *vaajikarana* (aphrodisiacs), daily alcohol drinking, excessive physical work, lack of exercise, mental and emotional fluctuations, etc. are also responsible for premature ageing.

Hence *Dinacharya* and *Rutucharya*, the concepts in *Ayurvedic* medicine that looks at the cycles of nature and bases daily activities around these cycles are very important in prevention of early ageing. These are designed for maintenance of health achievement of a long, healthy active life, providing relief from pain and disease there by achieving satisfactory enjoyment of life and attainment of self-realization.

***Dinacharya* for prevention of premature aging is as follows :**

❖ Sleep and time to wake up

Sleep is considered an important pillar for good health. It is advisable to wake up during *brahma muhūrta* after sound sleep (preferably around 5.30 a.m.). This is the best time for study and to gain knowledge.⁶ Seven to nine hours of sleep is recommended by The National Sleep Foundation for elders.

❖ Cleansing of teeth and mouth

Cleansing of teeth and mouth should be practiced after every meal in addition to early

morning and before going to bed. The soft brushes made out of twigs of *khadira*, *karanja*, *nimba*, *arka*, *apamarga*, etc. should be used for this purpose. Tongue and mouth should be cleaned by a long flexible strip of metal or plant material (*jivhanirlekhana*). It not only cleanses the tongue but also stimulates digestion.

❖ Drinking water

Drinking water early in the morning according to one's capacity cleanses the body by enhancing the elimination of toxic wastes.

❖ Bowels

One should attend the nature's calls. Elimination of urine and feces cleanse the body and cheers up the mind.

❖ Eye Care

Eyes should be cleaned with fresh cold water to prevent eye diseases and promote vision. Also wash eyes with *triphala* water every day.

❖ Betel Chewing

Chewing of betel leaves with small pieces of *puga* (Areca nut) and Fragrantsubstances like cardamom, cloves, refreshes the mouth and enhance digestion. Tobacco and tobacco preparations should be strictly avoided.

❖ *Abhyanga* (Oil Massage)

It is highly beneficial to massage whole body including scalp with oil every day to prevent dryness of body and stiffness of joints due to ageing in elderly.⁷ Formassaging, *tilataila* (gingelly oil), *sarshapataila* (mustard oil), *narikelataila* (coconut oil) or any medicated oils like *Narayanataila* may be used. Oil massage ensures softness of skin, free movement of joints and muscles; renders nourishment, improves peripheral circulation and eliminates metabolic wastes.⁸ Head massage helps in various problems like headache, hair loss, graying of hair and induces good sleep. Padabhyanga (oil massage of foot) helps in improving vision especially for patients with diabetic retinopathy and cataract.

❖ Exercise

Life time physical inactivity accelerates secondary aging (e.g. speeding the reduction in bone mineral density, maximal oxygen consumption and skeletal muscle strength and power). Sedentary lifestyle induces mechanisms which lead to risk factors of chronic diseases and eventually to premature death.⁹ Hence daily walking is the best exercise that can be advised to old people. Regular exercise builds up stamina and resistance against disease, clears the channels of body (*srotas*) and increases the blood circulation and efficacy of vital organs, improves skin color, promotes appetite and digestion and prevents obesity and early aging. Aerobic exercise (moderate to vigorous activity for 30 minutes or more per day) like swimming and walking are some best exercises produce

beneficial effects on so many diseases like CVP, Hypertension, Diabetes, Bowel disturbances, sleep disorders, lethargy due to low muscle tone.

❖ Bath

Bathing improves enthusiasm, strength, appetite, span of life and removes sweat and other impurities from the body. One should have regular shaving, haircut, clipping of nails etc.

❖ Marital Life

Person should avoid extra marital sexual relationship and sexual intercourse with a woman suffering from disease to prevent *dhatukshaya* in elderly.

❖ Food

Whole grain, *amalaki* fruit, *mudga* (green gram) as also stated in modern medicine are to be consumed daily. Various types of fruits, *shakavarga* and more than 84 types of alcoholic products are mentioned for their nourishing properties. If *madya* is taken by good people observing all rules, it works as elixir.¹⁰It has curative in chronic fever and wasting diseases. Fish is contraindicated to consume daily but recent studies have observed that increasing fish consumption to at least 2 servings per week in mid or later life may lower CHD risk in women but not in men.¹¹ According to *Charak* and *Sushruta* all varieties of salts are unctuous, hot, sharp and most exceedingly appetizing, promoter of digestion, laxative and alleviator of *vata*.¹² Salt restriction is also observed by American Heart Association 2006 guidelines (less than 1,500 milligrams of sodium per day).

❖ Leisure

Ayurveda has asked to spend time with family, read and relax. Managing stress in positive ways, instead of through smoking or drinking alcohol, reduces wear and tear on your body at the hormonal level. Healthy lifestyle behaviors advised in *Dinacharya* are also given by American Heart Association 2006 Diet and Lifestyle Recommendations.

Rutucharya for prevention of premature aging is as follows :

❖ Spring

In spring, water and fire elements dominate. Spring, when in balance, is a time of cheerfulness, enthusiasm, cleansing, melting, creativity, sprouting, happiness, compassion and pleasure. When out of balance, spring can bring allergies, colds, flu, congestions, laziness, attachment, passion and overeating. Early spring is more *kapha*- like, when effusions and congestions increase, while late spring is more *pitta*- like, bringing more rashes and fevers. During early summer, awaken before sunrise to help maintain warmth, and meditate with the head and body covered in a warm blanket. Drink warm water from a copper cup in early spring. Perform vigorous bellows (*bastrika*) breath pranayama in the early spring, shifting to gentle bellows breath in later spring. Spring is an excellent time for cleansing and rejuvenation. During the early morning, *kapha* predominates, bringing

dew, throat congestion and some sluggishness. So *Vaman karma* is indicated in spring.¹³

❖ Summer

In summer, solar energy predominates and can bring increases in heatstroke, hives, peptic ulcer, violence, colitis, diarrhea, sweating and boils. It is better to avoid vigorous exercise and favor swimming, taking exercise during the early morning and descending sun hours, especially after the heat of the day has passed. It is advised to awaken early by about 5am and follow a seasonally adapted *Dinacharya* (daily health program). *Yoga asana* for summer time can give emphasis to the camel, fish, cobra, boat, bow, cow and palm tree poses. Performing *shitalipranayama* with inner retention at the navel can help cool the G.I. tract, especially the small intestinal region, where *pitta* dominates. Use coconut oil for *abhyanga*, which penetrates to the sweat glands and helps avoid sunburn, rashes and hives. Take one tsp. of bitter ghee on an empty stomach on first hunger, to help cleanse the liver, a prominent *pitta* site of *pitta dosha*. A light breakfast taken about 8-10am. Avoid sour foods such as citrus, garlic, onions, red wine, tomato, salt, chilies and other heating spices in summer time. Take dinner by sunset or about 7pm.

❖ Rainy Season

During the *vata*-like autumn season, clear, light, emptying, windy, rough, dry, mobile qualities affect all living beings. Proneness to constipation, cracking joints, arthritic pain, insomnia, loneliness, fear and confusion can increase. It is wise to arise about 6am when there is no wind, and stillness prevails. Use a brass or copper scraper for cleaning the tongue to remove any fermented '*ama*', or toxins. *Yoga asana* is selected to help strengthen the pelvis as the main seat of *vata*, and to help remove systemic *vata*. Do gentle forward and backward bends, gentle spinal twists, and camel, cobra, cow, and cat poses. Use warm sesame or *mahanarayan* oil to rub generously onto the whole body. Continue to rub the oil into the body, especially the joints and abdomen; then shower with comfortably hot water. Dry yourself with a vigorous towel massage. Lunch is best taken about 11am or 12noon, with hearty servings of *kitchari*, steamed vegetables with oil, soup, chapatti and a little hot water with lemon juice. A short rest is OK after lunch, to help slow the heart rate and respirations, and help build up *slesakkapha* to nourish and protect the joints, before returning to work. Avoid cold foods like salad, loud music, fast driving, excess sex, cold drafts, excess traveling, old food, cold drinks, over-fasting, over-exercising and over-talking. *Basti* procedure is indicated in rainy season to eliminate *vata*.¹⁴

❖ Winter

Winter season is cold, damp, wet, heavy, cloudy and snowy, like *kapha*. However, imbalanced winter activities can promote dullness, attachment, bronchial asthma, pneumonia, heaviness, congestive heart failure and a feeling of loss, sadness or melancholy. It's better to wake up by 4am, and massage your body with warm sesame oil to help maintain body heat throughout the day, except if there is cough, cold, menstrual cycle or congestion. Doing '*neti*' or warm water washing of the nostrils can help keep

kapha from accumulating in the upper respiratory region. Taking a hot tub bath with a little camphor or eucalyptus oil or ginger powder can help keep the lungs, a main site of *kaphadosha*, clear during cold weather. 'Nasya' or nasal administration of medicated snuff or medicated nose drops can help maintain the immunity of the nostrils, a doorway to the brain. Exercise can be more vigorous in winter, though often we feel like doing less. Bridge, peacock, palm tree, warrior, triangle and lion poses are especially good for winter practice and for *kapha* individuals. Brunch can be hot barley cereal with raw honey, or hot rice cereal cooked with celery and hot peppers.¹⁵ Avoid dairy products, particularly yogurt, in winter, especially when the sky is cloudy and overcast. It's wise to sleep early, to feel ready for rising early, to keep *kaphadosha* in its place, so it does not accumulate.

Conclusion

The positive health is to be obtained by strictly observing the prescribed rules of *Dinacharya* & *Rutucharya*. The vitiation of *doshas* caused by *nityaahara-vihara* is prevented by following *Dinacharya* & the vitiation of *doshas* caused by *Kala-prabhav* is prevented by *Rutucharya*.

The highly skewed public health expenditure on curative care has meant lack of resources for preventive health care. Implementing good "preventive" health screening programs such as *Ayurvedic* daily regimen (*Dinacharya*) and seasonal regimen (*Rutucharya*) along with *Sadvritta* are extremely important to prevent lifestyle disorders and foster healthy aging.

