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International Ayurveda Research Day 2014





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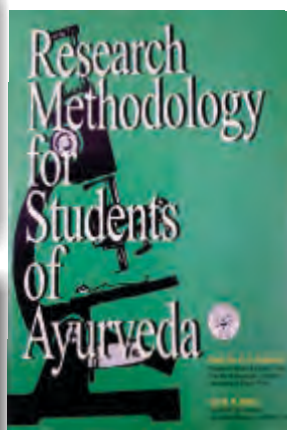


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Namaste,

Today, our founder Prof. Dr. P. H. Kulkarni enters 80th year.

This conference is a tribute to his contribution to Ayurveda research worldwide for last 50 years.

Today, we also celebrate 3 decades of Ph. D. (Ayurveda), started in Pune University and three decades of our peer reviewed journal 'Deerghayu International'. This is an interdisciplinary Ayurveda research conference that will have around 250 delegates, out of which, around 100 will present their research work through presentations/ posters and papers published in special issue of our peer reviewed journal 'Deerghayu International'.

We, the organizers of Ayurveda Research Day thank and congratulate you for being an active part of this unique initiative. We wish this one-of-its-kind gathering of Ayurveda researchers would bring forth many new aspects and avenues for the future. We feel proud to have created such exclusive platform dedicated to the essence, image, interpretation and inclusiveness of Ayurveda Research.

Kindest regards,

Dr. Atul Rakshe

Executive President



International Ayurveda Research Day, Pune 9 March 2014

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Case Study

Ayurvedic approach in treatment of Fournier's Gangrene with case presentation

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ABSTRACT -

Fournier gangrene is a type of necrotizing infection or gangrene usually affecting the perineum. In the majority of cases Fournier gangrene is a mixed infection caused by both aerobic and anaerobic bacteria. Death can result from Fournier gangrene. & in Ayurveda it can be co-related with Dust Vranamah. Acharya sushurta had exhaustively studied the subject of wound management & explained wound management in shashti upkrama to treat vrana. The wound healing is natural phenomena unless the wound is healthy and clean when it gets infected it may lead to life threatening condition like sepsis and etc. such a rare and life threatening condition of Fournier's Gangrene treated With the help of some of measures out of shashtiupakram, we have treated/ cured a case of Fournier's Gangrene, 55 years/M in Shalyatantra Department of Loknete Rajarambapu Patil Ayurvedic Medical College, Hospital, Post Gradutae Institute & Research Center, Urun Islampur.

KEYWORDS-Fournier's Gangrene, Dust Vrana, Vranadhawan, Vranalepan, Vranadhoopan.

INTRODUCTION -

Fournier's gangrene (FG) is a rare, rapidly progressive, fulminant form of necrotizing fasciitis of the genital, perianal and perineal regions, which may extend up to the abdominal wall between the fascial planes. It is secondary to polymicrobial infection by aerobic and anaerobic bacteria with a synergistic action. The cause of infection is identifiable in 95% of cases, mainly arising from anorectal, genito-urinary and cutaneous sources. Predisposing factors such as diabetes and Immunosuppression lead to vascular disease and suppressed immunity that increase susceptibility to polymicrobial infection. Diagnosis is based on clinical signs and physical examination. Radiological methods may help to delineate the extent of the disease but false negatives may happen.

Fortunately, it is a rare condition, with a reported incidence of 1.6/100,000 males with peak incidence in the 5th and 6th decades. However, the incidence is rising, most likely due to an increase in the mean age of the population, as well as increased numbers of immunosuppressive therapy. Early diagnosis, aggressive resuscitation of the patient, administration of good medicaments and aggressive radical surgical debridement(s), are the key of successful treatment.

Clinical features : -

1. The clinical features of Fournier's gangrene include sudden pain in the scrotum, prostration, pallor, and pyrexia. At first only the scrotum is involved, but if unchecked, the cellulitis spreads until the entire scrotal coverings slough, leaving the testes exposed but healthy, it is most common feature.
2. The presentation may also be insidious as opposed to the classical sudden onset presentation. One overwhelming feature of the presentation is the strong "repulsive, fetid odour" that is associated with the condition
3. Patients can present with varying signs and symptoms including fever greater than 38°C, scrotal swelling and erythema, purulence or wound discharge, crepitation, or fluctulance
4. Crepitus of the inflamed tissue is a common feature of the disease due to the presence of gas forming organisms. As the subcutaneous inflammation worsens, necrotic patches start appearing over the overlying skin and progress to extensive necrosis
5. The spread of infection is along the facial planes and is usually limited by the attachment of the Colles' fascia in the perineum. Infection can spread to involve the scrotum, penis, and can spread up the anterior abdominal wall, up to the clavicle.

Such necrotizing infection or gangrene external sources which caused by the can be correlated with DushtaVrana in Ayurveda.

DushtaVrana -

तत्रतिसंवृतोऽतिविवृतोऽतिकठिनोऽतिमृदुः

उत्सन्नोऽवसन्नोऽतिशीतोऽत्युष्णः.....

..... दीर्घकालानुबन्धी चेति दुष्टव्रणलिङ्गानि। - सु. सू. २२/७

An excessively narrow or wide mouth, excessively indurated or soft ulcers, excessively elevated or depressed, very cold or very hot, having one of these colours black, red, fierce looking vessels, ligaments etc. associated with putrefying pus, having an unpleasant appearance and with severe pain, having a burning sensation.

पूतिः पूयातिदुष्टासक् स्त्राव्युत्सङ्गी चिरस्थितिः।

दुष्टो व्रणोऽतिगन्धादिः शुद्धलिङ्गविपर्ययः।। मा. नि. ४२/७

DushtaVrana is associated with the discharge of putrefying pus and sloughing muscles, vessels, ligament etc. It is excessively indurated, elevated with excessive discharge of vitiated doshas, foul smelling according to severity of vitiation of doshas.

MATERIALS AND METHODS -

1. triphala kwath - For wound cleaning.

2. Panchaguna tail for Vranalepan- It will be applied locally on wound, the GMP certified

market sample taken

3. Vranadhoopan-

वातात्मकानुग्रजान्सास्त्रावानपिचव्रणान् ।

सक्षौमयवसर्पिर्भिः धूपनाडुगैश्चधूपयत् ।। सु. चि. १/८०

The vrana with severe pain and discharge should be exposed to dhoopan with dhoopandravya (medicines) such as **Ral, Guggul, Karanj, Goghrit, Haridra** . It is nothing but the fumigation of ulcer with fumes produced by heating medicinal powders. These are easily available everywhere in India and are within approach of rich as well as poor.

Case Study : A Fournier's Gangrene

Patient Name :XXX, 55years/M

Address : narsinhpur, sangli.

Occupation : Farmer

Monthly income: 10,000/-

Date of 1st visit : 26/11/2013

Date of Recovery : 20 /01/2014

Duration of treatment: 55 days

Chief Complaints : Duration

1. Suddenly developed swelling over both scrotal region daysh.
2. Fever
3. Severe Pain

} since 02

History of Present illness :

1. Apparently allright before 02 days
2. Suddenly develop pain and inflammation over both scrotal region
3. Associated symptom- fever and drowsiness (lethargy)
4. Within one / two days , extensive gangrene of the scrotal skin occurs resulting in sloughing of the scrotal skin exposing both testicles. So patient get admitted in Shalyatantra Department of Loknete Rajarambapu Patil Ayurvedic Medical College, Hospital, Post Gradutae Institute & Research Center, Urun Islampur for further management.

Past History

No H/O Systemic HT, DM, TB, Asthma or any other major illness.

No H/O any type of allergy.

No H/O Hydrocele , Hernia or any other pathology related to inguino- scrotal region.

General Examination:

G.C.Moderate, febrile

Pulse-80/min

BP- 130/80 mm of Hg

Cardiovascular System: S1, S2 Normal

Central Nervous System: Conscious, Well oriented

Respiratory System: Chest clear on both sides

R/R- 18/min

Digestive System: Regular bowel habits

Local examination: Both testis exposed with slough present.

Vrana Examination :

As per trividhpariksha :

1)DarshanPariksha (Inspection) :

- 1.Site: Bilateral scrotal region & Penis(in some extend)
- 2.Size and Shape: Length: 10cm, Breadth: 8cm
- 3.Colour: Blackish due to Necrosed skin over scrotum
- 4.Edges: oedematous, Blackish
- 5.Base: Leathery Sloughy, non-healing, pale yellow coloured
- 6.Discharge: Muco purulent
- 7.Surrounding skin: Inflamed

2)SparshanPariksha (Palpation):

- 1.Edges (Margins): Indurated, Oedematous, Blackish
- 2.Local Temperature: Raised
- 3.Tenderness: +++
- 4.Inflammation: Present
- 5.Odour: foul smell
- 6.Regional Lymph Node: Anterior Inguinal Lymph Node palpable.

3) PrashnaPariksha (Question):

1. Pain: Cyclical or persistence
2. Burnning sensation: present

Laboratory Investigation:

Hb : **7.9gm %**

BSL(R) : 75.08 mg/dl

TLC : 18800/cu.mm

DLC : P-**86%**, B-1%, E-2%, L:15%, M: 2%

HIV I & II test : Negative

HBsAg test : Non-reactive

Serum Creatinine : 1.28 mg/dl

ESR : 23mm/hr

BT : 3.30 min

CT : 6.10 min

Urine - Routine: normal study.

Causes :

1. ?Unhygienic condition leads to infective foccus
2. Anemia - Nutritional deficiency : Vitamin deficiency
: Zinc deficiency
3. Obliterative arteritis of the arterioles due to infection.

Diagnosis: Fournier's Gangrene.

Treatment and observations

Treatment	Observations
<p>On 1st Day:1) Debridement - Clean & uninfected without much loss of tissue removing devitalised tissue</p> <p>2)Vranadhawan:With triphala kwath</p> <p>3) Vranadhoopan:Ral, Guggul, Nimbpatra, Haridra, Karanjbeej, Vidang, Sarshap</p> <p>4) Local application : Panchaguna tail.</p> <p>Oral Medication :</p> <ol style="list-style-type: none"> 1. Tab. Gandhak rasayan 2tab TDS (each tab. 250mg) for 15 days. 2. Tab. Amrita guggulu 1 TDS (each tab. 250mg) for 30 days. 3. Tab. Kaishoreguggulu 1TDS (each tab. 250mg) for 15 days. 4. YashadBhasm 250 mg 2times/day for 30 days with Madhu (Honey) 5. Shatavarichurn ,Ashwagandha churn each1gm with a cup of Milk in morning for 30 days. <p>From 2nd to 5th Day :</p> <p>Slough removed</p> <p>Vranadhawan</p> <p>Vranadhoopan</p> <p>Panchaguna tail for LA and dressing done.</p>	<p>Slough : +++</p> <p>Foul smell : present</p> <p>Inflammation: +++</p> <p>Edges : Induration +++</p> <p>Tenderness : +++</p> <p>Base: Leathery Sloughy, non-healing, pale yellow coloured</p> <p>Discharge: Muco- Purulent</p> <p>Anterior inguinal Lymph Nodes : Palpables</p> <p>Slough : ++</p> <p>Foul smell : present</p> <p>Inflammation: ++</p> <p>Edges : Induration ++</p> <p>Tenderness : ++</p> <p>Base: Sloughy, non-healing, pale yellow coloured</p> <p>Discharge: Pus</p> <p>Anterior Inguinal Lymph Nodes: Palpable</p>
<p>On 6th to 30th days</p> <p>Vranadhawan + Vranadhoopan +</p>	<p>Slough : ++</p> <p>Foul smell : +</p>

Vranalepan For Vranalepan- combination of YastimadhuGhrit + Kumariswaras+ Madhu is applied	Inflammation: Absent Edges : Soft Tenderness : ++ Base: Sloughy, non-healing, pale yellow coloured Discharge : pale yellow, serous Anterior Inguinal Lymph Nodes : Palpable
On 30th to 35th Day :	Slough : Absent Foul smell : No smell Edges : Slopping Tenderness : + Base: Production of healthy granulation tissue Discharge: Slight serum Anterior Inguinal Lymph Nodes : Not Palpable
Onwards 35 days(upto wound healing) Vranadhavan + Vranalepan & dressing done decreased	No Slough No Foul smell Edges : SoftSurrounding skin colour : Greyish to Normal Tenderness : Gradually & finally absent Base: Production of healthy granulation tissue, depth gradually decreased and finally it was healed completely Discharge : Absent

RESULT :

The Fournier's Gangrene was cured completely.

DISCUSSION :

Discussion on Concept- The ShashtiUpakarmas(described by Sushruta) are divided broadly in 3 major groups- a) VranaShodhan b) VranaRopan c) Vaikritapaham.

Out of these three types , first upakarma i.e. shodhan is must for management of DushtaVrana. The present study is also attempt in the same direction.

Discussion on Topic selected- Without getting the wound debridement ,it is not possible to get granulation tissue developed. So such a drug is selected which has following properties-

1. Debride the slough
2. Increase granulation & thus enhance wound healing
3. Easily available
4. Cheap & affordable

So triphala kwath & panchaguna tail is selected for application in DushtaVrana.