Awareness about simple rules of *Dinacharya* and *Rutucharya* should be included in syllabus of moral science of school children. Short term courses and workshops about practicing *Dinacharya* and *Rutucharya* in daily lives for adolescents and young people should be carried at community level, workplace and school settings. Efforts in this regard can be taken by department of *Swasthvritta* of various *Ayurvedic* colleges to progress research on promotive, preventive and therapeutic interventions generally on various degenerating conditions and aging. Practising *Dinacharya* and *Rutucharya* will not only reduce premature aging but also reduce the disease burden of geriatric diseases.

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Review :

Conceptual Study Of Vaman Karma With Nimba Yashtimadhu Kashaya

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ABSTRACT :

Prameha is a mainly Santarpanottha and Kapha pradhan Vyadhi, On the basis of similar symptomatology it can be correlated with Diabetes Mellitus(type 2) in modern era. According to WHO, Its prevalence is estimated that 20% of the current global population In India, which is no perfect solution has been find out. Hence, Aim is to study efficacy of Vamana Karma with Nimba Yashtimadu Kashaya in Prameha. Objectives are to study Nidanpanchaka of Prameha and Vamana Karma. All the references are collected from Ayurvedic and modern literature. Prameha is mainly Santarpanottha, Kaphaja and Kleda Pradhan Vyadhi and having many Dushyas like Lasika, Shukra Dhatu etc. are involved, Vamana is Pradhan Karma for Kapha, Kleda. Hence Vamana can help in Prameha. Nimba having Tikta, Kashaya Rasa, Kledghna, Rukshghna and Pramehaghna according to Prabhava. Yashtimadhu is Tridosahara, Doshutkleshaka, Madhura Rasa thus easy to palatable, hence Nimba as Vamaka and Yashtimadhu as Vamanopaga can be used for Balwana and Shula Prameha Rugna. on the basis of mentioned discussions it can be concluded that Santarpanottha Prameha could be treated through Vamana with Nimba Yashtimadhu Kashaya.

Keywords : Prameha, Nimba, Yashtimadhu, Kashaya, Vamana.

INTRODUCTION :

Health is the supreme foundation to virtue, wealth, enjoyment and salvation. Therefore preservation and promotion of health is removal of causative factor of disease is the principal and goal of Ayurveda.

Rapid As per the report of WHO estimate, more than million people presently suffers from *Diabetes* and this number is expected to rise to 366 million by the year 2030. In India Rapid, it is also 3rd leading cause of death (After heart disease and cancer). It has turned out to be the biggest “*silent killer*” in today’s world.

Previously a lot of work was Done on Shodhan i.e. Vaman in Prameha , but efficacy of Vaman with Nimba Kashaya is not done, Hence in this study Vamana with Nimba Kashaya and Yashtimadhu Kashaya will be going to study. Kapha is predominant Dosh while the important Dushyas are Meda and Kleda for which Vamana is primary

treatment. In spite of tremendous advancement of modern medicine i.e. Oral hypoglycemic agents and insulin, they are not free from serious side effects and are unable to prevent long term complication but it can be overcome by Shodhana Karma .

AIM & OBJECTIVES :

1. Study the efficacy of *Vamana Karma* by *Nimba Yashtimadhu Kashaya* in *Prameha*.
2. To study about *Vamana Karma* in various *Samhitas*.
3. To study about *Prameha Vyadhi*.

MATERIALS & METHODS :

MATERIALS :

All the references regarding *Prameha* and *Vamana Karma* are collected from *Bruhatrayee* and *LaghuTrayee* and Various textbooks and compilation is done. *Nimba Yashtimadhu kashaya* is Reviewed from *Charak Samhita*.

METHOD :

- Concept of *Vamana Karma*, *Prameha* and *Nimba Yashtimadhu kashaya* is studied in detail.
- Collection of all the references is done and correlation between the data is Done from *Samhitas* and *Yukti* and *Anumana Pramana*

RESULT :

- On the basis of mentioned observations and discussions it can be concluded that *Santarpnotta Prameha* could be treated through *Vamana* with *Nimba Yashtimadhu kashaya*.

REVIEW OF DISEASE :

- *Prameha* was Explained in all *Bruhtrayee* and *Laghutrayee*.
- According to all *Acharyas*, *Prameha* is mainly *Kledapradhana* and *Kaphapradhana Vyadhi*.

Nidan (Etiology) :- *Acharya* while describing the *Guna's* of *rasa* explains the properties of *Madhura rasa* as *Guru*(heavy), *Amla rasa* as *Kledana* , *Bhedana* (penetrating in nature), *Teekshna* (sharp in nature), *Vikasi*. (spreads easily). Hence if it is used in excess and in isolation, it leads to vitiation of *Kleda* and aggravation of *Kapha*, leading to *Prameha* and other diseases.

Purva Rupa (Premonitory signs):- *Hast pad daha* , *Mukhamadhurya*, *Trushna* , *Purvarupa* has been mentioned for *Prameha* in the classical texts.

Rupa (Symptoms):-The vital symptoms are *Prabhuta mutrata*, *Aavila mutrata lakshanas* mentioned in *Samhitas*.

Samprapti (Pathogenesis)

In *sanhitas* , *Acharyas* stated regarding the *Samprapti* of the disease *Prameha* that it

occurs when *Sheeta, snigdha, Drava, Guru gunas, Madhura, Amla, Rasatmak and Kledakara*, *Abhishanda Aahar* and *Aasyasukham, Diwaswapna, Avyayam, Achinta, Swapnasukham* leads to *Kapha-Pitta prakopa*, due to these Prakopa, vikruti of Kledaka Kapha and Pachaka pitta, Thus increase dravata, Klinta while Dhatavagnimandya occure and incerase Kleda, these kleda was Sthansanshrit in Basti, and Kleda nirgamana from Mutra, function of mutra is Kledavahna Thus Prabhuta Mutrata, Aavila mutrata, Hasta pada daha, daurbalya, Mukhmadhurya etc.

PROCEDURE REVIEW :

- Internal oleation by consumption of cow's ghee for 3/5/7 days till Samyak snigdha lakshana are seen
- External oleation by application of Tila Taila will be done after Samyaka Snigdha lakshana are seen and on the day of Vamana Karma.
- Swedana – Sarwang Mrudu Bashpa peti swedan will be done for last 3 days
- Patient is advised to take Kaphotkleshaka Aahara i.e Curd-Rice, a day previous to Vamana procedure.

Process of elimination of *Doshas* through the *Urdhvabhag* is known as *Vamana*. *Vamana* is the Procedure in which orally administered drug acts on internally vitiated *Doshas* Specially on *Kapha* and expels them out through *Mukha marga*.

REVIEW OF DRUG :-

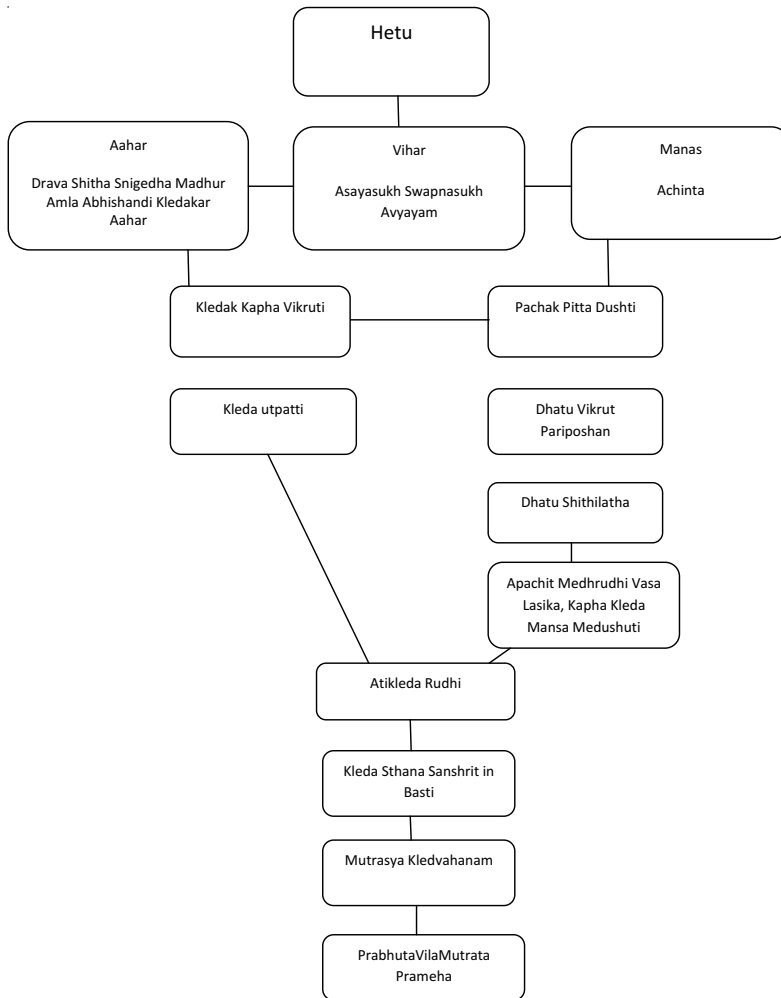
Nimba having Tikta, Kashaya Rasa, Kledghna, Rukshghna and Pramehaghna according to Prabhava. Yashtimadhu is Tridosahara, Doshutkleshaka, Madhur Ras thus easy to palatable, hence Nimba as Vamaka and Yashtimadhu as Vamanopaga can be used for Balwana and Shula Prameha Rugna.

Accrding to Ashtanga Hrudaya, Nimba can be used as Vamaka and According to Charaka Samhita, Yashtimadhu used as Vamanopaga.

DISCUSSION :

The *Anshansha kalpana* of *Doshas* responsible for the formation of the Disease are because of the Nidanans responsible for the causation of *Prameha*. the *Shita, Snigdha, Drava, Guru Gunatmaka* and *Abhishandi, Kledakar Aahar* and *Swapnasukha, Aasyasukham vihara* and *Achinta Mansika Hetus* are leads to Kapha –Pitta Prakopa and increase Dravata, It take place dushti of Kledaka kapha and Pachaka pitta, develop Agnimandya, so Improper Dhatupariposhana occure then altimately Dhatvagnimandya is occure, Effect of these, formation of Apakwa Dhatus, Apachita Meda Dhatus, Dhatu Shaithilya, and increased quantity of Kleda. Kledaka Kapha vikruti and Apachit Meda Dhatu having same properties It take place Pramantaha Kleda Vruddhi, these Kleda Sthansanshrita in Basti and its Nirgamana from mutra. Becos function of Mutra is Kledavahana so Prabhutavila Mutrata Lakshana was seen. *Manas Hetu* also plays very important role in arising *Prameha*, because of *ACHinta, Swapnasukha* are responsible to increase *Kapha* Dosha. thus In which Meda, Rakta, Shukra Lasika, Vasa, Majja, Rasa, oaja *Dushyas* are involved. In present study we can use *Vamana*

Karma as a *Shodhan* processure for *Prameha*. *Vamana Karma* is a specific process for elimination of *Kapha-Pitta Doshha* and is specially indicated for *Kapha, kleda* predominant *Doshas*, *Kapha, Meda* and *Kleda* have same Properties and *Prameha* is mainly *Kaphapradhan*, *Kledajanya* hence *Vamana* is effective treatment. According to *Acharyas* by *Vamana Karma* increases *bala* of *Indriyas* & *Buddhi* *prasadana*, and reduce *Tama guna*. hence this process can helpful in *Prameha* present due to *Mansika* *hetus*. *Vamana Karma* can help for *Kledashodhska, Pitta & Kapha Shodhan*. *Vamana* is mentioned as a *Shodhana* in *Dushti* of *Rasa, Rakta, Mamsa, Meda* and *Shukra Dhatu*. Hence in majority of the *Vikruta Kapha Kleda Vikaras*, *Vamana* is the better treatment. *Prameha* is mainly *Kaphapradhana* and *Kledapradhana Vyadhi* hence *Vamana* is *Pradhana karma* for *Prameha*.



Samprapti Bhanga of Prameha**CONCLUSION :**

- 1) *Vamana Karma* (Emesis) can definitely be used in Prameha (diabities).
- 2) The reduction in Vital symptoms of *Prameha lakshanas* (Diabetes) can be effectively done.

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Review :**“ Hrudaya A Literary Study”**

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ABSTRACT : Background - Hrudaya is an important organ of human body. It plays essential role in difficult activities in human body. **Aim** - To study aspects of Hrudya according to ayurveda and modern science. **Methodology** - References about hrudya's origin etc. from different ayurvedic texts have been studied. **Result. Conclusion** - This is a review article. Various references from ayurvedic & modern texts regarding Hrudya have been studied to understand the concept of Hrudya

Key Words : Hrudaya, Heart

INTRODUCTION: Hrudya is derived from two words-

- a) Hru :-Means bring back forcibly
- b) Da :-Means to donate

It means heart is the organ which draws impure blood from the body and gives pure blood to the body.

The heart is also compared with the root of a tree (Mahamoola). Heart along with its major trunks and big vessels is compared with the tuber of lotus (Padaminikander). The main blood vessels (MulaSiral/mahamulah) are also compared with big and tender branches of the lotus which are spread in the mud. (Ref.-Ch Su.30/3-4)

Hrudya is the origin of 10 main blood vessels and they are arranged like the axis to rim of a wheel i.e. from heart to peripheral part of bod Heart is the root of both pranavaha and rasavaha strotas. (Ch.Si.9/5)

AIM & OBJECTIVES :

Study of Hrudya and its rachana and kriya sharir according to ayurvedic and modern science.

MATERIALS & METHODS:

As this is a review article; the materials are the classic texts of Ayurveda & the method is systematic collection of the scattered references regarding the hrudya and with these classical references this is an attempt to study different aspects of hrudya according to ayurveda and modern science.

OBSERVATIONS & DISCUSSIONS :**GARBHAVIJNANA (Embryology)****Ayurvedic view -**

- 1) Caraka quoted Kankayan's view that Hrudya is the first fetal organ to develop (Cs.Sa.6/21).
- 2) Susruta mentioned Krtavirya's view that Hrudya develops prior to other organs of the embryo itself being the site of Buddhi (Mental faculty) and Manas (mind)- (Ss.Sa.3/32.).
- 3) Caraka considered that fetal heart starts pulsating from the third month (Cs.Sa.6.). While, Susruta considered that the fetal starts functioning from fourth month onwards (Ss.Sa.3.)
- 4) Acaryas of Ayurveda considered Hridaya as *Matrjabhava*(organ which is maternal in origin) - Ss.Sa.3/33.)

Modern view -

Human heart develops from its most primitive analogue i.e., a simple tube-like structure to the full-fledged four-chambered structure with septal valves and vessels by about 3rd week of fetal life. Several processes such as turning, twisting, septal formation, bulbus involution etc., takes place between the fifth and eighth week of intrauterine life. By fifth week, the heart tube assumes an "S" shape. The conducting system of heart can be identified by the middle of sixth week of intrauterine life. At about eighth week heart assumes its familiar configuration and the interventricular septum also closes.

Heart commences to beat prior to the development of conducting system and circulation is established before a complete vascular mechanism has been laid down. Generally, heart begins to beat at the end of third week. Nerve invades the heart at the end of fourth week and the S.A.node is well developed by the third month of fetal life.

Comparison between both perspectives -

From the above two perspectives it is evident that Hrudya (heart) is among the first organs to develop during the intrauterine life. The pericardial cavity can be identified before the head fold is formed or while it is in the process of formation at a stage when embryo possesses only two somites.

The hypothesis of Acaryas proposing development of all the organs at the same time is correct since, the entire development of heart is completed between 21st and 40th day of embryonic life within a span of 20 days. During this part other organs will also develop. The basic development of heart occurs between the second and ninth week of embryogenesis.

Susruta's view about the development of heart as the purest essence of Rakfa and Kapha appears to be more rationale. According to modern embryology heart develops from the angioblastic tissue and the first heart forming cells appear as irregular clumps and strands

in the cephalic portion of the human embryo between the endoderm of the yolk-sac and splanchnic mesoderm i.e., the heart and the blood vessels of the embryo arise from angioblastic tissue, differentiated from the intra-embryonic mesoderm.

Hrudya is mentioned as one among the *Kosthangas* i.e., among the organs of thorax and abdomen (Cs.Sa.7/10; Ss.Sa.5 & A.H.Sa.3.)

Hrudya is vital (*Pradhana*) among the Marmas (vital points). It is classified under *Trimarmas* (three vital organs) as well as *SadyahPranaharaMarmas* (sites of injuries which results in immediate death) - (Cs.Su. & Ss.Sa.6.).

Heart was described under Dasavidhapranayatanas (A.H.Sa. 3)

Some references mention about the four chambered structure of the heart (HaranaCandra - Ss.Sa.)

Modern view -

Heart is a hollow muscular organ of a somewhat conical form; which is slightly larger than a closed fist and lies between the lungs in the middle mediastinum is closed in the pericardium. It is divided into four chambers viz., 2 atria (right and left) and 2 ventricles (right and left). The atria and ventricle separated by interatrial and interventricular septum respectively.

The opening between right atrium and ventricle are protected by tricuspid valve. The left atrium and ventricles are protected by mitral valve. The left atrium and ventricles are protected by mitral valve. The superior vena cave opens into the right atrium. Pulmonary artery arises from the right ventricle and reaches the lungs. From the lungs four pulmonary veins arise and open into the left atrium. The aorta will originate from the left ventricle and branching spread all over the body. The aorta and pulmonary artery are provided with semilunar valves.

KRIYA SARIRA (Physiology)

The functional aspects of Hrudya have been described in the following manner in the Ayurvedic texts-

- 1) The word Hrudaya (*Hru-d-ya*) itself indicates its functions viz.,
 - a) circulating Rasa & Rakta throughout the body,
 - b) providing nourishment to various Dhatus (tissues) through Rasa, and
 - c) to perform *Sahkoca* (contraction) and *Vikasa* (dilatation) to maintain continuous circulation- (*SatapathaBrahmana*).
- 2) The vessels involved in the circulation are of 3 varieties -
 - i) *Dhamani* (Artery)-*DHMANAT DHAMANYAH*; meaning which pulsates (Cs.Su.30.). A Dhamani will pump Rasa & Rakta forcibly- "*DHMANAM RAKTASYA BALAT VIKSHEPANAM*" (Pr.Sa. DhamaniKhanda) or which fill up the vessels with RasadiDhatu- *DHMANATPURANATVA HYENA RASADINETYARTHAH*"- (Cakrapani-

Cs.su.30.).

- ii) *Srotas* (Capillary)- "*SRAVANAT SROTAMSI*" (Cs.Su.30.)- meaning which secretes. A srotas is one that is permissible to flu-ids "*\$RA VAN AM SYANDANAM*"- (Pra.Sa.Dha.Kha.) or which secretes PoshyaDhatu (nourishing materials) like Rasa etc "*SRA VANADITI RASADEVA POSHYASYA SRAVANAT*"- (Cakrapani- Cs.Su.30.).
- iii) *Sira* (vein) meaning which slowly propagates fluid "*SARANATSIRA*" (Cs.Su.30.). A sira is one which will slowly pump the blood(Rakta) towards the heart "*SARANAM MRIDUGATYA HRIDAYABHIMUKHAM CALANAM*" (Pra.Sa.Dha.Kha.) or which spreads Rasa, Rakta etc. to various parts of the body "*SARANAT DEHANTARA GAMANAT*"- (Cakrapani- Cs.Su.30.).

Hrudya governs all the sharira bhavas like :Mana, Atma their functions, functions of various organs etc (Cs.Su.30.).