Panchaguna tail is not mentioned in any Ancient Samhitas, but it is useful in healing of DushtaVrana, hence I selected this medicine.

Discussion on Mode of Action - In this case, due to following actions of various drugs mentioned above gangrene healed completely.

- **Triphala kwath** : Vranashodhan, Vranaropan, Krimighan.

It is well known and clinically tested as for above its properties.

- **VranaLepan -**

The PanchagunaTail which is mentioned by Acharya Yadavji Trikamji in Siddha Yoga Sangraha is selected for the study. The ingredients have VranaShodhana, VranaRopana, VedanaSthapana, and Rakthastambhana properties.

- **Vranadhoopan(Fumigation)** : Antiseptic, Decreases pain, secretion & foul smell.
- **Bandage-** After cleaning & application of medicine, thick Kavalika (Cotton pad) is kept over the wound & proper bandaging is done.
- **Tab.gandhak rasayan** contains Gandhak which acts as antiseptic.
- **Tab. Amrutadi guggul ingredients in it help for wound healing**
- **YashadBhasm** : It is kashay& shit, so helps in healing process, anti-inflammatory in action.
- **Shatavari&Ashwagandha** acts as Balya, rasayan helps in ulcer healing, Vednasthapak (analgesic).

Discussion on Achievement of Therapy -

Most necessary steps in wound management is debridement & removing slough from wound. the triphala kwath & panchaguna tail are effective.

In Modern medicine wound cleaning is done by Hydrogen peroxide, Povidineiodine, Normal Saline. The slough is removed by mechanical debridement method. Mechanical debridement is useful for slough which is not firmly adherent with the floor. Only the loose slough can get separated. This hinders healing. Here triphala kwath & panchaguna tail are working effectively.

The vrana dhupana therapy also plays role in reducing the foul smell and discharge from it.

The internal medicine also contribute to maintain the harmony of dosha which decreases the healing period.

CONCLUSION :

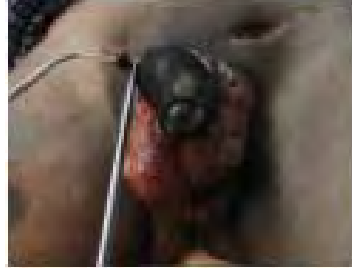
- Results of Vranadhawan, dhoopan & locally applied drugs are very encouraging.
- Medicines used in the above case are cheap, effective and easily available.
- No need of analgesics & antibiotics.
- No need of skin grafting.

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- Sarth Bhavprakash
- Dhanvantari Nighantu
- Kaidev Nighantu (pathyaapathya Vibodhak)



(a) Before Treatment



(b) Debridement



(c) panchagun tail L.A



(d) Vranadhoopan



(e) During dressing



(j) On 35th day of treatment



(k) After treatment

Research : Clinical

“ TO STUDY THE EFFICACY OF AMLAKYADI CHURNA IN THE MANAGEMENT OF GARBHINI PANDU ”

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ABSTRACT :

Female is the centre of human life circle. Ancient ethics like Manusmriti has evaluated female by giving prior position in human life. Prajadhari (giving birth) is the most important role. For those women needs healthy conditions during pregnancy. In this physiological process mother experiences certain problems like pandu (Anemia).If it is neglected it may lead to complicate events of pregnancy, labour & purperum etc. There is marked demand of extra iron during pregnancy especially in the second half. Even an adequate diet cannot provide the extra demand of iron. The fall in the hemoglobin concentration during pregnancy is due to combined effect of haemodilution and negative iron balance. The anemia is normocytic and normochromic type. pandu by amlakyadi choornam consists of Amlaki, Yashtimadhu & Swarna makshika. Amalaki is Panchrasatmka (devoid of lavana) and pitta shamak.It consists of vit-C which helps in good absorption of loha.Yashtimadhu is Madhurarasa rasayana, balya, ruchikara.Swarna makshika is raktaprasadak, pitta shamak etc. Tamra has got krimighna property. Mudhu is yogavali, srothoshodana, antiemetic. The pregnant woman should be treated with the use of soft, sweet, cold, pleasing & gentral drugs, dietetics and behavior.Pregnant women were selected at O.P.D.level. 3grms of Amlakyadi churna was given with anupan of madhu (honey) twice daily after light food in the morning & evening for 90 days.It is economical, safe & effective and devoid complications. Total 30 patients were treated, parameters are assessed monthly once throughout the period of 90 days. At the same time clinical symptoms like anorexia, poor appetite, Shotha (inflammation), malabandhata (constipation), Pallor etc and Hb% also observed. Weight gain observed in all the patients and also Hb% is improved in all the cases. There were no side effects noticed while usage.Well tolerated by the pregnant woman without any complications.

Key Words: Pandu roga, Garbhini,Amlakyadi churna and women.

INTRODUCTION :

Acharya Harita has described eight Garbhopadravas in Harita Samhita and included Vivarnatva, which appears to be pallor that accompanies anemia. In the context of Raktagulma, Acharya Kashyapa has described furnished similar description during with Garbhavastha (pregnancy) which refres to Garbhavasthajanya Pandu.The growing fetus is

nourished by the Rasa of mother. So, mother needs a better and more nutritious diet. Acharya Kashyapa has described that Ahara Rasa of the mother is divided into three parts. First part nourishes her own body, second part nourishes the Garbha (fetus) and the third part is utilized for the nourishment of Stana (breast). Acharya Charaka has also described "Pandutva" (pallor) as a Rasapradoshaja Vikara. It is clear that Garbhavasthajanya Pandu occurs due to the fetal demands and improper functioning of the Rasadhatu leading to malnourishment of the body. Maternal diet and maternal tissues store supply nutrients to the fetus. No mother will be able to meet the extra demand of nutrients by diet alone. This leads to certain pathological conditions in a pregnant woman. Among these, iron deficiency anemia is very common. When the hemoglobin percentage (Hb%) decreases to less than 11 g/dl in 1st trimester and 3rd trimester or less than 10.5 g/dl in 2nd trimester in peripheral blood the condition is called anemia (Center for Disease Control and Prevention). In Asia and South Africa about 20% pregnant females die due to iron deficiency anemia. In India anemia in pregnancy is the most common high risk pregnancy having incidence of 40-80%. In western countries, this incidence is 10-20%.

The analysis of ingredients of Amalkyadi churna which are known correctors of metabolism, enhancers of bioavailability of nutrients, provides iron supplementation hence weight and Hb are increased.

Materials and Methods

Drugs :

1. Amlaki (Phyllanthus emblica Linn.)
2. Yashtimadhu (Glycyrrhiza glabra)
3. Swarna makshika (Copper pyrite CuFeS_2).

Anupana - Madhu.

Preparation of drug :- Fruits of Amlaki & roots of Yashtimadhu were taken in fine powder form. Swarna makshika bhasma prepared according to process mentioned in Rasataranghini. Yashtimadhu + amalki & Swarna bhasma were taken in the ratio of 3:1. 3gms. of this drug (Amalakyadi churna) was given with Madhu twice daily (orally) after light food intake in the morning & evening for 90 days continuously.

Patients : 30 patients randomly selected who were suffering from Garbhini Pandu from OPD of Stri Roga and Prasuti Tantra Department

Criteria for selection of patients :

Inclusion criteria

1. Patients with clinical signs and symptoms of Pandu (anemia) described in Ayurvedic classics and modern medicine.
2. Patients of 2nd or 3rd trimester of pregnancy

3. Patients having Hb% equal to or less than 10 gm% but more than 6.5 gm%

4. Microcytic hypochromic appearance of red blood cell in peripheral smear.

Exclusion criteria

1. Patients suffering from pregnancy related Complications such as PIH, hyperemesis gravidarum, preeclampsia etc.
2. 1st trimester of pregnancy
3. Patients having high risk pregnancy

Parameters : 1) Objective: Hb% & weight

2) Subjective: Anorexia, nausea, vomiting, heartburn, constipation, shotha, pallor etc.

Follow up : 1) Assessment after every month

2) Signs & Symptoms recorded before & after Treatment

Observations and results :

Results based on Hb% before & after treatment :

Hemoglobin HB%	No. of Cases	Before treatment (average)	After treatment (average)
7.0gm to 8.0gm	9	6.8gms%	11.05 gms %
8.0gm to 9.0gm	15	8.45gms%	12.06 gms%
9.0gm to 10.0gm	6	9.25gms%	12.51 gms%

Results based on Signs & Symptoms :

Signs & Symptoms	Before treatment	Complete	After Treatment Partial	No results
Anorexia	52% (15)	72.33% (11)	21% (3)	6.66% (1)
Poor appetite	69% (21)	61.90% (13)	28.57% (6)	9.52% (2)
Heart burn	61% (18)	61.11% (12)	27.77% (4)	11.11% (2)
Constipation	51% (15)	60% (9)	26.66% (4)	13.33% (2)
Shotha	29% (9)	55.55% (5)	22.22% (2)	22.22% (2)
General weakness	60% (18)	83.33% (15)	11.11% (2)	5.55% (1)
Pallor (conjunctiva, tongue, nails)	73.33% (22)	81.81% (18)	9.09% (2)	9.09% (2)

Total results of 30 patients :

No. of cases	Complete relief	Partial relief	No relief
30	70.34%	19.49%	10.16%

DISCUSSION

The pregnant women requires additional amount of energy and nutrition as she has to supply the fetus which may lead to nutritional deficiency disorders like Pandu, etc. the present study is aimed at finding as safe effective, management and to get Garbhini into normal from Pandu by Amalakyadi churna. Vitamin C which is present in Amalaki will enhance the absorption of loha (in swarna makshika). In total the drug is tridoshashamaka, rasayana (health tonic), balya (energy), ruchikara, jeevaniya, and brimhaniya (improves blood & gives energy) in nature. The anupana madhu also having iron content, yogavahi in nature, with this nature of drug in all 30pts. Weight gain observed and also Hb% is improved.

CONCLUSION

The compound preparation of Amalakyadi churnam contains Amalaki, Yashtimadhu & Swarna makshika. Madhu as anupana is very much useful in the management of Garbhini pandu. The drug is well tolerated by the pregnant women without any complications.

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Research : Clinical

ROLE OF NIDANPARIVARJAN IN MADHUMEHA (DAIBETIS MELLITUS)

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ABSTRACT

The burden of diabetic is increasing globally particularly in developing countries. The causes are complex but are in large part due to defective diet and sedentary lifestyle, obesity and physical inactivity. A large number of cases of diabetes and its complications can be prevented by a healthy diet, regular physical activity, maintaining a normal body weight, means by doing NIDANPARIVARJANA only. Ayurveda says sugar levels can be kept under control with the help of proper medication and a strict diet-lifestyle plan.

This research work was planned to evaluate the extra effects of Ayurvedic *Ahara* and *Vihara* in the management of *Madhumeha* and to project them socially. A total of 60 patients were selected and divided into two groups. Group A was treated with Ayurvedic *Ahara* and *Vihara* with *Eladichurna* and group B was treated with only *Diet control* and *Nidanparivarjan* for 90 days. The study showed highly significant results in most of the parameters in both the groups. However, further trials with increased number of patients are needed to support the current observations.

INTRODUCTION

The disease *Madhumeha* is a growing global problem. About 347 million people worldwide have diabetes mellitus. and Diabetic predicted to become the seventh leading cause of death in world by 2030. In 2004, an estimated 3-4 million people died from consequences of high fasting B.SL. 80% of diabetic deaths occur in low and middle income countries. Diabetic is leading cause for burden amputation and kidney failure.

Diabetic has emerged as a major health care problem in India also. According to diabetic Atlas published by the international diabetic federation (IDF) there were an estimated 40 million persons are with diabetic in India in 2007 and this no predicted to rise to almost to 70 million people by 2025. It is stated that in 1995 no of diabetic was 19.4 million in India which rise to 30 million by the year of 2002. The international diabetic federation estimates the total number of people in India with diabetes to be at around 50.8 million in 2010 rising to 87.0 million by 2038.

The burden of diabetic is increasing globally particularly in developing countries. The causes are complex but are in large part due to defective diet and sedentary life style, obesity and

physical inactivity. The complications associated with the disease are common and are often disabling and every system in body may be involved since the disease occurs in all age groups and as there is no cure each and every branch of professions are constantly involved in dealing with the problems of life control and cure of diabetic patient.

The ancient Ayurvedic classical texts namely the Samhitas of Charaka, Sushruta and Vagabhata and the subsequent treatises have invariably given detailed description of the disease diabetes, its causes, types, pathology, the line of treatment and management both preventive and curative.

For the last several decades, a large number of oral hypoglycemic drugs have been discovered besides the discovery of insulin, which could be administered directly to control the blood sugar level. As a matter of fact, today, control of blood sugar level in diabetes is no more a problem. But in spite of all these developments, Madhumeha continues to be a major incurable disease, millions of people dying every year due to diabetic episodes or its complications.

The problem with diabetes mellitus is that it is very difficult to diagnose in the early stages and still require having further research and proper treatment by ayurvedic medicine & diet & lifestyle hence this subject is selected for study.

AIMS and OBJECTIVES :-

AIMS:-

1. To assess the role of Nidana Parivarjana and pathyapathya in Madhumeha.
2. To study the clinicopathological effect of Eladi Churna with Nidan parivarjan in the patient of Madhumeha.