It transports nutrition, vital energy and oxygen to the dis-tant parts of the body as it is the site of Rasavaha, Ojovaha and Pranavaha srotases. The conscious state of the body, the sensory and motor functions, and the voluntary and the involuntary activi-ties of the organs of the body are all dependent of the proper func-tioning of the heart and predominance of the qualities of sattwa and tamas in the Rasa-dhatu an indication of biochemical changes of opposite nature in the blood (Ss.Sa.).

Heart is nothing but an inert mass of flesh, but it being the seat of three doshas and three gunas related to body and mind derives its driving force from these basic organizations of life. Vata in the form of VyanaVata imports moving force; Pitta in the form of Sadhaka Pitta protects it from inertia and fatigue and gives power to match the situations, alertness and consciousness; Kapha in the form of Avalambakaslesma prevents wear and tear, conserve its tone and force.

Tamas and Kapha slow down the heart and produces sleep. The sattwa and pitta refreshes it, makes it responsive, alert and con-scious. Rajas and Vata activates it, keep it moving i.e., excitability and tonicity. They all work in co-ordination for maintaining life. These controlling forces have not yet been identified as some dis-tinct biochemical or hormonal products.

Heart Sounds- The Heart is the seat of AnahatCakra, presided by Vyanavayu which produces a characteristic sound dur-ing its movement (systole & diastole) - (Na.Vi.).

Pulsation- Due to continuous contractions and dilatation of heat pulsation, occur in the Nadis (vessels)- '*NADYA SCALANTYASRIGDHARA YAH SPURANAM TATAH*' - (Na.Vi.)

Mind effects the ability of the heart. Heart is effected in intellectual pursuits and in emotional upheavals like: rage, sorrow, pleasure, pain, fear, anxiety, depression or excitement. That is why heart is considered to be the seat of mind and intellect- '*MANO BUDDHINIVASAH*'(Cs.Ci.26. &Ma.Ni.)

Modern view -

The right atrium receives impure blood through large veins from the upper and lower regions of the body. The right atrial blood through the atrioventricular opening passes into the right ventricle. Due to contraction of the right ventricle, the blood is carried to the lungs. In the alveoli the impure blood gives off CO_2 and takes up O_2 and thereby gets purified. The pure blood from the lungs is carried through pulmonary veins to the left atrium and through atrioventricular opening to the left ventricle. The left ventricle contracts and the pure blood is pumped out to the aorta. The aorta and its arterial branches, which break up into capillaries, carry the pure blood to all the parts of the body. The veins provided with valves into the right atrium carry the impure blood from different regions of the body. The right atrium sends blood to the right ventricle and the cycle is repeated. There are about 5 Lt. blood in a normal adult human body. The amount of blood ejected per ventricle per minute is about 5 Lt. and is known as 'cardiac output'. Heart beats from 70- 80 times per minute, and the amount of blood ejected per ventricle per beat is about 70 ml.

Cardiac muscle consists of certain specialized structures, which are responsible for initiation and transmission of cardiac impulses at a higher rate than the rest of the muscle. Those specialized cardiac tissues operate such mechanism are collectively known as the junctional tissues of heart. They comprises :

- (1) Sinoatrial (S.A.) node,
- (2) Atrioventricular (A.V.) node,
- (3) Bundle of His (Atrioventricular bundle),
- (4) The right and left branches of the bundle - ending in the Purkinje fibers

CONCLUSION :

This is a review article. Various references from ayurvedic & modern texts regarding Hrudya have been studied to understand the concept of Hrudya.

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Review :

Metabolic Syndrome and Medodusti

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ABSTRACT

Metabolic syndrome is defined as a constellation of three or more of the following: obesity, triglycerides = 150mg/dl, HDL cholesterol <40 mg /dL for men and <50mg/dL for women, fasting glucose = 110 mg/dL and hypertension.

Meda performs the Dharan Karm . The channels which supply nutrition to Medodhatu is known as Medovaha Srotasa.. Snigadhagata, Udarparshevavruddhi, Shwas, Kasa, Daurgandhyam are the symptoms and signs of Medovruddhi. Number of etiological factors causes Medovaha Strodusti . By medodushti symptoms and signs as mansadushti and also medodusti are seen. In medodusti we found Austoninditiya Vyadhi and premonitory signs and symptoms of Prameha.

Chiitsa is described in the 21 st chapter of Charak Sutrasthan.

Metabolic syndrome and Medodusti are well correlated .Metabolic syndrome and also medodusti can be identified at the earliest for prevention of further complications and be cured by the way of Ayurveda.

Keywords- Metabolic syndrome, Obesity , DM, Hypertension, Hypercholesterolemia, Medovaha Srotas, Medodusti, Atistaulya , Medodusti Lakshane , Chikitsa .

Introduction

Individuals with the metabolic syndrome are at risk for type 2 diabetes and cardiovascular disease. There is no uniform definition of the metabolic syndrome, but there are similarities between the criteria proposed by the U.S. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III [ATP III]) and the World Health Organization (WHO)

This syndrome is increasing at an alarming rate .Related to the metabolic syndrome; the epidemic of obesity is likewise a major factor contributing to coronary artery heart disease risk. The prevalence of obesity (Body mass index [BMI] e"30kg/m²) continues to increase in adult population.

Earlier the metabolic syndrome was defined as a constellation of three or more of the following: obesity, triglycerides e" 150mg/dl, HDL cholesterol <40 mg /dL for men and <50mg/dL for

women, fasting glucose \geq 110 mg/dL and hypertension.

Glucose intolerance and type 2 diabetes may also be manifestations of an underlying condition known as the metabolic syndrome. Originally described by Reaven, to include insulin resistance, hyperinsulinemia, glucose intolerance, increased triglycerides, decreased HDL cholesterol, and hypertension, the syndrome now also includes increased body weight (esp. central adiposity), inflammation, microalbuminuria, hyperuricemia and abnormalities of coagulation and fibrinolysis. Insulin resistance is believed to underlie many or all of these metabolic abnormalities, although some individuals with metabolic syndrome do not manifest insulin resistance.

Increased physical activity is an important goal to prevent obesity and its consequences. A diet having low saturated fat is very important. Low-carbohydrate diets, even when high in saturated fat, may improve the cholesterol profile in overweight men and are as effective at achieving weight loss. Fish, rich in omega-3 fatty acids, may help to protect against vascular disease, and it is recommended that it be eaten three times a week by patients at risk.

1) Obesity

Obesity is defined as an excess of adipose tissue. Physical examination is usually sufficient to detect excess body fat. More quantitative evaluation is performed by calculating the BMI. The BMI closely correlates with excess adipose tissue. It is calculated by dividing measured body weight in kilograms by the height in meters square.

The National Institutes of Health (NIH) define a normal BMI as 18.5-24.9

Overweight is defined as BMI = 25- 29.9

Class I obesity is 30-34.9,

Class II obesity is 35-39.9 and

Class III (extreme) obesity is BMI > 40

Factors other than total weight however are also important.

- 1) Upper body obesity (excess fat around the waist and flank) is greater health hazard than lower body obesity (fat in the thighs and buttocks) .
- 2) Obese patients with increased abdominal circumference (>102cm in men and 88 cm in women) or with high waist-hip ratios (>1.0 in men and >0.85 in women) have a greater risk of diabetes mellitus, stroke, coronary artery disease, and early death than equally obese patients with lower ratios.
- 3) Location of excess fat – Visceral fat within the abdominal cavity is more hazardous to health than subcutaneous fat around the abdomen.

• Health Consequences Of Obesity

Obesity is associated with significant increase in both morbidity and mortality. Many

disorders occur in obese people.

The most important and common of these are

- A) Hypertension ,Type 2 Diabetes Mellitus ,Hyperlipidemia ,Coronary Artery Disease, Degenerative Joint Disease and Psychological disability.
- B) % of individuals with obesity have the metabolic syndrome
- C) Certain cancers (colon,ovary,and breast),
- D) Thromboembolic disorders ,
- E) Digestive tract diseases
- F) Skin disorders.
- G) Surgical and obstetric risks are greater
- H) Greater risk of pulmonary functional impairment including sleep apnea, endocrine abnormalities, proteinurea and increased hemoglobin concentration.
- I) Increased rates of major depression and binge eating disorder.
- J) Subject to various forms of social discrimination.

B) Lipid Disorders

Triglycerides e" 150mg/dl, HDL cholesterol <40 mg /dL for men and <50mg/dL for women

1) Hypertriglyceridemia

Lipoproteins are the small particles in the blood which contain cholesterol,phospholipids ,triglycerides and proteins. Lipoproteins are classified into four types on the basis of their density.

1. Very low density lipoproteins (VLDL) –contain high concentration of triglycerides (formed from FFA- free fatty acids and glycerol) and moderate concentration of cholesterol and phospholipids.
2. Intermediate density lipoproteins (IDL) – formed by the removal of large portion of triglycerides from VLDL by lipoprotein lipase. Concentration of cholesterol and phospholipids increases because of removal of triglycerides.
3. Low density Lipoproteins (LDL)- formed from IDL by the complete removal of triglycerides . These lipoproteins contain only cholesterol and phospholipids.
4. High density lipoproteins (HDL)- contain high concentrations of proteins with low concentrations of cholesterol and phospholipids.

All the lipoproteins are synthesized in liver. HDL is synthesized in intestine also.

In fasting serum, cholesterol is carried primarily on three different lipoproteins – the VLDL,

LDL, and HDL molecules. Total cholesterol equals the sum of these three components:

Total cholesterol = HDL cholesterol + VLDL cholesterol+ LDL cholesterol.

Most triglyceride is found in VLDL particles, which contain five times as much triglyceride by weight as cholesterol. The amount of cholesterol found in the VLDL fraction can be estimated by dividing the triglyceride by 5.

VLDL cholesterol = Triglycerides/5

VLDL carries cholesterol from the liver to organs and tissues in the body. It is also associated with atherosclerosis and heart disease.