OBJECTIVES :-

1. To study whether the drug is effective in blood sugar level in patient of Madhumeha by investigations (BSL and USL).
2. To analyze the clinical data on both group (that is trial and control group).
3. To compare the study of trial group with control group.

MATERIALS AND METHODS :-

Patients

1. The outdoor patients regularly visiting to *Nidanachikitsa* department of the Institute was studied and included for data collection.
2. In this clinical trial, patients were selected by randomize single blind method and patients was observed before and after treatment.

Total numbers of patients selected for the present research study were 60 divided into two groups that are trial and control.

A.Trial Group : Patients suffering from Madhumeha treated with Eladichurna with AnupanaTanduloka (along with NidanaParivarjana).

B.Control Group : Patients suffering from Madhumeha treated with dietary control (along with NidanaParivarjana).

Duration – Patients were studied for 90 days and investigation was done before and after treatment at the interval of 0, 30, 60 and 90 days.

Investigations :

Both BSL and USL examinations were performed and compared with the normal ranges.

a. Inclusion criteria

1. Age – 35 – 60 yrs.
2. Sex – Both (F/M)
3. Patients from any economical class are selected.
4. Patients having following sign and symptoms included
 - ☐ Bahumutrata (Polyuria)
 - ☐ Mutramadhuryata (Renal glycosuria)
 - ☐ Mutravilata (Turbidity of urine)
 - ☐ Trushana (Polydipsia)
 - ☐ Tavgakandu (Intense itching)
 - ☐ Kshudhahikyata (extreme hunger)
 - ☐ Alasya
 - ☐ Karapadataladaha
 - ☐ Malavashotmba (constipation)
 - ☐ Atinidra
 - ☐ Krushata (Rapid emaciation)
 - ☐ Atisweda

b. Exclusion criteria:

1. Age – below 35 yrs and above 60 yrs is excluded.
2. Patient suffering from ARF, CRF, BPH, HIV, Tuberculosis, Tumors, Interstitial inflammation of kidney.
3. Pregnancy induced diabetes mellitus

4. Patients suffering from I.D.DIABETIS MELLITUS., Diabetes Mellitus complication like retinopathy, other neuropathy.
5. Juvenile Diabetes Mellitus, Diabetes incipidus
6. Patients suffering from congenital, chronic systemic illness.
7. Chemotherapy and radiation therapy of CA patients.

Administration of drug :

a. Eladichurna

LSÉÉÍvÉSÉÉeÉiÉÑMühÉÉmÉÉwÉÉhÉpÉâSìlÉÍqÉíÉÇcÉÔhÉíqÉÇ |
iÉhQÒûsÉeÉSÉâiÉmÉíiÉÇmÉëqÉâWûUÉâaÉWûUirÉÉvÉÑ ||
..(B.R./prameha/52)

Contains : laghuela, pashanbheda, shudhashilajit, pimpali.

All ingredients of Eladichurna were procured in a powder form from the GMP certified company. They were mixed in specified proportions to make a final Eladichurna formulation.

Dose:3 g. TDS

Anupan: Tandulodaka-50 ml

b. Tandulodaka:It was prepared as described in standard ayurvedic text “SharangadharSamhita”.

MũlhQûiÉÇiÉhQÒûsÉmÉSÉÇeÉSÉâÂmÉOûaÉÑÍhÉiÉâiÉÇmÉâiÉÇcÉÇ
pÉÉuÉlÉiÉuÉÉeÉSÉÇ aÉëÉ½ÇÇ SârÉÇxÉuÉíŞÉMüqÉixÉÑ...(Sh. S Pra.Kh.1-28)

Take 1-pala (48grms) rice grains add 8 times water in that and mix it properly with the help of hand then take only water.

For Patient Method of preparation of Tandulodaka :

1 table spoon Rice grains + 8 table spoon water mix it properly and take only water. *Materials*

Special Plan of Pathyapathya for patients of Madhumeha

Morning : 5:30-6:00 a.m.	Brahma MuhurtaJagarana(wake up before sunrise) UshahpanaShaucha Vidhi (passing urine, stool, face wash) Dantadhavanateeth cleansing)
6:00-7:00 a.m.	Vyayama(exercises) Padagamana(walking) Yoga Devaprarthana (prayer)
7:00-7:25 a.m.	Snana(bath)
7:25-7:45 a.m.	Alpahara: (light breakfast) as per Agni BalaYusha (soup) and Anna or Shakaor Phala

7:45-11:45 a.m.	Routine work
11:45-12:00 p.m.	HastapadaPrakshalana(freshen up)
Noon : 12:00 - 2:30 p.m.	Laghubhojanaas per Agni BalaAnnavaJava (barley)-Hordeumvulgare Godhuma(wheat)-TriticumsativumShalishashtika(rice) Oryzasativa Kulattha (horse gram) - DolichosbiflorusMudga(green gram) PhaseolusaureusChanaka(bengal gram) - CicerarietinumAdhaki (toordal) - Cajanuscajan Sarshapa Taila (mustard oil) BrassicajunceaSaktu(powdered pulses) Shakavarga Tiktashaka Patola (pointed gourd) - Trisanthusdioica Methika (fenugreek) Trigonellafoenum Karvellaka (bitter gourd) - Momordicacharantia Phalvarga Jambu (jamun) - Eugenia jambolana Dadima (pomegranate) - Punicagranatum Amalaki (emblicmyrobalan) - Emblicaofficinalis Kapittha (monkey fruit) - Limoniaacidissima Shuskaanna/Lajainclude Dhani (popcorn of jowar) Daliya (roasted bengal gram) Mamara (puffed rice) Maricha (Pipernigrum) Saindhava (rocksalt) Hingoo (asafoetida)
12:30 - 12:45 p.m.	UpavishanainVajrasana
Afternoon : 4:30 p.m.	Phalavarga Amalaki, Dadimaor Jambuor Yusha (steam boiled soup)
Evening : 7 : 00 p.m.	Dinner-Anna (after taking Snana) as perAgni balaAnna (LaghuKhichdi, etc.) Shaka (simple cooked vegetables) Yusha (vegetable soup) Then 100 steps Padagamanama(leisure walking)
9:30 p.m.	Prarthana(prayer)Yoga-Dhyana(meditation with relaxation)
10:00 p.m.	Nidra(bed time)
Once a week for 12 h from 6:00 a.m. to 6:00 p.m.	Apatarpana (Upvasa/fasting)and in the evening have a lightAnna (e.g., light Khichadi)

The effects of "Eladichurna" along with NIDANPARIVARJAN & DIET CONTROLE along with nidanparivarjan were assessed in regards to the clinical signs, symptoms and investigations on the basis of grading and scoring systems and overall upshaya.

Grading and Scoring :

For symptoms – Subjective parameters were considered.

For sings – Appropriate clinical parameters were considered.

Scoring :

+++	Severe
++	Moderate
+	Mild
0	Nil

Grading and Scoring of Signs and Symptoms :**a. Main symptoms****1. Prbhootamutrata :***a. Quantity of urine :*

0	1.5 to 2.5 liters
+	2.5 to 3.0 liters
++	3.0 to 3.5 liters
+++	3.5 and above.

b. Frequency of urine :

0	3-5 times/day and 1-2 times/ night
+	5-7 times/day and 1-2 times/ night
++	8-10 times/day and 3-4 times/ night
+++	10-12 times/day and 5 times/ night

2. Avila mutrata – Turbidity score (News print test)

0	Crystal clear fluid
+	Faintly cloudy or smoky or hazy with slight(barely visible turbidity)
++	Turbidity clearly present, but newsprint easily read through tube.
+++	Newsprint not easily read through tube

3. Kshudhadhikya

0	Normal (3 meals/day)
+	Slightly increased (1-2 meals) than normal
++	Moderately increased (2-3 meals) than normal
+++	Markedly increased (4-5 meals) than normal

4. Pipasaadhikya : Quantity of water intake

0	2-3 liters/ 24 hrs.
+	3-4 liters/ 24 hrs.
++	4-5 liters/ 24 hrs.
+++	More than 5 liters/ 24 hrs.

5. Karapadadaha

0	Daha absent
+	Occasional daha
++	Daha mild but continuous
+++	Daha severe and continuous

b. Associated symptoms**1. Alasya :**

0	No alasya
+	Doing work satisfactorily with initiation late in time
++	Doing work unsatisfactorily and late in time.
+++	Doing little work very slow.

2. Dourbalya :

0	Can do routine physical activities without any difficulty.
+	Can do routine physical activities with little difficulty.
++	Can do mild physical activities only
+++	Can do mild physical activities with difficulty.

3. Atisweda :

0	Normal sweating after doing normal physical activity
+	Moderate increase of sweating by doing normal physical activity
++	Excessive sweating after hard work

4. Atinidra:

0	Satisfactory, 6-7 hrs/night
+	Satisfactory, 7-9 hrs of sleep/night and day but occasional drowsiness
++	7-10 hrs of sleep /night and day and feeling of drowsiness throughout the day.
+++	8-11 hrs of sleep / night and day and feeling of drowsiness throughout the day

5. Karapadasuptata :

0	Suptata absent
+	Occasional suptata
++	Suptata mild but continuous
+++	Suptata severe and continuous

6. Malavasthambha :

0	Stool frequency normal/ once in 24 hrs.
+	Passing with straining and takes purgatives occasionally
++	Passing stool after a gap of one day, frequently take purgatives
+++	Passes stool after more than 24 hrs. gap, purgatives does not work.

7. Arochaka :

0	Equal willing towards all food substances
+	Willing towards some specific aharas
++	Willing towards only one rasa.
+++	Willing towards only most liking food

8. Urine sugar :

0	Absence of glucose in urine
+	<0.5% glucose in urine
++	0.5-1.0% glucose in urine
+++	1-2% glucose in urine
++++	More than 1-2% glucose in urine

OBSERVATIONS:-

Maximum number of patients was obtained in the age group of 35-40 years that is 31.66 %, Male patients that are 53.33 % exceeded the female patients who were 46.66 %. Maximum

number of patients were found in House wife that is 41.66 %, Majority of patients were found in lower-middle class that is 50 %, Maximum patients were found in a group having positive family history for Madhumeha that is 65 %, 56.66 % of patients were found vegetarian while 43.33 % were found to take mixed diet. Maximum patients were found in the group having habit of taking tea/coffee that is 43.33 % followed by 33.33 % in a group having the habit of chewing tobacco. Madhurahara was found in large number of patients that is 44 followed by avyayama in 40 patients. Snigdhaaharasevan was found in 38 patients. Asyasukha was found in 37 patients while dadhisevan was found in 35 patients. 32 patients were found to have vatakarahara followed by 18 patients having vatakaravihara while 9 patients were seen to have manasiknidanas.

Prabhootmutrata was found in maximum number of patients that is 54 patients while avilamutrata and pipasaadhikya was found in 45 and 44 patients respectively. 49 patients were found with a symptom of dourbalya followed by 47 patients with alasya. 43 patients were found with symptom of atisweda while 40 patients were having symptom of Karapadasupti. **The mean biochemical value of fasting blood sugar level in trial group was 165.7 % and control group was 161.2 %. Post prandial blood sugar in trial group was 228.06 % and that in control group was 191.13 %.**

RESULTS :-

For subjective parameters, the EladiChurna (along with NidanParivarjana) provided statistically highly significant ($P < 0.001$) relief in PrabhutaMutrata (quantity of urine) by 45.20 %, PrabhootMutrata (frequency of urine) by 47.72 %, Mutraavilata by 45.00 %, Kshudhadhikya by 50.00 % and Pipasaadhikya by 60.00 %, whereas the relief obtained in Karapadadaha was 12.50 % which was statistically insignificant ($P > 0.05$). And , the dietary control (along with NidanParivarjana) provided statistically highly significant ($P < 0.001$) relief in PrabhutaMutrata (quantity of urine) by 43.08 %, PrabhootMutrata (frequency of urine) by 38.88 %, Mutraavilata by 52.22 %, Kshudhadhikya by 44.57 %, Pipasaadhikya by 42.66 % and Karapadadaha 30.80 %.

There is no significant difference found at 90th day in any of the main symptoms . The p value for all the main symptoms was found to be more than 0.05, that is $p > 0.05$. Hence, the difference between trial and control group is insignificant. The only significant difference was found in Karapadadaha with $p < 0.01$.

For sings – Appropriate clinical parameters, there is a highly significant difference in the relief of Alasya ($p < 0.01$), Dourbalya ($p < 0.001$), Atinidra ($p < 0.05$), Malavashtambha ($p < 0.05$) and Arochaka ($p < 0.01$). The relief in Atisweda and karapadasuptata were found statistically insignificant with $p > 0.05$ for Atisweda and $p < 0.05$ for Karapadasuptata.

After applying unpaired t-test, highly significant difference was found in the fasting and PP blood sugar level with $p < 0.001$ in both cases. And also the significant difference was found in the fasting and PP urine sugar level with $p < 0.02$ for fasting and $p < 0.01$ for PP urine sugar level.

Conclusion :-

The specially prepared Ayurvedic diet and lifestyle plan in the present study has all the potential to be used as a standard Ayurvedic model protocol for *Madhumeha* (DM) patients. According to the effect of therapy, *EladiChurna* with Nidanparivarjan helps to reduce both the blood and urine sugar levels. It is seen to be effective in associated symptoms like Alasya, Dourbalya and Malashthambha. It is also seen to be effective in the curing of symptom Karapadadaha. EladiChurna with nidanparivarjan has seen to be an overall significant effect in the treatment of Madhumeha.

From this study, we can conclude that, EladiChurna with nidanparivarjan acts as pramehaghna, trishnaghna, deepana, pachana.

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

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

Date : 1st April 2014

P. H. Kulkarni
(Signature of publisher)

Research : Clinical

TO STUDY THE BMR IN DIFFERENT SHARIR PRAKRUTI INDIVIDUALS

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METHODOLOGY :

The study was performed under two headings :-

1) Literary : The following theoretical points were added -

- ❖ Compilation of SharirPrakruti from Ayurvedic Samhitas.
- ❖ Details about BMR as per Modern.
- ❖ Comparative study of Prakruti and BMR

2) Practical:

- ❖ Assessment of sharirprakruti of volunteers from CDAC ayusoftproforma
- ❖ Assessment of BMR of volunteers with help of standard Harris Benedict formula.
- ❖ Correlation was done with the help of collected data such as ShariraPrakruti and BMR Kcal/day through statistical analysis.

CONCLUSION :

Comparative study shows that,

1. Mean BMR was maximum in Pitta PradhanPrakruti individuals.
2. Mean BMR was minimum in VatapradhanPrakruti individuals.
3. Mean BMR levels in KaphapradhanPrakruti individuals were less than Pitta pradhanindividuas & more than Vatapradhan individuals.

Statistically this observation is not significant, may be because of the small sample size according to statistical ANOVA test.

Further research should be done with the large sample size to prove the inference statistically.

INTRODUCTION

Ayurved is an ancient science which deals with every aspect of human life. There are many scientific concepts in ayurveda which needs detailed scrutiny to assess their utility in the field of science.

Ayurveda is the science of life which not only deals with the treatment of diseases but also maintains the health in individuals is its prime goal. Therefore every research in Ayurveda gives emphasis to health prophylaxis along with treatment. According to Ayurveda Prakruti is a factor which originates in a person right from the time of conception & it determines the physical & mental attributes of man.

Prakriti, the build and constitution of the human body is a sum total of morphological, physiological and psychological traits of human beings. *Prakriti* of a man has genetic and acquired aspect, the genetic aspect depends upon *Shukra* and *Shonita*, while acquired constitution develops in relation to environmental factors like climate, season, time factor, age, race and individuals (*Pratyatmniyta*). The relation of person to any kind of physical & mental stimuli depends on him/her Prakruti. Therefore, Prakruti is analyzed based on the physical & mental characteristics of an individual.

The basal metabolic rate measures the minimum amount of energy to maintain physiological function at rest. The knowledge of this rate is important in clinical application for defining appropriate nutrition support & determining caloric needs for energy balance. Then to understand the concept of Prakruti, it is very essential to add some modern objective parameter in Ayurveda. BMR according to modern science changes person to person then this research work has been undertaken to prove whether any correlation of Prakruti and BMR.

SELECTION OF TOPIC

- According to Ayurveda, Prakruti analysis is an important concept, which describes the constituency of a person healthy or diseased.
- The Prakruti analysis is based on Shareerika & Manasikagunas.
- Today, the BMR is used as a measure of an individual's metabolism, which changes with age, weight, height, and a variety of medical conditions. A person's exercise habits may affect their BMR.
- The concept of Prakruti plays major role in this regard, Hence with an academic interest to know the possible relation of Prakruti and BMR so this topic was undertaken.

AIMS AND OBJECTIVES

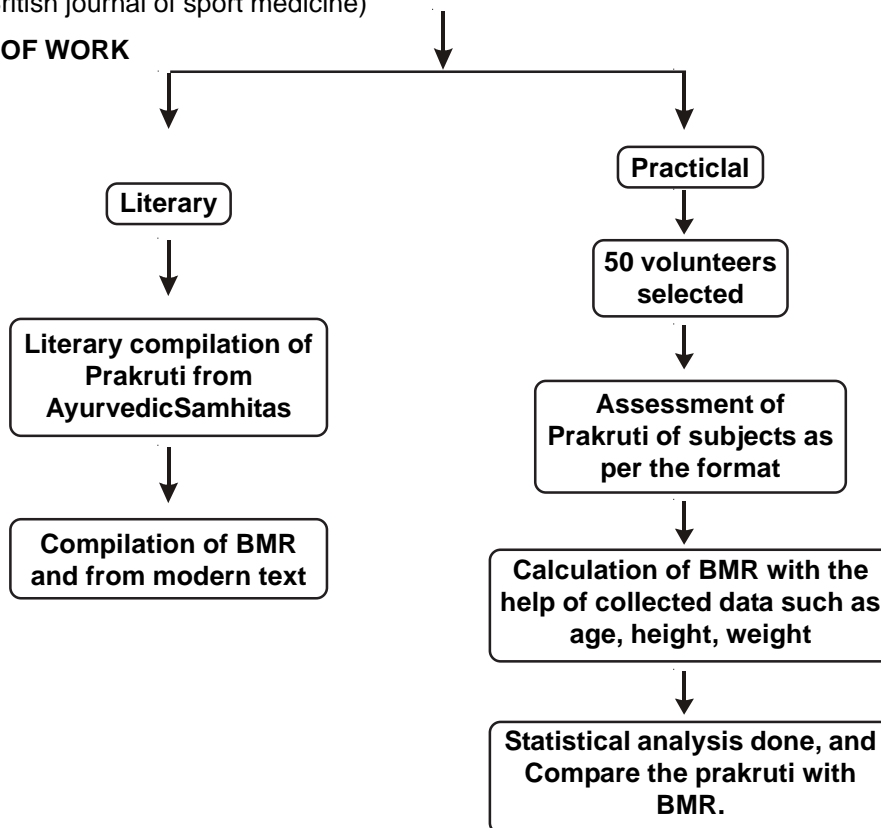
Aim :- To study the BMR in different Sharira Prakruti individuals.

Objectives:-

- The concept of Sharira Prakruti from Ayurvedic Samhitas was studied in detail and the references were compiled.
- The BMR from all modern texts was studied and references were compiled.
- The correlation between Sharira Prakruti and BMR was studied statistically.

PREVIOUS WORK DONE

1. A comparative study on Vyayam& Yoga in the management of SthoolaMadhumeha.
- Vijayalakshmi G.H. (Hasan)
2. VibhinaDehaPrakrutikevyaktiyon me Dehoshma (Body temperature) par kalatathaVayanusarVyayamakaprabhavekadhyayan.
- Andhare R.V. (Nagpur)
3. A clinical study on the effect Vyayama in Medhovridhi persons of various DehaPrakruti.
- Tejinder (New Delhi)
4. The effect of exercise & improved physical fitness on BMR.
- (British Journal Nutrition)
5. Effect of exercise on BMR & Anthropometric variables in women with Anorexia Nervosa.
- (World journal of sport science)
9. Effect of aerobic & anaerobic exercise on BMR.
- (British journal of sport medicine)

PLAN OF WORK

MATERIALS & METHODS**MATERIALS :-**

1. AyurvedicSamhitas.
2. Modern text & techniques
3. StanderedPrakrutiparikshan Pro forma by C-DAC Ayu soft (CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING - A scientific society of the ministry of communications and information technology, Government of India).
4. Standard equation for BMR calculation, according to Harris BenedictFormula, $BMR = 66.4730 + (13.7516 \times wt \text{ in kg}) + (5.0033 \times ht \text{ in cm}) - (6.7550 \times age \text{ in years})$

INCLUSION CRITERIA :-

1. 50 volunteers who were newly joined the Abhijit Dada Kadam Cricket Club B.V.D.U. Pune.
2. Age between- 10-16 yrs.
3. Only Male volunteers were selected.

EXCLUSION CRITERIA :-

1. Volunteers suffering from any major illness were excluded.
2. Female volunteers were excluded.
3. Volunteers, below 10 years or above 16 years wereExcluded.

METHODOLOGY :-

1. A 50 volunteers between the age group of 10 to 16 years were selected for the study.
2. ShariraPrakrutiparikshan of 50 volunteer was done with the help of standeredPrakrutiparikshan Pro forma by C-DAC Ayu soft
3. The BMR calculation of each volunteer was carried out with the help of standard Harris Benedict formula.
4. To avoid bias same time, Place, equipment and pattern was maintained.
5. A comparative study was done with the help of collected data such as ShariraPrakruti and BMR Kcal/day.
6. Statistical analysis was done with the help of collected data by using ANOVA TEST.

OBSERVATION**Observation table**

Sr. No.	Name of The volunteer	Pradhan Prakruti	Age (yrs)	Height (cm)	Weight (kg)	BMR (Kcal/day)
1	P. A. T.	Pitta	10	134.5	27.253	1046.5965
2	V. C. G.	Vatta	10	133	29.025	1063.42219
3	S.S. B.	Kapha	10	128	38.125	1163.58675
4	O. S. S.	Pitta	10	137	28.246	1072.76169
5	P. R. P.	Pitta	10	135.1	29.52	1080.77553
6	V. N. A.	Vata	10	132	30.25	1075.3049
7	N.M. J.	Kapha	10	127.5	40.55	1194.43288
8	A.C. M.	Kapha	10	130.2	41.07	1215.09181
9	S. H. T.	Vata	11	141	29	1096.385
10	S.G. S.	Vata	11	135	30.12	1081.77119
11	A.S. G.	Vata	11	135	31	1093.8726
12	T. J. B.	Pitta	11	150	45	1361.745
13	A. S. D.	Vata	11	134	31.451	1095.07157
14	A. R. S.	Vata	11	136	32.50	1119.503
15	V. D. K.	Kapha	11	129.3	39.75	1185.682
16	P. S. D.	Kapha	11	133.1	42.69	1245.1231
17	S. O. S.	Kapha	11	136.7	43.12	1269.04709
18	S. R. J.	Pitta	12	142	36.254	1194.44951
19	S. D. U.	Kapha	12	140.5	45.415	1312.86341
20	S. B. F.	Pitta	12	165	51.215	1515.19619
21	P. C. T.	Vata	12	158.5	71.124	1756.4573
22	D. V. F.	Pitta	12	137	38.241	1196.69894
23	S. N. J.	Vata	12	140	41.25	1253.0865
24	O. C. S.	Kapha	12	133.6	42.13	1233.168708
25	P. M. C.	Kapha	12	135.8	43.19	1258.752004

26	G. V. B.	Kapha	12	137.2	41.18	1238.115488
27	J. S. D.	Pitta	13	152.5	39.03	1278.340448
28	S. J. C.	Kapha	13	153	48.05	1404.88138
29	S. V. G.	Kapha	13	158	65.123	1664.677447
30	M. R. J.	Pitta	13	151	45.35	1357.74606
31	R. T. K.	Vata	13	148.5	46.70	1363.80322
32	R. C. P.	Kapha	13	140.5	50.13	1370.947208
33	H. K. A.	Pitta	14	153.5	49	1413.6919
34	S. A. J.	Pitta	14	151.25	47.123	1376.623397
35	S. K. K.	Vata	14	157	43.20	1351.87512
36	D. F. S.	Kapha	14	147.3	50.18	1398.90018
37	G. M. K.	Kapha	14	148.6	51.80	1427.68168
38	H.M. K.	Pitta	15	156	46.213	1381.118691
39	S. A. K.	Vata	15	163	49.186	1457.023198
40	R. P. C.	Pitta	15	160	52.10	1482.08636
41	S. D. G.	Pitta	15	158.20	52.27	1474.418132
42	V. K. V.	Vata	15	159	50.25	1451.6429
43	A. S. B.	Kapha	15	158.4	54.35	1505.02266
44	A. D. T.	Vata	15	156	52.215	1463.587036
45	A. G. G.	Vata	16	172.5	61.012	1660.423119
46	D. S. P.	Pitta	16	155	59	1545.2024
47	P. R. K.	Pitta	16	156	55.25	1498.6369
48	K. L. P.	Pitta	16	165	58.25	1584.9187
49	R. G. S.	Pitta	16	162	60.50	1600.8508
50	D. R. S.	Vata	16	162.5	49.35	1450.02196

Observation Table 2

The observations were further arranged as per Vatapradhan, Pitta pradhan, and KaphapradhanPrakruti and the values of BMR. The observations were as follows :

VataPradhanPrakruti

Sr. No.	PradhanPrakruti	BMR (kcal/day)
1	Vata	1063.42219
2	Vata	1075.3049
3	Vata	1096.385
4	Vata	1081.77119
5	Vata	1093.8726
6	Vata	1095.07157
7	Vata	1119.503
8	Vata	1756.4573
9	Vata	1253.0865
10	Vata	1363.80322
11	Vata	1351.87512
12	Vata	1457.023198
13	Vata	1451.6429
14	Vata	1463.587036
15	Vata	1660.423119
16	Vata	1450.02196