2) HDL cholesterol < 40 mg /dL for men and < 50mg/dL for women

HDL (High density lipoproteins) is referred as the 'good cholesterol' because it carries cholesterol and phospholipids from tissues and organs back to the liver for degeneration and elimination. It prevents the deposition of cholesterol on the walls of arteries.

High level of HDL is a good indicator of a healthy heart, because it reduces the blood cholesterol level. HDL also helps normal functioning of some hormones and certain tissues of the body .It is also used for formation of bile in liver.

C) fasting glucose e"110 mg/dL

Diabetes is a heterogenous disease of carbohydrate metabolism characterized by polyuria, polypepsia, and polydipsia, due to lack of secretion of insulin or resistance to insulin. DM is the leading cause of end- stage renal Disease (ERSD), non traumatic lower extremity amputations and adult blindness.

Prediabets

Prediabetes is defined by the American Diabetes Association in 2002. A person with impaired fasting glucose is defined as having pre-diabetes .Such people are at high risk for developing diabetes in the next decade or coming years and have an increased risk for coronary heart disease.

Prediabetes is the preclinical, asymptomatic stage of the diabetes, where the disease may be delayed & reversed by life style changes particularly diet & exercise. It is found that people who develop Pre- diabetes develop type 2 diabetes during an average 3 years follow up. Other studies show that many people with Pre- diabetes develop type 2 diabetes in 10 years.

Investigations and Diagnosis

Diagnostic tests for Prediabetes are Impaired Fasting Plasma Glucose test (FPG-110 mg/dL-125 mg/dL) & Impaired Oral Glucose Tolerance Test (OGTT-140 mg/dL-199 mg/dL) .

D) Hypertension

It is the lateral pressure exerted by the blood column on the wall of arteries. Persistent

increase in systemic blood pressure is known as hypertension. Hypertension is diagnosed when systolic blood pressure is elevated above 140 mm of Hg or diastolic blood pressure is above 90 mm of Hg. The prevalence of hypertension increases with age.

Hypertension is a silent killer .The mortality rates for strokes and coronary heart diseases are major complications of hypertension .Also patients with end-stage renal disease and heart failure continue to rise.Hypertension is classified as primary and secondary HTN and different etiological factors have been mentioned.

Medodusti

Meda

Meda is the fourth Dhatu, which performs the Dharan Karm ,support the body, mind and life. Meda stands for Sneha, fat, oil etc. It means the substance, which has Snigdhatva property, is called Meda. There are many oily substances in the body like Vasa, Majja et cetera.

Sneha, Sweda, Dridhatva and Asthipushti are the functions of Medadhatu. Netra and Gatrasnigdhatva are the additional functions of Meda Dhatu which is the shelter for any Dosha of its allied nature, depicts the concept of Ashryashrayeebhava .Similar allied properties of homogenous Dhatu or Dosha may serve as a cause to the nutrition or vitiation of Dosha or Dhatu and it is in this context Meda can be considered as a location of the resident Kapha, since Meda plays a major role in nutrition or vitiation of Kapha and vice versa. This shows Ashryashrayeebhava of Medadhatu.

Sthana and Swarupa of Meda Dhatu

There are two types of Meda one is Poshak and another is Poshya.

The Poshak Meda is circulated in whole body along with Rasa-Rakta Dhatu for nourishing the Poshya Meda Dhatu. According to modern science, it can be correlated with cholesterol and lipids, which are present in circulating blood. Poshya Meda is stored in Medodharakala in its sites specifically Udara, Sphika, Stana and Vasa. According to modern science, it can be correlated with adipose tissues / fat.

Pramana of Meda Dhatu

The total quantity of Meda is two Anjali and the Vasa is three Anjali. Thus, total Meda content of body is enumerated as 5 Anjali and total measurable body elements are counted as 56.5 Anjali. Total Meda content of body is 11 to 12% approximately. Modern physiology has mentioned the same amount of fat.

Medovaha Srotasa

The channels which supply nutrition to Medodhatu is known as Medovaha Srotasa.

Bhrutrayi have considered together that Vrikka as one of the Moola of Medovaha Srotas but vapavahana, Kati and Mamsa are mentioned as second Moola separately.

Metabolism of Meda

According to Ayurveda, Kapha is seated in Rasa, Mamsa, Majja and Sukradhatu. Kapha and Meda are having similar properties. On the basis of Ashraya ashrayee-Bhava. Vitiation of Kapha also leads to vitiation of above Dushya. In this way, vitiation of Kapha also leads to vitiation of Meda Dhatu except Asthi Dhatu.

The formation of Dhatu from Annarasa is explained through three Nyayas.

1. Sarvatmana Parinama Paksha
2. Kedarikulyanyaya
3. Khalekapotnyaya

If Agni will be good and potent, through passing from the level of Rasagni, Raktagni and Mamsagni, the Medodhatuvridhhi will occur and if Agni will be poor, it will create Dhatvagni-Mandya. So, Rasagata, Raktagata, Mamsagata and Medogata Snehamasa will be increased due to their own Dhatvagnimandya respectively.

Whenever Rasa, Rakta, Mamsagata Sneha starts to increase due to excessive eating and less calorie consumption, overload on Dhatvagni starts to build-up. Patients shows the symptoms of Rasavridhhi and Kaphavridhhi as Angagaurava, Alasya, Tandra, Nidradhikya et cetera. Later on actual Medadhatu gets clinical increase and present with various physical signs like Chala - Sphika - Udara - Stana et cetera and later stages difficulty in performing all his/her daily activities. Further improper nutrition to Asthi, Majja and Shukra Dhatu may also occur.

Medsarata

Medasar persons in whom Meda Dhatu is prominent have good complexion, Twacha, Netra, Rom, Nakha, Danta, Auostha are of Snidha Guna in quality. These persons Swar is of best quality. Mutra and Purisha are also of Snigdha Guna quality. These people are economically rich and are from the elite class of the society. It is not only that they are happier, delicate both in physical and mental way and have tendency of helping and have Datrutwa Guna.

Medaksaya Lakshane

In Medakshaya there is arthritis and pain is like the breaking bone. Joints are felt relaxed and slacken off. Person have complaints related to eyes. Body becomes lean and weak. Waist and buttocks are emaciated and felt dull. (Swapane Katyaha)

Harita says in Medakshaya there is weakness, somnolence, stupor and comatose conditions, dryness all over the body, bodyache, dyspnea, cough, dyspepsia, anorexia, slowness in the physical and mental activities and dryness along with tremors.

Medovruddhi Lakshane

- 1) Snigadhagata – skin all over the body becomes oily

- 2) Udarparshvavruddhi – Udar,Parshva, buttocks,breasts become overgrown and become pendulous
- 3) Shwas- by exertion person become dyspnic
- 4) Kasa- frequent coughing and cough reflex
- 5) Daurgandhyam- sweat has bad smell

Viddha Lakshane

By Vedhan and injury to the Medovaha Strotas following symptoms and signs are seen

- 1) Swedagaman- excessive sweating
- 2) Snigadhagata – skin all over the body becomes oily
- 3) Talushosha- dryness of the mouth
- 4) Shotha – edema all over the body
- 5) Stualya- obesity
- 6) Pipasa- excessive thirst

Medovaha Strodusti Reasons

- 1) Non exercise
- 2) Sleep during day time
- 3) Excess intake of oily and fatty substances in the diet
- 4) Drinking of alcoholic drinks

Medodushti Lakshane

By Medodushti we found symptoms and signs as Mansadushti and also of Medodusti. Diseases caused by the vitiation of Mamsa are Graniloma ,myoma,piles,Galashaluk (uvilitis), Galshundika (tonsillitis),sloughing of flesh, Alaji (boils), goiter,cervical adenitis and inflammation of epiglottis.

In Medodusti we found Austoninditiya – Vyadhi and premonitory signs and symptoms of Prameha (obstinate urinary disorder including diabetes mellitus) and Prameha Vyadhi itself as follows

A) Nindaniya Purusha- From the standpoint of physical constitution the following are the eight types of undesirable persons

- 1) Atideergha
- 2) Atirhasva
- 3) Atiloma

- 4) Aloma
- 5) Atikrishna
- 6) Atigaur
- 7) Atisthula
- 8) Atikrusha

B) Prameha Purvarupani

The prodromal features are those, which appear before the onset of the disease, that is before the involvement of the specific Dosh. The clinical features manifested incompletely due to the pathogenic process being minimal should be taken as the specific prodromal features of the disease as Jatilibhavam kesheshu ,Madhurya masasya ,Karpadayo suptatadaahi, Mukha taalu kantha shosha etc.

C) Prameha

Meda vitiation is common and dominant Dusya in the pathogenesis of Madhumeha .Kapha and Meda have close resemblance in regard to functions as well as qualitative parameters get vitiated more or less by same etiological factors.

Vagbhata mentioned in Ashtanga Sangraha that along with Prameha Purvarupa excessive Meda can cause diseases of Slesma, Rakta and Mamsa.

Thus from above description it is clear that vitiated Meda plays vital role in

the progress of pathogenesis .It is necessary to occur vitiation of Meda in the precipitation of Madhumeha. So this deranged Meda produces signs and symptoms. These are described as Medo Dosh.

Excessive appetite and thirst because of the increased digestive power and Vata vitiation. Thus in Madhumeha pathogenesis Meda plays leading role.

Symptoms Of Prameha are as follows

- 1) General Features of Prameha
 - a) Urine Characteristics : Prabhutamutrata ,Avilamutrata ,Picchila Mutrata
 - b) Associated signs and symptoms: Sahaja Pramehi ,Apathyanimittaja
- 2) Premonitory features of Prameha
- 3) Specific symptomatology of Madhumeha : All Prameha may terminate into Madhumeha.
 - a) Urine Characteristics:urine Kashaya and Madhura taste, Pandu in colour and Ruksha quality.
 - b) Associated Symptomatology:.,Sharira Madhurya ,psychological features

D) Atistaulya

Person having pendulous appearance of Sphika , Udara and Stana due to excess deposition of Meda along with Mamsa Dhatu and also having an abnormal distribution of Meda with reduced zeal towards life is called "Atisthula".It can be defined as "a person who due to extensive growth of fat and flesh is unable to work and disfigured with pendulous buttocks, belly and chest is called Atisthula and the condition is termed as Ati Sthaulya".