Observation table 3 :**Pitta PradhanPrakruti**

Sr.No.	PradhanPrakruti	BMR (kcal/day)
1	Pitta	1046.5965
2	Pitta	1072.76169
3	Pitta	1080.77553
4	Pitta	1361.745
5	Pitta	1194.44951
6	Pitta	1515.19619
7	Pitta	1196.69894
8	Pitta	1278.340448

9	Pitta	1357.74606
10	Pitta	1413.6919
11	Pitta	1376.623397
12	Pitta	1381.118691
13	Pitta	1482.08636
14	Pitta	1474.418132
15	Pitta	1545.2024
16	Pitta	1498.6369
17	Pitta	1584.9187
18	Pitta	1600.8508

Observation table 4:**KaphaPradhanPrakruti**

Sr. No.	PradhanPrakruti	BMR (kcal/day)
1	Kapha	1163.58675
2	Kapha	1194.43288
3	Kapha	1215.09181
4	Kapha	1185.682
5	Kapha	1245.1231
6	Kapha	1269.04709
7	Kapha	1312.86341
8	Kapha	1233.168708
9	Kapha	1258.752004
10	Kapha	1238.115488
11	Kapha	1404.88138
12	Kapha	1664.677447
13	Kapha	1370.947208
14	Kapha	1398.900188
15	Kapha	1427.68168
16	Kapha	1505.02266

STATISTICAL ANALYSIS

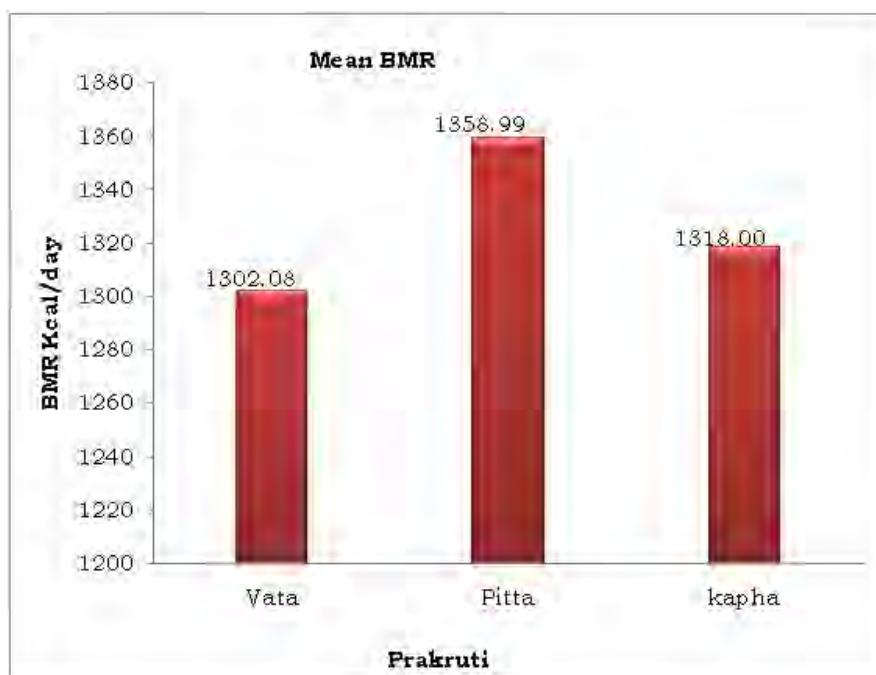
Comparison of mean BMR with respect to Vata, Pitta and Kaphapradhan Prakruti.

Observation table 5 :

Prakruti	Number of volunteers	BMR		F-value	P-value
		Mean	SD		
Vata	16	1302.08	224.60	0.44	0.644
Pitta	18	1358.99	177.77		
Kapha	16	1318.00	135.68		

Conclusion:- By using ANOVA test p-value > 0.05 therefore there is no significant difference between mean BMR in vata, pitta and kaphapradhanprakruti group.

Graph 1:



The above graph 1 shows that the difference of mean BMR between Vata, Pitta and KaphapradhanPrakruti.

DISCUSSION

Ayurveda explains all bodily actions based on the status of three Doshas i.e. Vata, Pitta and

Kapha. All the physiological processes are directly controlled by these Tridosha.

The relation of person to any kind of physical & mental stimuli depend on his/her Prakruti. These physical stimuli have impact on the basic physiological action of human body but it varies according to prakruti.

From observation it was found that, In all three types of pradhanPrakruti, i.e. in VattapradhanPrakruti mean BMR was 1302.08 Kcal/day, in Pitta pradhanPrakruti mean BMR was 1358.99 Kcal/day and in KaphapradhanPrakruti mean BMR was 1318 Kcal/day, as shown in graph number 1.

Observation and comparative study shows that the mean BMR was high in Pitta PradhanPrakruti than other two Prakruti, shown in graph number 1, but it was not proved statistically may be due to the small sample size according to statistician.

The result may be due to:

In CharakSamhita the characteristics of the DoshajaPrakruti explained in VimanSthanAdhyay 8, According to that characteristics,

1. The Gun of Pitta Prakruti:

CharakAcharya explains the gunas of Pitta prakruti in Cha.Vi. 8/97, mainly these are Usana, Tikshana, Drava. Due to that gunas the person having the following karma

UsnaGuna – Excess hunger and thirst

TikshnaGuna –

Having strong Physical strength, strong digestive power, intake of food and drink in large quantity, frequent eating habits, inability to do difficult Situations or any hard work.

Drava guna :

Excessive sweat, urine and faeces.

2. The Guna of Kapha Prakruti:

CharakAcharya explains the gunas of Kapha prakruti in Cha.Vi. 8/96, mainly these are Manda, Staimitya, Shita. Due to that gunas the person having the following karma

Mandaguna : Slow in any action, intake of food and less movement.

Staimityaguna : Slow in imitating action, getting, irritated and slowness in having diseases.

Shitaguna : Lack of intensity in hunger, thirst, heat and sweating.

3. The Vata Prakruti :

CharakAcharya explain the gunas of Vata prakruti in Cha.Vi. 8/97, mainly these are Ruksha, Laghu, Shighra. Due to that gunas the person having the following karma

Rukshaguna

vataprakruti person is slim & has a small frame of body which is krisha.

Laghuguna

Light and inconsistent gait, action, food, and movement.

Shighraguna

Due to shighragunavataprakruti person acquires diseases quickly. He is quick in initiating only action, getting irritated; the onset of any disease is also quick. Quick in favor, affection likes and dislikes quick in understanding but quick in forgetting things.

CONCLUSION

➤ Comparative study shows that,

1. Mean BMR was maximum in Pitta PradhanPrakruti individuals.
2. Mean BMR was minimum in VatapradhanPrakruti individuals.
3. Mean BMR levels in KaphapradhanPrakruti individuals were less than Pittapradhanindividuas & more than Vatapradhan individuals.

Statistically this observation is not significant, may be because of the small sample size according to statistical ANOVA test.

➤ Further research should be done with the large sample size to prove the inference statistically.

SCOPE AND LIMITATION**Scope**

- ❖ Further study can be done with large sample size.
- ❖ Separate study based on age & gender can be conducted.
- ❖ This study can be done with the help of types exercise pattern pattern (e.g.- Aerobic, Aneerobic etc.)

Limitations

- ❖ This study was limited to only 50 individuals.
- ❖ Only EkaDoshajPradhanShareerPrakruti was considered.

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1. **Ayurvediya International**

2. New Biannual Ayurveda Scientific Journal

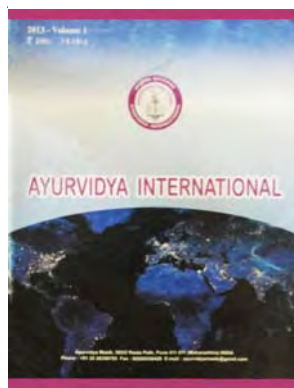
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Research : Clinical

A CLINICAL STUDY BY SAMANYA SIDDHANTA ON ASTHI KSHAYA WITH AJASTHI BHASMA

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INTRODUCTION -

Asthi is blessed with the function of sharir dharna. Any derangement{ Vriddhi or Kshaya} in it may lead to different diseases. Asthi kshaya is a condition in which there is diminution of Asthi dhatu(bone tissue). It can be compared to osteoporosis in modern science, which is increase bone fragility and susceptibility to fractures Osteoporosis is more common among the elderly due to asthi dhatu kshaya and vatprakop. Changing lifestyles, lack of exercise and poor dietary habits are the main culprits. Osteoporosis is poised to become the next huge health crisis in India after diabetes. There are 36 million Indians expected to be affected by osteoporosis in the year 2013. The number of cases have doubled in the last decade and one in three women in urban India, above the age of 45 years, has osteoporosis. Staying indoors and lack of sunlight exposure due to working in air-conditioned offices has resulted in increase in prevalence of osteoporosis even in tropical countries.

AIMS

To study the samanya siddhanta (swayonivardhana) of Sushruta.

To study the literary review of samanya siddhanta.

To study Asthi kshaya in light of Ayurveda and modern science.

OBJECTIVES

To study efficacy of Ajasthi Bhasma on Asthi kshaya.

To evaluate efficacy of panchtikta Ksheerpaka in Asthi kshaya.

To evaluate the efficacy of Ajasthi Bhasma in improvement of osteoporotic patient.

ASTHI KSHAYA

Osteoporosis is characterized by low bone mass with micro architectural deterioration of bone tissue leading to enhanced bone fragility. This increases the susceptibility to fracture. Osteoporosis is a silent disease, reflected only in a low bone density, till a fracture occurs. Imbalance between bone resorption and bone formation processes causes changes in bone mass.

3 major reasons: Failure to achieve optimal peak bone mass due to faulty lifestyle particularly calcium intake. Increase bone resorption due to estrogen deficiency, lack of calcium & Vit-D and other hormonal results. Inadequate bone formation due to complete loss of skeletal elements by excessive resorption and age related impairment of osteoblast function.

Diagnosis: Sr calcium, total alkaline phosphatase, Bone specific alk. Phosphatase, osteocalcin, carboxy terminal propeptide of type I procollagen etc.

X-rays: Singh – Miani's index

Bone mineral density by Dual energy x-ray absorptiometry(DEXA), Single energy x-ray absorptiometry(SEXA), Quantitative computerised tomography(QCT), Ultrasound and MRI.

TREATMENT

FLUORIDES

BIPHOSPHATES

CALCIUM

HRT

LIFE STYLE CHANGES

Samanya siddhanta

First Padartha mentioned by Charak (cha.su.1/44)

Chakrapani says 3 types of samanya.

Dravya Samanya

Guna Samanya

Karma Samanya

INCLUSION CRITERIA

AGE : above 60 years

SEX : Either.

Patients presenting with classical features of asthi kshaya.

EXCLUSION CRITERIA

Pathological osteoporosis and neoplasm's of bone.

Endocrinal disorders

Other serious systemic and metabolic diseases

GROUP A:

30 randomly selected patients were given, Ajasthi Bhasma 500mg BD with Panchatikta Ksheerpaka as anupana for 2 months

GROUP B:

30 randomly selected patients were given, Panchatikta Ksheerpaka 20ml BD for 2 months

SUBJECTIVE:

All investigations were carried out before and after the treatment.

Blood investigations :

Sr. Calcium

Sr. Phosphorus

Sr. Alkaline Phosphatase.

Bone mineral density(B.M.D) :

Normal -'t' score greater than -1;

Osteopenia -'t' score between -1 to -2.5;

Osteoporosis -'t' score less than or equal to -2.5

Severe osteoporosis -'t' score less than -2.5 with fracture.

AJASTHI BHASMA

Prepared like Shringa Bhasma as per "Ayurvediya Aushadhikaran" by Late Vd. Dhamankar Shastri

Samana dravya of asthi dhatu i.e. Ajasthi Bhasma on chemical analysis showed 36% calcium in the form of calcium phosphate in it. calcium phosphate is an integral part of human bones.

Also it has madhura rasa - vipaka, laghu, ruksha, sukshma, kathin guna as of asthi Panchatikta ksheerpaka as per **Arundatta** (tika on Ash.hrd 11/26-28) is a combination of snigdha and khara guna which increases asthi dhatu by khara guna and pacifies vata by snigdha guna of dugdha. Panchabhautika composition of Panchatikta ksheerpaka is similar to Asthi dhatu thus providing it nourishment by Guna Samanya Cow milk is rich natural source of calcium and Vitamin D.

The ratio of calcium to phosphorus present in cow's milk is ideal for their proper absorption and assimilation for bone formation.

NIDANA :

Katu ras

Amla rasa

Ruksha, sheeta, laghu guna

Patra shaak sevan

Chanak sevan (gram flour i.e besan)

Vishamashana

Ratrijagrana

Chinta

Krodha

Stress

Ahar rasa cannot nourish old aged becoz body becomes paripakwa due to senility Dalhan says “aprinan” is “ishat prinan” which helps in keeping person alive, not in increasing dhatus

Catabolism overpowers anabolism in old age.

Sedentary lifestyle(73.33%)

When subjected to mechanical stress bone tissue increases deposition of minerals & production of collagen fibres Lack of Vyayam as main cause of agnimandya which further results in dhatu kshaya Vegetarians get less calcium than non-veg eaters Patra shaak causes Asthi kshaya as mentioned in Bhavaprakash (shaak varga) Urban people lead a sophisticated lifestyle Modern food have fewer nutrients thus leading to improper nourishment of body.