The Pratyatma Lakshana of Sthaulya has been enlisted by Charaka. Charaka has described 8 specific symptoms which are as follows:

1. Aayushohraso
2. Javoprodha
3. Kricchavyavayat
4. Daurbalya
5. Daurghandhayam
6. Svedabadha
7. Kshuditmatram
8. Atipipasa

Whereas other Acharyas have defined number of symptoms and signs of Atisthualya .

E) Atiswed- excessive sweating

F) Granthivruddhi- enlargement of glands

G) Galaganda –enlargement of thyroid gland

H) Arbud- excessive growth of tissue

I) Medojoausthaprakopa- Medodusti

Chikitsa Of Medodusti

Treatment of diseases caused by the vitiation of Medodhatu is described in the 21st chapter of Charak Sutrasthan.

Both the types exceedingly corpulent as well as exceedingly emaciated persons suffer from some diseases are to be treated by sliming and nourishing therapies respectively. Heavy and non nourishing diet is prescribed for sliming in the case of the over corpulent .Light and nourishing diet for the nourishment of the slim.

For reducing over corpulence the following are the prescriptions par excellence :

- 1) Diet and drinks that alleviate Vata and Kapha which can reduce fat

- 2) Enema with drugs that are sharp ,ununctuous and hot
- 3) Unction with ununctuous drugs
- 4) Intake of Guduchi , Musta ,Haritaki ,Bibhitaka and Amalaki
- 5) Administration of Takrarishta
- 6) Administration of honey
- 7) Intake of Vidang ,Nagara ,Yavaksara ,powder of black iron along with honey and powder of Yava and Amalaki
- 8) Administration of Bilvapanchamula
- 9) Administration of Shilajatu
- 10) Administration of the juice of Agnimanth .
- 11) Intake of Prasatika , Priyangu , SSyamaka , Yavaka , Yava ,Jurnahva, Kodrava , Cakramudgaka, seeds of Adhaki , along with Patola ,& Amlaki as food followed by honey water.
- 12) Alcoholic preparations that help that reduce fat, muscle & Kapha may be used as post prandial drinks.

The above are to be prescribed in proper dosage for the reduction of corpulence. One desirous of reducing over corpulence should indulge more and more in vigil, sexual act, physical and mental exercises.

Diagnosis of the Metabolic Syndrome

ATP III Criteria (three or more of the following)

1. Abdominal obesity: waist circumference > 102 cm in men and > 88 cm in women
2. Hypertriglyceridemia e" 150 mg/dl
3. Low HDL cholesterol < 40 mg/dl in men and < 50 mg/dl in women.
4. High blood pressure e" 130/85 mmHg
5. High fasting glucose e" 110 mg/dl

WHO Criteria

1. High blood Pressure e" 160/90 mmHg
2. Hyperlipidemia: triglyceride concentration e" 150 mg/dl and or HDL cholesterol < 35 mg/dl in men and < 39 mg/dl
3. Central Obesity: Waist-to-hip ratio of > 0.90 in men or > 0,85 in women and/or BMI > 30kg/m²

4. Microalbuminuria : urinary excretion rate e" 20 µg/min or an albumin - to-creatinine ratio e" 20 mg/g

Medodusti lakshane

When Meda is vitiated symptoms are seen likely as vitiation of Msansadhatu along with premonitory symptoms of Prameha (symptoms of prediabetes), symptoms of Prameha itself and Atisthulata, polyphagia ,polyurea and difficulty in sex indulgence are also found.

Conclusion

From all the above discussion it clearly shows that the diagnostic criteria given for metabolic syndrome is nothing but the symptoms and signs of Medodusti. Hence it can be concluded that metabolic syndrome and also Medodusti can be identified at the earliest for prevention for further diseases as mentioned earlier and can easily be cured by the way of Ayurveda.

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Review :

Article On Study Of Three Doshas Through Nadi Pariksha (radial Pulse Examination) In The Patients Treated By Panchakarma

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ABSTRACT :

Since ancient era we examine Doshas, Swastha and Dushtanadi with the help of Nadipariksha. In Panchakarma Chikitsa such examinations are very important for identification of stages of doshas before, during & after the treatment and for advice the Vamanadi Karma to the patient. The aim is to study the effect of Panchakarma on doshas through Nadiparikshan (Radial Pulse Examination). Objectives are assessment of Dushtadosha in the Nadi and Samadosha in the Swasthanadi by manual method, assessment of Doshaprabhuta in the Nadi by Naditarangini instrument. Materials used are classical literatures regarding manual Nadiparikshan and Naditarangini instrument (patent by Mr. Aniruddha Joshi). Observations - literature regarding Nadidhamanivichar, Shodhandravayavichar, Nadiparikshan and Naditarangini instrument. Conclusion - We can definitely examine Dushtanadi changing to Swasthanadi to assess the effect of Panchakarma with manual Nadipariksha and the Doshaprabhuta in the Nadi (radial pulse) before, during and after Panchakarma by Naditarangini instrument (Patent no. WO2009019720 A2).

Keywords : Panchakarma, Dushtanadi, Swasthanadi, Manual Nadiparikshan, Naditarangini instrument.

INTRODUCTION :

Nadiparikshan is one of the difficult examination in Ayurveda and very few vaidyas do the nadiparikshan in their practice.

First of all Nadiparikshan is mentioned by Yogishwar Mahesh & Yogis of Yoga Sampradaya had presented this in front of the world.

As mentioned in Yoga Ratnakar Vaidya should do Ashtavidh pariksha of Atura which are NADI, MUTRA, MALA, JIVHA, SHABDAM, SPARSHADRUSHTI AND AKRUTI.

(YOGA RATNAKARA PURVA 1/2) 1

In Nadipariksha with the help of Aatmatatwa, Twagindrya & Manawa receive the knowledge. Therefore for understanding Nadipratyakshapramanis useful. Yatharthaanubhuti of Spandawhich we receive from Nadi is the part of Examination of Nadi. (CHARAK SAMHITA) 2.

AIM :

To study the effect of Panchakarma on doshas in the Nadi(Radial pulse) by Nadiparikshan.

OBJECTIVES :

- Assessment of Dushtadoshathrough Dushtanadiby manual method.
- Assessment of Samadoshathrough Swasthanadiby manual method.
- Assessment of Prabhutadoshathrough Nadiparikshanby Naditaranginiinstrument.

MATERIALS AND METHODS :

- LitertureofNadi-Dhamanivichar will be studied from SushrutSamhita.
- LitertureofShodhanDravya&Dhamanivicharwill be studied from CharakSamhita.
- Litertureof literatureof manual Nadiparikshanwill be studiedfrom Yogratanakaraand Kanad.
- Detailed study of Naditarangini instrument will be studied of instrument patent by Mr.Anirudh Joshi (Patent no. WO2009019720 A2)

Observations :

A. In literature search regarding Nadi-Dhamanivicharin SushrutaSamhitawe got following observations.

Vata, Pitta, and Kaphaare the constituents of the Rakta. And Raktasancharanis takes place in Dhamani. (SUSHRUT.SHARIR. 7/16) 3.

Sushrut has mentioned Gatiof Vata, Pitta, Kaphais with Rakta.Raktadosh does the Poshanof Sharirshleshmavarga, Pittavarga,Vatavargasare present in Raktaand Raktawhich comes from Dhamanicontains Vata, Pittaand Kapha.(SUSHRUT SAMHITA) 4.

Nadi is Dhamani,Sira. Nadi in which Spandaand Dhamantakes place. We can differentiate Doshavasthaclearin this Nadibecause of Vyana, rasa Raktapravahantakes place and because of this Pravahanmany types of Gatiestakes place in the Nadi. (SUSHRUT SAMHITA) 4.

B. In literature search regarding Shodhandravyaand Dhamanivicharin CharakSamhitawe got following observations.

Charakacharyamentioned that drugs which are having Ushna, Tikshna, Vyavai, Vikasi properties (Shodhanadravyas) with the help of their Prabhavthey goes in Hrudhaya,then enter in Dhamanies in all over the body and goes in Sukshmastrotas.With the help of their Ushnataliquefies Doshasamuhain the body. (CHARAK KALPASTHAN 1/5) 5.

C. In literature search regarding manual Nadiparikshanin textsKanad andYogratanakar following are the observations.

As mentioned in Nadividnyanam,when Nadiis Rogamuktait feels clear in two rhythms. It is Nirmalbecause Prakrutavasthaof Doshas. Nadi of Vata,Pitta, Kapha feels at Prakrutstahana,

Prakrutgati. It is not Chanchalor not Manda. This are all are Shubhaand PrakrutLakshanasof Nadi.(NADI VIDYANAM - KANAD) 6.

In Nadivigyanthe Lakshanasof Vikrutnadiis also mentioned. Nadi which flows with the Raktapurnatvam, the Spandaof Nadiis feel like Tantunadi which does not feels at Prakrutsthana, Nadiwith more speed, Nadiwith Prakupitvatadilakshanas, Nadiwhich is Kathinnadi which is too Manda, which feels sticky, Nadiin which we feel Gatikautilyathis are all the Lakshanasof Vikrutnadi.(NADI VIDYANAM - KANAD) 6.

In Yoga ratnakar it is mentioned that vaidya should examineVatapittadidoshas, Manda, Madhyam, and Tikshnagatiand Gatiof Tridoshasby puttinghis three fingers (index, middle, ring)on Nadi.By examine Nadiwe can enlighten Vata, Pitta, Kapha, Dwandwaj, Sannipatikdoshasand Sadhyaasadhyatvaof Rogas. (YOGRATNAKAR PURVAKHANDA 6/7) 7.