OBSERVATIONS:

Symptoms	Group A	Group B
Asthi shool	73.33%	65%
Asthi toda	55.56%	62.22%
Sparshasahatya	81.67%	65%
Sandhi shaithilya	41.67%	56.66%
Kesh sadana	41.67%	26.66%
Danta sadan	20%	13.66%
Nakha sadan	25%	15.66%
Rukshata	21.67%	15%
Shrama	71.66%	10%
Total result	59.62%	54.67%

DISCUSSION -

Chakrapani states that vaishamya can be either vriddhi or kshaya (hraas). This vriddhi or kshaya can be either vyasta i.e. partial or samasta i.e. complete. Vyasta can be correlated to "akartsanyena" i.e. "ekadeshena" and samasta can be correlated to "prakrutya" i.e. "saakalyena". Ekadeshena can be taken as the viashamya of its quality due to partial vaishamya and sakalena can be taken as complete viashamya of quantity also. Thus, it can be taken as qualitative and quantitative vaishamya (here kshaya) of Asthi dhatu. When Ajasthi Bhasma is given along with Panchatikta Ksheerpaka, it acts by both dravya as well as guna samanya thereby increasing Asthi dhatu quantitatively (dravya) as well as qualitatively (guna). Ajasthi Bhasma when given with Panchatikta Ksheerpaka as anupana acts by Dravya as well as Guna Samanya. Ash. Sang. (Su19/14) has also advocated the use of Samana Dravya. He has also stated to use Samana Guna only if the use of Samana Dravya is not possible. Asthi kshaya can be effectively managed by giving Ajasthi Bhasma along with Panchatikta Ksheerpaka as anupana than giving Panchatikta Ksheerpaka alone. Also, it is proved that Dravya and Guna Samanya have a better result than Guna Samanya alone. This treatment improves the QUALITY OF LIFE of Asthi kshaya patients by giving them very good symptomatic relief and objective relief to some extent. However, Shodhana Chikitsa like Panchatikta Ksheer Basti should be given followed by Ajasthi Bhasma and Panchatikta Ksheerpaka anupana for more improvement in objective parameters.

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1. Title : **Ayurvedic Education Perspective & Implications**
2. Authors : Vaidya Jayant Deopujari / Vaidya Mrutyunjay Sharma
3. Publisher : Ayurveda Vyaspeeth, Nagpur.
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5. Price : Rs. 200/-
6. Pages - 130, Chapter - 9, Colour harts - 6



Note : Excellent information is compiled many other authors, articles may be refered in next edition.

Research : Clinical

STUDY THE EFFICACY OF SHATAVARI GHRIT TARPANA & ANU TAIL NASYA IN THE TREATMENT OF COMPUTER VISION SYNDROME

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INTRODUCTION

“Eyes are the windows of soul.”

- Over eighty percent of our learning is mediated through our eyes, indicating the important role our vision plays in our daily activities. Vision disturbance is a silent enemy that only appears after a long period of continued stress. Daily computer use is become a part of life. Today we have the luxuries of better software, promise of the internet with online living and tease of a paperless society. People who spend more than two hours on a computer each day will experience symptoms of CVS or Computer Vision Syndrome. The most common symptoms include headache, focusing difficulties, burning eyes, tired eyes, general eyestrain, aching eyes, dry eyes, double vision, blurred vision, light sensitivity, neck and shoulder pain. Computer vision syndrome and Ayurved

- Ayurvedic view - How daily use of computer cause the disease?

Though ayurvedic classics have no direct reference about computer vision syndrome, we can confirmed its nidana and samprapti by Trividha Hetu i.e.-1) Asatmendriarth samyoga Of Dristi-(incompatible correlation of senses with their objects) Atiyoga – long exposure to screen, Heenyoga – very small fonts , poorly illuminated room, Mithya yoga – constantly staring , not blinking ,2) Prajnaparadha- (intellectual error)Prajnaparadha- dhi, dhruti, smriti , vibhram unable to differentiate between good and bad i.e. continuous exposure to screen, though knowing its harmful effects, forget advice for evasion of unhealthy exposure.3)Parinama – (time) with respect to chakshurendriya (visual objects) Thus computer users are excessively exposed to UV rays and glare, emitted from computer monitors. These vata- pittakar nidana as having speed and are the forms of energy leading to vata – pitta pradhana tridoshagna vitiation at chakshurendriya then sthansansraya of these vitiated doshas occur in bahya and second patal of netra (consist tear film, conjunctiva, ciliary muscle of the eye) producing the CVS symptoms.

- **Aims and Objective** - To find out the efficacy of Shatavari Ghrith Tarpana & Anu tail nasya on computer vision syndrome and To compare the efficacy of Shatavari Ghrith Tarpana , Anu tail nasya and CMC eye drops on computer vision syndrome.
- **Materials and methods** - For this study Shatavari Ghrith ,Anu tail & CMC drops were

taken from GMP approved pharmacy (company)

- **Selection of Patients** - A randomized open labelled, controlled, comparative study was conducted in 60 patients of computer vision syndrome of OPD of shalakyatantra dept. of LRP Ayu. Med. Coll. , Hosp, P. G. Institute and Research Centre, Islampur , Dist-Sangli , Maharashtra.
- **Inclusion criteria –**
 - Patients irrespective of age, sex, education, place of work
 - Working with computer from more than 2 years ,
 - Daily exposure to computer for more than 6 hrs.,
 - Showing more than 3 symptoms of CVS.
- **Exclusion criteria –**
 - Patients with other ocular and systemic disease
 - Working with computer from less than 2 yrs.
 - Daily exposure to computer for more than 6 hrs.
 - Showing less than 3 symptoms of CVS.
- **Study Design –** 60 patients divided into two groups
- **Group A.**
 - 30 patients - These volunteers were treated by 2 sitting of Tarpana for five days with seven days interval between two sittings. And pratimarsha nasya , two times per day i. e. in morning 8 am & in evening 6 pm for total period of 21 days
 - Tarpana – Shatavari Ghrit – 5 Days -2 sitting with interval of 7 days
 - Nasya – Anu tail
 - Dose – 2 drops per nostril
- **Group B**
 - 30 patients of CVS were treated by CMC eye drops for 21 days
 - CMC eye drop – 1 drop in both eyes 4 times a day
 - Treatment continued for 21 days for both groups
- **Study procedure -**
 - Shatavari ghrit tarpana is given at morning for 10 - 15min per day as described in classical text and also all volunteers in Gr. A was advised to perform pratimarsha nasya as per procedure mentioned in ayurvedic texts.

Advises after treatment –

- Percussion on face, forehead and Fomentation on face , forehead, Gandush with lukewarm water,Avoid exercise, excess movement, mental disturbance like anger, fear etc. Also, Volunteers should not be allowed to see bright light , take rest for one hour , not be exposed to direct air after treatment.
 - All volunteers were advised to take normal diet. Some suggestions given to patients i.e.
 - “20/20/20” rule:
 - Use Computer glasses:
 - Adjust View Size:
 - Adjust Refresh Rate:
 - Adjust Resolution:
 - Choose larger screen size:
 - Adjust brightness:
 - Take frequent screen breaks:
 - Move your computer to a darker area:
- Assessment criteria – Symptoms of CVS were graded & assessed on the basis of Pre & Post observation of subjective parameters found.

Symptoms	Absent (0)	Mild (1)	Moderate (2)	Severe (3)
I. Redness of eye	Absent	Present after 2 hrs exposure to screen	Present before 2 hrs exposure to screen	Present all the time , even without facing screen
II. Burning of Eye	Absent	Present after 2 hrs exposure to screen	Present before to 2 hrs exposure screen	Present all the time, even without facing screen
III. Itching & Dryness of eye	Absent	Present after 2 hrs exposure to screen	Present before to 2 hrs exposure screen	Present all the time, even without facing screen
IV -Eye strain	Absent	Present after 2 hrs exposure to screen	Present before 2 hrs exposure to screen	Present all the time, even without facing screen
V- Blurred Vision (distance and /or near)	Absent	Present after 2 hrs exposure to screen	Present before 2 hrs exposure to screen	Present all the time, even without facing screen

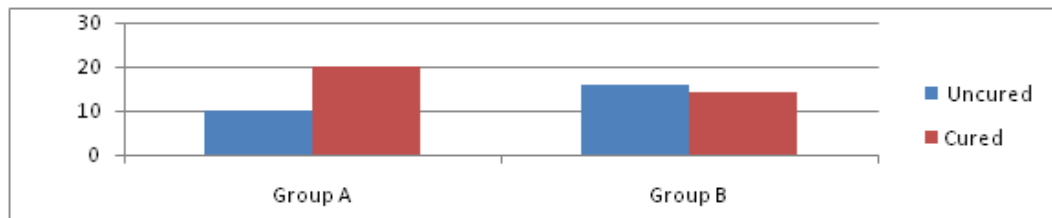
Symptoms	Absent (0)	Mild (1)	Moderate (2)	Severe (3)
VI – Difficulty in focusing	Absent	Present after 2 hrs exposure to screen	Present before 2 hrs exposure to screen	Present all the time, even without facing screen
VII -Double vision	Absent	Present after more than 2 hrs exposure to screen	Present in less than screen 2 hrs exposure to	Present all the time, even without facing screen
VIII. Headache	Absent	Slight headache, doesn't hamper his/ her daily routine	moderate – can perform household works but can't work on computer	3- Severe headache hampering his / her routine work
IX – Neck / Shoulder pain / Backache	Absent	Mild pain, doesn't hamper his/ her daily routine	Moderate - can perform household works but can't work on computer	Severe pain - hampering his / her routine work
X – Fatigue	Absent	Felt after more than 2 hrs exposure to screen	Felt in less than 2 hrs exposure to screen	Feel tiredness without doing any work

Observations

Incidence of demographic profile of CVS

Sr. No.	Findings	Predominance
1	Age	25-50 yrs
2	Sex	Male
3	Religion	Hindu
4	Socio-economic status	Middle class
5	Dietary habit	Mixed
6	Prakriti	Vata-pittaj
7	History of ophthalmic illness	No
8	Visual acuity	6/9 – 6/12
9	Work place lighting	Poor
10	Angle of gaze	Above eye level

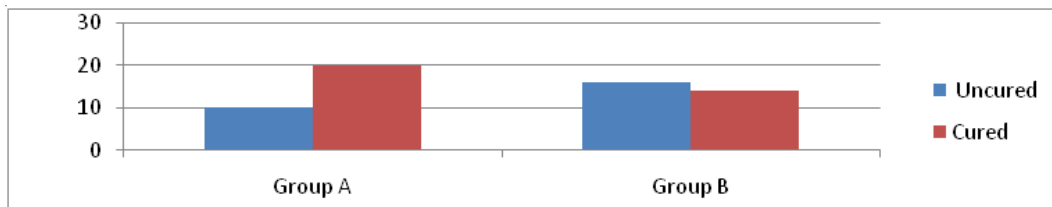
OBSERVATIONS – Redness of eye



Redness of Eye –

- observed in the all individuals of both group.
- Group A : 20 patient were Cured out of 30.
- Group B : 14 patient were Cured out of 30.
- According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Burning of Eye



Burning of Eye

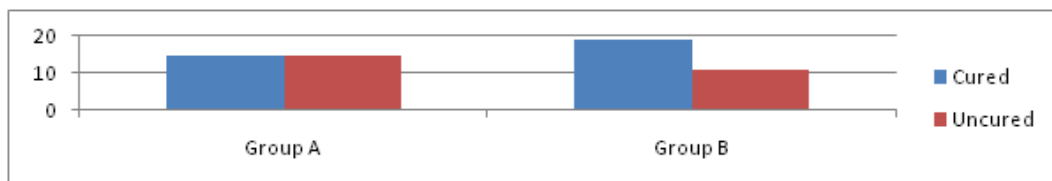
observed in the all individuals of both group.

Group A : 20 patient were Cured out of 30.

Group B : 14 patient were Cured out of 30.

According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Itching And Dryness Of Eye



Itching And Dryness Of Eye

Observed in the all individuals of both group.

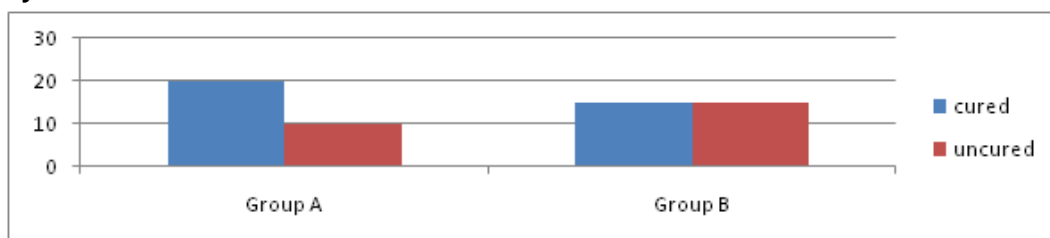
Group A : 15 patient were Cured out of 30.

Group B : 19 patient were Cured out of 30.

Equally effective

According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Eye strain –



Eye strain –

observed in the all individuals of both group.

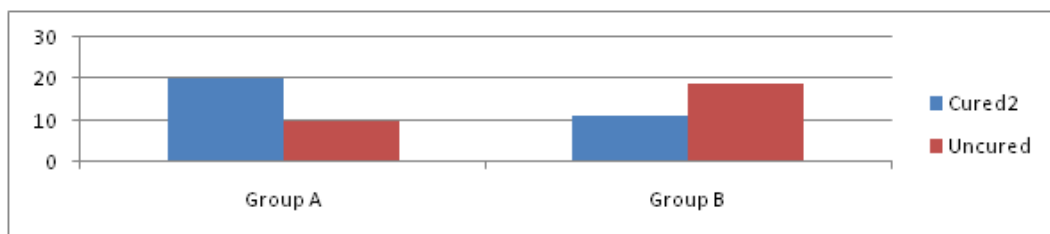
Group A : 20 patient were Cured out of 30.

Group B : 15 patient were Cured out of 30

Equally effective

According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Blurred Vision -



Blurred Vision -

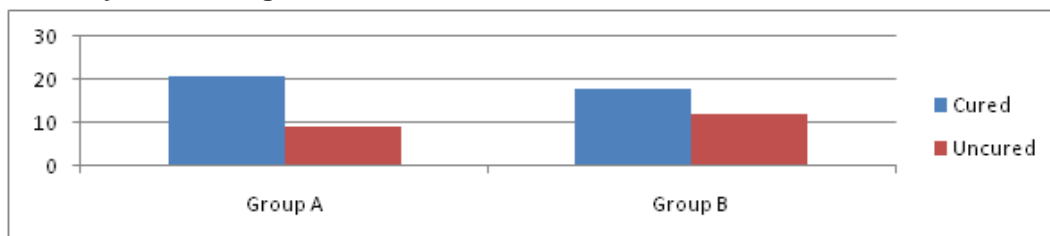
observed in the all individuals of both group.

Group A :20 patient were Cured out of 30.

Group B : 11 patient were Cured out of 30 Significant

According to χ^2 test result was significant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Difficulty in Focusing –



Difficulty in Focusing –

Observed in the all individuals of both group.

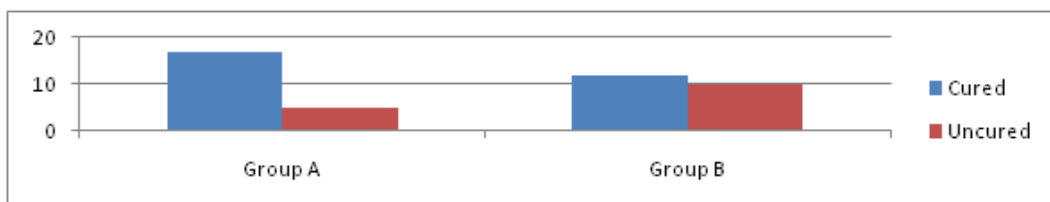
Group A : 21 patient were Cured out of 30.

Group B : 18 patient were Cured out of 30

Equally effective

According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Double Vision



Double Vision was observed in 22 individuals of both group

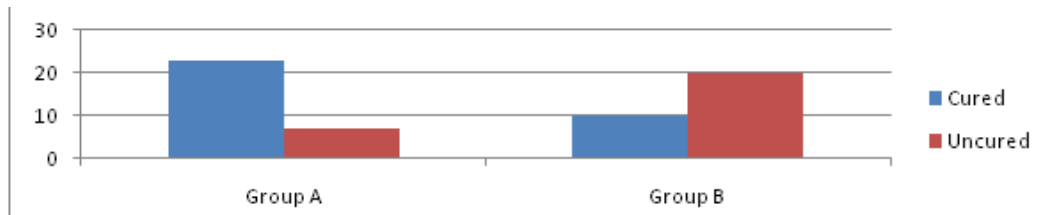
► Group A : 17 patient were Cured out of 22

Group B : 12 patient were Cured out of 22

Equally effective

► According to χ^2 test result was insignificant at level of significance of 0.05 and degree of freedom (d.f.) 1.

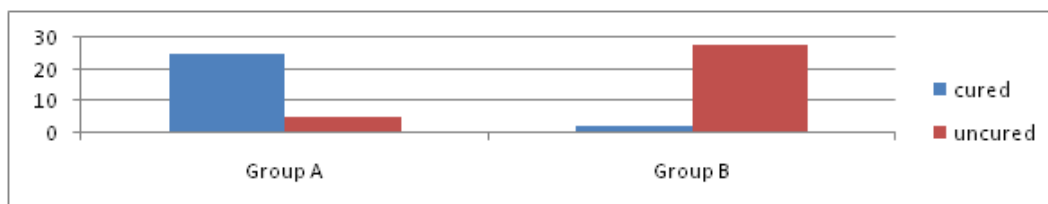
Headache



Headache

observed in the all individuals of both group.

- ▶ Group A : 23 patient were Cured out of 30.
- ▶ Group B : 10 patient were Cured out of 30.
- ▶ According to χ^2 test result was highly significant at level of significance of 0.05 and degree of freedom (d.f.) 1.
- ▶ Neck/ Shoulder pain/ Backache

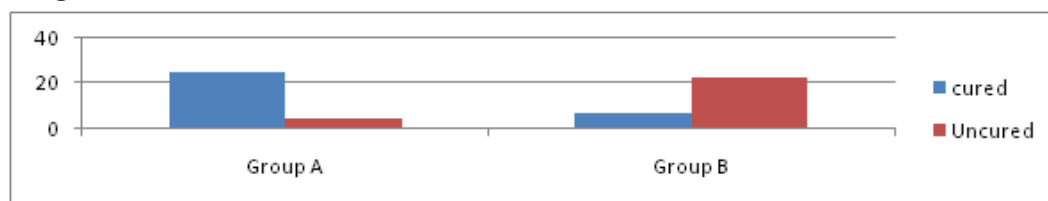


- ▶ Neck/ Shoulder pain/ Backache

observed in the all individuals of both group.

- ▶ Group A : 25 patient were Cured out of 30.
- Group B : 02 patient were Cured out of 30
- ▶ Highly significant
- ▶ According to χ^2 test result was highly significant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Fatigue -



Fatigue

- ▶ observed in the all individuals of both group.
- ▶ Group A : 25 patient were Cured out of 30.
- Group B : 07 patient were Cured out of 30
- ▶ **Highly significant**
- ▶ According to χ^2 test result was highly significant at level of significance of 0.05 and degree of freedom (d.f.) 1.

Sr. No.	Symptoms	X ² Value	Significant
1	Red eyes	2.42	Equally effective
2	Burning eyes	2.42	Equally effective
3	Dryness/ itching	1.06	Equally effective
4	Eye strain	1.7	Equally effective
5	Blurred near & distance vision	5.38	Significant
6	Difficulty in focussing	0.64	Equally effective
7	Double vision	2.52	Equally effective
8	Headache	11.36	Highly significant
9	Nack/ shoulder pain/ bachache	35.6	Highly significant
10	Fatigue	21.68	Highly significant

Discussion -

Tarpana –

As ayurved texts says , tarpana gives strength to eyes i.e it is dristiprasadak so used in various diseases and degenerative conditions Shatavari ghrit is vata – pittashamak, balya and rasayan by it's guna , rasa , virya and vipak. So it disintegrates the pathology of computer vision syndrome.

Tarpana is in the form of suspension containing unctuous nature and the particles does not leave the eye as quick as other water based solutions . This increases the tissue contact time and bioavailability hence higher therapeutic concentration can be achieved by akshi – tarpana . This facilitates the action of drug by two ways – 1) by allowing more absorption of the drug by the corneal surface and 2) by exerting direct pressure upon the cornea . Thus it reduces the signs and symptoms of computer vision syndrome.

According to modern pharmacology various drugs used in the eye disease treatment , enters the eyeball by passing through cornea . This penetration depends upon the permeability of the various layers of cornea. The epithelium and endothelium is highly permissible for lipid content as compared to stromal layer. Thus fat soluble drugs readily penetrate these layers ,however only water soluble drugs can penetrate the stromal layer. Thus for complete penetration of the drug , It should be lipophilic and hydrophilic.

Shatavari Ghrit used for tarpana , contains both lipophilic as well as hydrophilic properties. So it has got very good penetration through various layers of the cornea .Thus it reduces the signs and symptoms of computer vision syndrome

Nasya – “ nasa hi sirso dwaram ...”

- Nasya is the procedure in which medicine is applied through the nasal cavity. Nasal cavity , anatomically, leads to the structure of the head and so it is considered as the natural route to the head. So it is easy to apply medicine through this route. When medicine is applied through the nasal cavity and inhaled, it directly spreads to the following parts - Eyes through the nasolacrimal duct
- Middle ear – through the eustachian tube
- Intra cranial spaces –through the middle ear
- Because of these anatomical communications the medicine applied through the nasal cavity reaches all these areas. Nasya has direct action and sudden action because there is no time delay of digestion of the medicines. The medicine applied is directly absorbed through the mucous lining of the structures. Thus nasya cleans the strotas so, daily application of pratimarsa nasya will prevent the accumulation of vitiated kapha in the strotas of the eye.
- In the phalaprapatti of pratimarshya nasya, vagbhatacharya has mentioned klamanaasha i.e. it reduces the fatigue and eye strain , produced by continuous work on computer. It improves the vision and hence can be useful in relieving the symptoms like blurred vision, difficulty in focusing, double vision, and eye strain. (As. Hri. Su. 20/4)
- It also does the vaatashamana, hence can be useful in relieving the pain in the neck and shoulder. The shaman nasya, decreases the linear venous congestion, and hence helpful in reducing redness of the eyes. (As. S. Su. 20/ 29, As . Hri. Su. 20/6)
- The daily practice of shaman nasya causes the well developed skandha and griva, which prevents the neck and shoulder pain. . (As. Hri. Su. 20/4)
- It is also helpful in the neck stiffness. The snehana nasya causes the keenness of sense organs, i.e. improvement in the vision and decreases the symptoms like do blurred vision, difficulty in focusing, double vision, and eye strain. (As. Hri. Su. 20/23)
- The anu taila nasya is helpful in the all urdhvajatrugat rogas, and it also decreases the vata and pitta.
- Vatashamana- reduces the symptoms like dry eye, manya and skandha shool.
- Pittashamana-reduces the symptoms like burning eyes and redness of eyes.
- NASYA

MODE OF ACTION -

1. LOCAL EFFECTS

- IRRITATING DRUGS -> STIMULATION OF OFFACTORY NEURON ->SNEEZ REFLEX
->EXPULSION OF SECRETIONS FROM PARANASAL SINUSES -> STIMULATION OF TRIGEMAL GANGLION ->STIMULATION OF CAROTID PLEXUS -> ALLEVIATION OF SYMPTOMS LIKE HEADACHE.

- STIMULATION OF OPHTHALMIC AND MAXILLARY BRANCHES OF TRIGEMINAL NERVE ->

STIMULATION OF TRIGEMINAL GANGLION ->STIMULATION OF TRIGEMINAL NEURONES->

ALLEVIATION OF SYMPTOMS LIKE HEADACHE

SYSTEMIC EFFECTS

ABSORPTION OF NASYA DRUGS ->STIMULATION OF HYPOTHALAMUS ->RELEASE OF CERTAIN NEUROCHEMICAL TRANSMITTERS ->ALLEVIATION OF SYMPTOMS OF DISEASE

CONCLUSION -

- From all observation and discussion made, it can be concluded that
- ❖ Shatavari Ghrit Tarpana and Anu tail nasya is effective in computer vision syndrome and effect will remain even after treatment without any complications.
- ❖ The result founds are encouraging and can be used routinely in everyday practice for safe recovery.
- Red eye , Burning eyes , Dryness/ itching, Eye strain , Difficulty in focussing , Double vision In these sign & symptoms Tarpana and Nasya is equally effective as CMC EYE drops
- Shatavari Ghrit Tarpana & Anu tail nasya is effective in Blurred vision thanCMC Eye drop
- ❖ Shatavari Ghrit Tarpana & Anu tail nasya is very effective than CMC drops in
 - Headache
 - Neck/ shoulder pain/ backache
 - Fatigue
- ❖ People with Vata pitta pradhan prakriti are prone to Computer vision syndrome.