Yogratnakar mentioned that under the first, the index finger (Tarjani) Vatanadioccurs, while Pittaoccurs under the middle finger (Madhyama) and Kapha ultimately shows below the ring finger (Anamika). The wise person should always know these basic characteristics of Nadi. For doing Nadiparikshawe should put our three fingers (index, middle and ring). Below the Angushtamulaof right hand in males and below left hand in female.Index finger (Tarjani) should be kept near Angushtamula, where we can observeVatadosha. Near index finger middle finger (Madhyama) should be kept, Where we can observe Pittadosha& Ring finger (Anamika) should be kept near to Madhyama, Where we can observe the Kaphadosha.(YOGRATNAKAR 1/13) 8.

D. In literature search of Naditaranginiinstrument in research paper we got following observations.

The present application discloses the procedure for obtaining complete spectrum of the Nadi pulses, as a time series and capable of detecting themajor types and the subtypes of the Nadi pulses. The device involves three diaphragm elements equipped with strain gauge, three transmitters cum amplifiers, and a digitizer for quantifying analog signal. The system acquires the data with 12-bit accuracy with practically no electronic and/or external interfering noise. The pertaining proofs are given which clearly shows the capability of delivering the accurate spectrums, with repeatability of the pulses from the invented system. Nadi-Nidan is a specialty of 'Vaidyas' and hence the present system would enable the diagnosis accurately, quantitatively and independent of any human errors. 9.

DISCUSSION :

- According to Acharyasushruta –
- I. Vata, Pitta, and Kapha are the constituents of the Rakta.Raktasancharan takes place in Dhamani.
- II. Nadi is Dhamani,Sira. Nadi in which Spandaand Dhamantakes place we can differentiate Doshavastha clearly.

- In CharakSamhita it is mentioned that -
- i. Drugs which are having Ushna, Tikshna, Vyavai, Vikasi properties (Shodhanadravyas) with the help of their Prabhav goes in Hrudhaya and with the help of Prabhavthey enter in Dhamanies in all over the body.
- As per Maharshikanad -
- i) SwasthanadiLakshanas - Suvyakta, Nirmalatva, Na atichanchal, Na atimanda, Swasthan.
- ii) DushtanadiLakshanas- Raktavamati, sukshmatvam, swasthansyavimokshanam, chanchalyam, doshapurnatvam, naatikathin, naatichanchal, sthaimitya, gatikautilya.
- The Naditarangini instrument discloses the procedure for obtaining complete spectrum of the Nadi(pulses), as a time series and capable of detecting themajor types and the subtypes of the Nadi pulses.

CONCLUSION :

We can probablyassesDushtanadichanging to Swasthanadiby effect of Panchakarmawith manual Nadipariksha.By Naditaranginiinstrument we can probablyassess the DoshaPrabhutain the Nadi(radial pulse) before,during and after Panchakarma.

VOCUBALARY :

Doshas : three bodily humours that makes up ones constitution.

Swasthanadi : healthy pulse

Dushtanadi : unhealthy pilse

Nadipariksha : pulse examination

Panchakarma : five folds of ayurvedic treatment

Vamanadikarma : emesis and other procedures in panchakarma

Dushtadosha : unhealthy bodily humours

Prabhutadosha : dominating bodily humours

Nadi : pulse

Samadosha : bodily humours in equal quantity

Doshaprabhuta : domination of bodily humours

Nadidhamanivichar : view on pulse and artery

Shodhandravya and dhamanivichar : view on purification drugs and artery

Yoga sampradaya : community that follows yoga

Vaidya :ayurvedic physician

Ashtavidhpariksha : eight types of examination

Atur : patient

Nadi : pulse

Mala : stool

Mutra : urine

Jiva : tongue

Shabda : speech

Sparsha : palpitation

Druk : site

Akruti : body proportion

Atmatatva : soul

Twagindriya : skin

Mana : mind

Ytharthaanubhuti : knowledge of present things

Spanda :palpitation of pulse

Vata : wind (one type of three humours)

Pitta : bilious humour

Kapha : humour which relates to mucus, lubrication

Rakta / raktadosha : blood

Raktasanchanran : blood circulation

Gati : motion

Poshan : nutrition

Sharir : body

Shleshmavarga : humour which relates to mucus

Pitta varga : bilious humour

Vatavarga : wind (one type of three humours)

Sira : nerve

Dhaman :flow

Doshaavastha : condition of bodily humours

Vyana : one type of vatadosha
Rasa raktappravahan : circulation of body fluids and blood
Pravahan : circulation
Ushna : hot
Tikshna : sharp / acidic
Vyavayi : decomposing
Vikasi : blowing
Prabhava : special effect
Hrudaya : heart
Sukshmastrotas : minute strata
Ushnata : hotness
Doshasamuha : group of bodily humours
Rogamukta : disease free
Nirmal : pure
Prakrutavastha : normal stage
Prakrutasthana : normal site
Prakrutagati : normal motion
Chanchal : hyper active
Manda : slow
Shubha : welfare
Prakrutlakshanas : normal symptoms
Vikrutnadi : abnormal pulse
Raktapurnatvam : filled of blood
Tantunadi : thin pulse
Kathinnadi : hard pulse
Gatikautilya : false motion
Madhyam : medium
Tikshnagati : sharp motion
Dwandaja : double / two
Sannipatikdoshas : combination of all bodily humours
Sadhyaasadhyatva : curable or non curable

Rogas : diseases

Vatanadi : pulse of vata (wind) humour

Nidan : diagnosis

Raktasancharan : blood circulation

Suvyaktam : easily palpable

Nirmalatvam : without any impurity

Na atichanchal : normally active

Na atimanda : not too slow

Swasthana : own site

Swasthanasyavimokshanam : away from own site

Doshapurnatvam : fully filled by bodily humours (doshas)

Na atikathina : not too hard

Na atichanchal : not too active

Sthaimitya : rigidity

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Review :**Criticism of *Shukra Dhatu* as a *Pranayatana***

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Abstract :

Prana is considered as a type of vayu as well as a vital life force of body. There is mention of ten pranayatana (seats of prana in body). The list is inclusive of 2 dhatu. Seven Dhatu are for the dharana (structural & functional maintenance) of human body. Consideration of dhatu as a pranayatana underlines importance of the same. In last decades WHO has made changes in definition of normal sperm count & have declined the figure from 70 millions upto 15 millions only. Male infertility is certainly going to be burning issue in coming decades. Ayurveda is a wholistic medicine where the whole body is consideration for diagnostic as well as therapeutics. Shukra is one of pranayatana (seats of prana in body). Shukravaha srotas has moolasthanas as vrushana & shefa & stana. Concept of shukra dhatu is obviously inclusive of male hormones which are related with manas. In today's era there are stress & endocrine disorders have become a burning issue. Ayurvedic concepts of Shukra & prana are relevant in same sense. Shukra dhatu is not only vital and last derivative in dhatu parampara but also a pranayatana. Hence concept of shukra sharir/dushti needs interpretations with prana principle too. Same is explored using literary review as a method.

Keywords : Shukra Dhatu, Pranayatana, Prana.

Reviewed reports:

Prana: In ayurvedic & allied literature term 'Prana' is used mainly as a life principle as well as prana vayu a type amongst five types of vayu. Nirukti of term 'prana' is Praniti anen iti. The word is made with upasarga of Pra applied to dhatu Ana. Meaning of Ana dhatu is to breath, to respire, to move, to go 1 . Meaning of upsarga Pra is before, forward, in front of, forth, filling, fulfilling. (As adjective): excessively, very, much. 2 Meaning of Prana : Breath in, inhale, the breath of life, breath, respiration, spirit, vitality, life 3. Prana principle is one on which phenomenon of life depends.

Prana Vayu: There are five types of vata dosha based on sthana & karma. Prana is first & foremost among them. Prana vayu is situated at moordha, ura, kantha, jivha, aasya, nasika, and is responsible for stheevan, kshavathu, udgara, shwasa, aahar karma. (Cha. Chi.28/6) The main seat of prana is moordha i.e. shira. (Ah.Su. 12/4) According to western medicine brain has got centers for controlling human activities. Boodhi principle resides in shira.

Bhelaacharya mentions of Shirastha hrudaya as a place of manas. Hypothalamus & Pituitary gland those have control on rest of endocrine glands are too resided in same. The phenomenon of 'life' depends on 'prana' itself. (Charaka/chikitsa/28)

Pranayatana : Pranayatana are the sites where prana principle resides in particular organs/tissues. Chakrapani states that 'Aayatanani, tadupaghate pranopaghatat, tannashat cha pranashadityarthah na pranasya jivitakhyasya sharirendriyasattvaatmasamyogarupasya shankhadaya eva paramashayah, tasya krutnashariradyashrayatvat'. According to Chakrapani upaghata or nasha of sharir will happen if upaghata or nasha of pranayatana sites happens. (Cha. Su.29/1) Charaka has quoted shankha dwaya (both temporal regions), trimarma viz. shira (head), hrudaya (heart), basti (Kidney/ Urinary Bladder), kantha (throat) , rakta , shukra ojas & guda (anus) as pranayatana in sootrasthana (cha. Su. 29/1). In sharir sthana he has quoted nabhi & mamsa instead of both of shankha (cha. Sha. 7/9). In Ashtang samgraha Jivha bandhana is considered as pranayatana instead of mamsa.

In all of these references there are only two dhatus i.e. Shukra & Rakta are mentioned as pranayatana. The paper deals with criticism of shukra dhatu as pranayatana.

Shukra dhatu - Basic considerations:

Shukra dhatu is quite inclusive term. Concept of dosha, dhatu, mala is not only structural but also a functional concept. Concept of reproduction is applicable from cellular level of organization upto the level of the being. This is why Shukra dhatu becomes an inclusive term. Its interrelation with prana is discussed here.

Apara shukra is located in whole body. Shukra dhara kala is located all over the body. (Su. Sha.) Garbhotpadana is karma of Para shukra. (Ash. Hru. Sutra)

According to ksheera dadhi nyaya this is last among seven subsequent dhatu parampara. Its utpatti is from majja dhatu. (Cha. Chi.15) Vyutpatti of Sanskrit word shukra reveals the meaning as, 'white pure excellent dhatu of all.' Physiological pramana of shukra dhatu is half anjali.

Shukra dhatu Srotas :

Vrushana & Shefa are considered as moolasthanana of shukravaha srotas according to Charakacharya. (Cha. Vi. 5) Vrushana & Stana are considered as moolasthanana of shukravaha srotas according to Sushrutacharya. (Su.Sha.) Vrushana is an important organ responsible for utpatti whereas sheaf is for discharge. In sharir perspective, Vrushana is derived from prasada parts of mamsa dhatu, rakta dhatu, kapha & meda dhatu. (ashtang samgraha sharir 5/52). Stana is a rudimentary organ in males. Some scholars quote seminal fluid as stanya in purusha. Stanya is upadhatu of rasa dhatu. Here mention of stana simply implies intimate relation of shukra & rasa dhatu as both are snigdha, shukla, prawahi, drava, sheeta dhatu. Klaibya is considered as rasa pradoshaja as well as shukra pradoshaja vyadhi by Charaka.

Shukra dhatu Karma : Garbhotpadana is karma of para shukra. However Sushrutacharya enlists karma as dhairyaa, chyawana, preeti, deha bala, harsha, beejartha. (Su. Su. 14/5) Among all of these six karma, dhairyaa comes as very first of them. Samhita grantha are to be

learned by a reading methodology of classics. Kramamahatmya i.e. considering first entity as important among them is one of such methods. Dhairya is karma of pruthwi mahabhoot & hence parthiwatwa of shukra needs to be understood. Chyawana stands for vega & release of shukra. Preeti & harsha are attraction & aanand respectively. Dehabala is a karma of shukra & thus underlines need of holistic approach in understanding of shukra dhatu.

Shukra dhatu & Prana :

Oja is derivative of shukra. Seat of oja is ura / hrudaya or chest region/heart. Bala is important karma of oja. Bala is a pareekshya bhava to be examined in context with vyayama shakti.(Cha. Vi.3) Ojas is less structural & more functional term & includes body elements responsible for better cardiopulmonary efficacy. Bala is nothing but ;prakrut shleshma' says charaka. Whereas bala is nothing but ojas says Sushruta. In a commentary on a verse quoting rasaja bhava (among six of garbhotatti bahava in Sushruta Samhita, Dalhana comments as 'Prananubandhana is balanubandha'. Dehabala (which is karma of shukra dhatu) depends on prana & is nothing but cardiopulmonary efficacy. Also Brahmacharya (Celibacy), is the one among the trayopastambhas (three pillars) those maintains Bala varna & upachaya in the body.(Cha. Su. 11) This is why there is mention of pratiloma kshaya in ayurveda. In samprapti of kshata ksheena there is mention of subsequent loss of veerya , varna , bala, ruchi & finally agni.(Cha. Chi. 11). In Ayurvedic classics Kasa & yakshma chikitsa there is mention of many kalpa which are having shukravardhaka effects. Amruta prasha & sarpi guda kalpa mentioned in charaka samhita kshataksheena chikitsa are mentioned to have 'yoni dosha', 'ksheena/nashta shukra' & 'putrada effect' as their phalashrooti.(Cha. Chi. 11) Thus a physiological tringle of interrelationship of 'Shukra-prana-ojas' is explored.

Shukra as a adharaniya vega is again not considered along with vaat,vit & mootra vega but its enlisted after chhardi vega at the end of shloka in Ashtang Hrudaya roganutpadaneeya adhyaya. (Ah. Su. 4) This surely emplies that shukra dhatu is needed to be considered not only with apana vayu but also with prana. This is simply because that the phenomenon of chyawana & harsha is a psychosomatic phenomenon, as it involves manas. Shefa is a karmendriya. Prana vayu karma includes dharana of hrudaya & indriya. This is why kalpa like kalyanaka ghruta, Mahapaishachika ghruta, brahmi ghruta from unmad chapter have phalashrooti like vandhyatwa, aretasa,pumsavana.(Ah. Uttar. 6). Very interestingly four among six karmas of shukra dhatu namely dhairya preeti harsha chyawana are psychosomatic, whereas only two beejartham & dehabalam are sharir karma. Thus a physiological triangle of interrelationship of 'Shukra-prana-Manas' is explored.

Shukra/Prana & some relevant modern concepts :

Semen contains spermatozoa & seminal fluid (fluid from seminal vesicle, bulbourethral glands & prostatic secretions). 60% of Seminal fluid is from seminal vesicles & include ascorbic acid, fibrinogen, flavin, fructose, inositol, pepsinogen, phosphorycholine, prostaglandin, citrate & citric acid. 30% of fluid is from prostatic secretions. It includes acid phospatase, cholesterol, clotting enzymes, fibronilysin, glucose, phospholipids, plasmogen activator, seminine,

spermine, bicarbonate, calcium, citrate, sodium, zinc. Whereas remaining 10% constitutes sperms only.

Spermatogenesis is a four step process monitored by hormones. Stage of proliferation is monitored by Follicle stimulating hormone & Growth hormone, Stage of growth is monitored by testosterone & Growth hormone, Stage of maturation is monitored by testosterone & Growth hormone, Stage of transformation is monitored by testosterone & estrogen.

Testosterone & Dihydrotestosterone are responsible for Sperm production, seminal vesical physiology,

DHT i.e. Dihydrotestosterone are responsible for prostate development, beard growth, intra uterine differentiation of sex organs.

5androstenediol, Androstenedione & Estradiol have role in development of skeleton, abdominal visceral fat, muscle mass, Erythropoiesis & have actions on liver & Larynx.

Conclusion :

Shukra dhatu is not only vital and last derivative in dhatu parampara but also a pranayata. Hence concept of shukra sharir/dushti needs interpretations with prana principle too.

While considering cardiopulmonary conditions for pathophysiology & medicine purpose, their interlinking with shukra dhatu is inevitable one.

Ayurvedic sharir is a holistic concept & can better be understood in retrospective method.

Concept of shukra sharir is not only related with semen/ sperms. Shukra sharir includes relevant hormones.

Shukra is a pranayata & hence it's related with cardiopulmonary efficacy.

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Philosophy :

Shrimad Bhagwadgeeta

As I understood

God Guides for Good Life - Synopsis of Shrimad Bhagwadgeeta

Prof. Dr. Pandurang Hari Kulkarni

Prolouge : Bhagwan Shrikrishna preached to Arjun on the battlefield of life. Many aspects are covered for living purposeful and peaceful life. Upliftment of our spiritual level and ultimately lead towards final abode of God and to have real salvation from the cycle of birth and rebirth.

Human life starts in the womb of mother. Body of foetus grows day by day. May some obstructions occur. Foetal environment changes are responsible. Body grows continuously after birth. External environment affects on body and mind of a child. To face any difficulty is inbuilt in a child. However any time child should be ready to overcome obstacles. In adulthood, boldness, bravery, wisdom are with person. Some times person became fearful and unable to face the situation. Spouse, friend, teacher, guru, god is necessary to give support in such conditions. Utmost support gets from teachings of Bhagwadgeeta. It is needed that every foetus must hear Geeta teachings every day till last breath. It is further required Geeta should be read and understood every day. May be one page or paragraph every day. Geeta is observed in our mind and useful for balancing mind and help to keep every body on proper path on any difficult situation.

During course of life balance between body and mind needed to be maintained. It is a balance on thin rope. It may be day or night, every person have to fight, perform our assigned duties every now and then. Embrace whatever is coming towards you. If life is a stage we have to perform our act at its best. If life is a battlefield, boxing ring, we have to defend ourselves from the attack. If life is a farm we have to plough it properly at proper time and care should be taken. Attacks may be Royal, Natural calamities or from our foes, it should be defended, should be dealt wisely. Later on we continue our routine daily work.

Path of life is very uneven. we may come across with people who are harrasing us or anti propaganda, ignore it. Do not get disturbed. Relax. If you are in Service Industry, Business, Farming or Teaching or any branch of Defence Services, one needed to be careful for self and for family members, our community. Do not get depressed. Avoid depression of other people. Forget whatever happened so far. Enjoy, many occasions, celebrate and continue your work. Hear, Read and try to understand Geeta. Explain to others in very lucid language. Try to live at least one teaching of Bhagwadgeeta.

Translation - Adhyay/Chapter - 1

Shloka 1 to 20 : Pandav and Kaurav are fighting with each other, Blind Emperor Dhritarashtra

was in the palace and enquired with Sanjay, who was having powerful divine sight and can see/understand distant objects. Dharmakshetra is battlefield.

Bhishmacharya was senior most and respected warrior from Kaurava side, he blown his conch shell. Other warriors follow it. That was custom to start any battle with conch blowing. People from Kaurava side turned fearful after hearing roaring of conch. When one sees evil omens it indicates mental weakness and instability. In the moments of great sorrow we are tempted to adopt the way of renunciation.

Shloka 21 to 27 : Arjun was standing in the chariot and Bhagwan Shrikrishna was at driver's seat. Arjun surveys two armies and saw all are either our relatives or from friend circle. He turned depressed with anguish, with heavy hearts.

Shloka 28 to 47 : Body of Arjun turned flaccid, mind filled with fear. He went into depression. Restless Arjun said, "I do not want the kingdom. I do not wish to kill my kinmen. Though these persons turned and became my foes, why I should fight with these people. Arjun became more restless and sat in very sad mood. In the state of gloom, dejection melancholy, low spirits, blues, anguish. The three worlds mean earth, heaven and atmosphere (Antariksha). Brahmavidya is the science of absolute. Yogashastra is scripture of yoga. Divine principle is very close to us. The episode of depression occurs in the life of a person. This is darkness of soul. It leads to progress in spiritual life. Eternal questions are 'why I am here? What is the purpose of life?' (This Chapter is known as depressed/sad Devotee - Arjun Vishad Yoga).

(Note : Chapter 2 is published in January-April 2015 Issue No. 121 of Deerghayu International)

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