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2	Shailaja Shrivastav	Sharangdhar Samhita	Choukhamba Orientalia
3	Ambikadatta Shastri	Sushrut Samhita	Choukhamba Sanskrut Sansthan, varanasi.
4	Bhishakratna Shri Laksmipati Shastri	Yogaratanakar	Choukhamba Sanskrut Sansthan, varanasi.
5	Dr. Brahmanand Tripathi	Charak samhita	Chaukhamba Surbharati
6	Dr. Kanjiv Lochan	Astanga Hridaya	Chaukhamba Publication
7	Prof. Dr. Udayashankar	Text book of shalakya tantra	Chaukhamba Vishwabharati
8	Dr. P.K.Shantakumari	A text book of Ophthalmology in Ayurveda	Dr. P.K.Shantakumari

Research : Clinical

TO STUDY THE EFFECT OF KWATH OF LEAVES OF HOUTTUYNIA CORDATA ON ATISARA OF CHILDREN

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ABSTRACT

Houttuynia cordata is a genus of species in the saururaceae native to South East Asia. It is a single drug formulation having a wide range of therapeutic utility. During the past several decades the medicinally important phyto constituent have been identified including essential oil, flavanoids and other polyphenols, fatty acid and alkaloids. A survey of the literature shows Houttuynia cordata possesses a variety of pharmacological activities including antiviral, antitumor, antimicrobial, and anti-inflammatory and anti-oxidative effects. Considering these the present study is undertaken to evaluate the effects of kwath of Houttuynia cordata on atisara. Atisara is a common disease among the children. Therefore, the study is mainly concern with the effect of the potentiality of the kwath of Houttuynia cordata on atisara of children belonging to the age group of 0-5yrs. The result of the study is providing a scientific basis for the traditional use of this plant as an curable agent.

Keywords: Houttuynia cordata, atisara, children

1. INTRODUCTION

In Ayurveda diarrhoea is known as atisara. The term Atisara is a combination of two words- ati means excessive, Sara means passing of liquid matter through anus. Vijayarakshita defined the atisara is excessive passage of liquid from anus. Atisara is defined as an abnormal frequency and liquidity of fecal decharge. Frequent passing of watery stool, increased intestinal secretions is the cardinal feature. Atisara is traditionally believed to be due to increased gut motility but decreased absorption of water, increased intestinal secretions. According to Ayurveda atisara results from the excess mass of stools and endotoxins (Ama) in the gastrointestinal tract and this excess is eliminated through the rectum as diarrhoea. Atisara is common disease among children. It is caused by bacteria, virus, parasite, food, medicine etc. modern medicine like loperamide and bismuth subsalicylate and prescribe for diarrhoea, which gives mild relief in symptom and sign but after few days patient again suffer from same symptoms the patient are always seeking some alternative therapy from more effective and safer outcome. Ayurvedic treatment give the satisfactory result. It corrected the bowel frequency which is the cardinal feature of atisara. Atisara is a disease of purishavaha srota.

Houttuynia cordata is a genus of species in the saururaceae native to South East Asia. It is a single drug formulation having a wide range of therapeutic utility. During the past several decades the medicinally important phyto- constituent have been identified including essential oil, flavanoids and other polyphrnals, fatty acid and alkaloids. A survey of the literature shows Houttuynia cordata possesses a variety of pharmacological activities including antiviral, antitumor, antimicrobial, and anti-inflammatory and anti- oxidative affects. Houttuynia cordata have stambhana property that helps in reducing bowel frequency.

2. AIMS AND OBJECTIVES

The aims and objectives of the study were as follows -

- i) To prove the efficacy of Ayurvedic treatment in the management of atisara.
- ii) To provide a large population suffering from atisara a future possibility of safer treatment;this can be helpful in reducing the need of modern medicine.

3. MATERIALS AND METHODS

3.1 Selection of patients - Forty three cases with a classical picture of atisara were randomly selected irrespective of age ,sex and chronicity from the OPD and IPD of Hon' Shri Annasheb Dange Ayurved Medical college and Hospital,Maharashtra.

3.2 Inclusion criteria - Sign and symptom of atisara.

3.3 Exclusion criteria - i) Age group more than 5 years.

ii) Suffering from diseases other than atisara.

3.4 Plan of study and treatment -

- i) Proforma compiled with detailed clinical history physical examination of the patients
- ii) Investigation like ESR,Stool routine
- iii) After confirming the diagnosis 43 patients were given the following treatment -

3.5 Preparation of medicine - Medicine was prepared under expert supervision.Houttuynia cordata used in this study were purchased from local market. The air dried Houttuynia cordata (100g)were immersed in 400ml of distilled water,kept overnight in a refrigerator (10degree celcius)and boiled under reflux for 2 hours.This hot water extraction was conducted twice.The resulting kwath was filtered and concentrated. Kwath of Houttuynia Cordata is applied as dose according to the age of the children for two times a day.For the age group0-1yr(3ml),1-2yrs(5ml),2-3yrs(7ml),3-4yrs(10ml),4-5yrs(10ml).This treatment was given for a study period of 7days.

3.6 Diet - Patients were given laghu,grahi and pathya food articles.

3.7 Criteria of assessment - The improvement in the patients was assessed on the basis of relief in the symptoms and signs of the diseases together with laboratory investigation..All the symptoms and the sign were given grade scores and assessed before as well as after

4.OBSERVATIONS AND RESULTS

The observations and results are given in the following tables -

Table -1

Distribution of patient according to Age

Age Group	No. of Patients	Percentage
0-1 yrs	16	37.20
1-2 yrs	12	27.90
2-3yrs	08	18.60
3-4 yrs	04	09.30

Table- 2

Distribution of patient according to sex

Sex Group	No.Of patient	Percantage
Male	23	53.48
Female	20	46.51

Table - 3

Effects of Ayurvedic therapy on sign and symptom of atisara

Symptoms	Mean Score			S.D.	S.E.
	BeforeT.	A.T.	%		
Bowel Frequency	3.26	0.45	80.81	.817	.123
Bleeding in stool	2.48	0.23	92.88	.918	.137
Abdominal pain	2.19	0.19	84.46	.950	.189
Weakness	2.52	0.64	68.17	.734	.139
Body Weight(in kg)	51.45	41.72	2.55	1.143	.314

Table- 4

Effect of reduction of the dose of Loperamide drug

Name of the drug	B.T.	A.T.	%	S.D.	S.E
Loperamide	12.19	1.35	86.82	4.39	1.078

Table -5**Improvement in symptoms and sign and investigation of Atisara**

Symptoms And sign and investigation	Improvement (in%)
Reduction in bowel frequency	80.91
Reduction in Bleeding in stool	92.88
Reduction in Abdominal Pain	84.46
Reduction In Weakness	68.17
Increase in body weight	2.55

From The Trial it is found that by applying the Kwath of Houltuynia Cordata the bowel frequency is reduced by 80.91%, Abdominal pain reduced by 84.46%, Weakness was reduced by 68.17%, Body weight was Increased by 2.55. All the sign and symptoms are satisfactorily resulted.

5. Conclusion

On the basis of observation and discussion it may be concluded that Atisara is commonly found in young children and it can be corrected by applying Kwath of Houltuynia cordata. All the signs And symptoms was reduced by more than 80%. This trial is safe and effective alternative in the treatment of Atisara.

Acknowledgement: The author is thankful to the management and the Principal of Honb' Anna Saheb Dange Ayurved Medical College, Maharashtra for providing the permission and facilities for this study.

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Research : Clinical

Study of the Efficacy of Kulattha kwatha on Nashtartava with special reference to Poly cystic ovaries

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Guide- Dr. SUHAS D. HERLEKAR M.S.(Streerog Prasutitantra) H.O.D. & Professor
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INTRODUCTION

In today's era, women have become conscious about their health, as they have to carry responsibilities of their families morally as well as financially. Healthy womanhood turns into healthy progeny.

Many women suffer from menstrual problems which hamper their physical as well as psychological well being. One of them is amenorrhea in which there is absence of menstruation. Amenorrhea is one of the causes of infertility which create a lot of tension in life of a woman. Patients get information from one or the other sources that amenorrhea further makes a woman prone to many fatal diseases and thus want to get treatments.

In ayurvedic texts, we get the clinical features of Nashtartava as, Doshas obstruct the passage of channels carrying artava, thus artava is destroyed and not discharged monthly. (Su.Sha.2/23) Aggravated kapha dosha obstructs the passage of artava, causes vata prakopa thus menstrual blood is not discharged.(A.S.Sha.1/13)

The blood collected for whole month by both dhamanis assuming slight black colour is brought towards vaginal orifice by vayu.(Su.Sha.3/8). Vata dosha is responsible for expulsion of artava. So the obstruction of vayu will lead to obstruction of menstrual blood. Nashtartava (or rajakshinta) should be treated by using samshodhan and agneya(pittavardhak) dravya.(Su.Sha.2) (Su.Su.15).

It will also help in the formation of good quality of artava. Vatakaphahar dravya like kulattha can be used.(Su.Sha.2) Kulattha is one of the agneya dravya. It has bhedana prabhava. It will break the obstruction caused by kapha dosha. It will help for vatanuloman.

Pathologically we come across two types of amenorrhea : primary and secondary. Primary is that in which a girl has not yet menstruated after her 16 years of age. It includes mainly congenital causes. Here, we will deal with secondary amenorrhea. Secondary amenorrhea is that in which there is absence of menstruation for 6 months after normal menstruation.

Poly cystic ovarian syndrome is one of the common cause of amenorrhea. Women suffering for a longer period from PCOS are prone to fatal diseases like malignancy in future.

PCOS is a syndrome with clinical features as :- Amenorrhea, oligomenorhea, formation of

cysts around ovaries etc. Formation of cysts shows kapha dushti. Obstruction of vayu is also seen here. Thus the treatment described in Nashtartava may help in PCOS.

INCIDENCE :

1% of the female population suffer from PCOS. 10% of female show PCOS as cause for infertility.

AIM : To study the efficacy of Kulattha kwatha in Nashtartava w.s.r.t. Poly Cystic Ovaries

Objectives : To study Nashtartava in detail, PolyCystic Ovarian Syndrome in detail, to collect information about kulattha so as to treat Nashtartava, to provide effective alternative therapy to modern medications.

Material and methods : A study of Kulattha kwatha on Nashtartava for three months/three consecutive cycles. Total 30 patients selected. Baseline investigations before and after treatment. Authentification and standardization of the drug done. Data collected with the help of observations and assessment criteria.

Inclusion Criteria :

Voluntarily willing patients. Patients of age 20-35 years. Amenorrhea more than two months will be included Oligomenorrhea + Hypomenorrhea- irregularly, infrequent timed episodes occurring at intervals of more than 35 days with scanty bleeding.

PCOS in USG

Exclusion Criteria :

Pregnancy.

Primary amenorrhea.

Hypothyroidism.

Other Endocrine disorders.

Chronic illness.

Drug: Kulattha Kwatha.(decoction of *dolichus biflorus* seeds)

Drug dose : 80 ml(2 pal) in divided dose.

Time: Apankal-(pragbhakt) – twice, i.e. before lunch 40ml and before dinner 40ml.

Duration: 7 days.(from 21st day of menstrual cycle)

Withdraw patients ;

Absent for two follow ups, Willing for withdrawal, Number of patients withdrawn will be fulfilled by other patients.

Assesment criteria :

MENSTRUAL PATTERN: Interval in months/ Rhythm, duration, quantity, consistency.

USG : Size of cysts, number of cysts, endometrial thickness.

FSH:LH Ratio, Weight of patients.

Statistical Analysis : The tests used - Wilcoxon Signed Ranks test, paired t test

Results

The frequency distribution of patients according to Level of percentage of relief (Menstrual Pattern) is given below.

40% of the patients had 100% relief due to Kulattha kwatha. 30% of the patients had 75% relief due to Kulattha kwatha. 30% of the patients had 50% relief due to Kulattha kwatha.

Thus as the menstrual pattern is considered the drug has shown remarkable results as per analysis

As per the ovarian volume, number of cysts and endometrial thickness is considered taken from USG reports :

0% of the patients had 100% relief due to Kulattha kwatha. 13.33% of the patients had 66% relief due to Kulattha kwatha. 70% of the patients had 33% relief due to Kulattha kwatha. 16.67% of the patients had no relief due to Kulattha kwatha.

There is no significant effect of the drug 'Kulattha kwatha' on 'FSH: LH Ratio' of patients.

As the FSH: LH ratio of the patients treated before treatment was also 1:1 and that afterwards remained unaltered. Hence no significant change in the effect might have been seen after treatment

There is significant effect of the drug 'Kulattha kwatha' on 'weight' of patients. Hence weight of patients reduces significantly because of treatment. Kulattha with its agnideepan, ushna, lekhaniya and medohara properties may result into weight loss of patients which is one of the treatment for Polycystic ovaries

CONCLUSION

Considering the clinical study –

Artava here was referred as raja (stravrupatmak) as well as bijarupatmak, hence the study included the parameters of menstrual pattern and follicular cysts also.

Kulattha (*dolichus biflorus*) is a drug which acts with ushna virya, katu vipaka and has properties responsible for agnidipan, vatanuloman, bhedan.

These properties are essential for the breaking of samprapti in Nashtartava.

The results show significant effect of the drug on the menstrual pattern by improvement in menstrual interval, duration, quantity and consistency.

It proves to be a significant drug for regularization of menses.

It also shows some improvement in parameter on USG - number and size of cysts.

Kulattha is easily available and cost effective.

No side effects are seen of the drug when given in the amount as in this study.

It can be given on OPD basis and patients do not require any hospitalization.

Research : Experiment

STUDY OF VANSHALLOCHAN WITH THE HELP OF PHARMACOGNOSTIC AND PHYSICO – CHEMICAL ANALYSIS

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ABSTRACT – Drug Standardization becomes important need of today's era. Especially Ayurvedic drugs are adulterated with various substances. So the quality of drugs hampers and purpose of Ayurved does not get fulfilled. Vanshalochan is the important drug used in many Ayurvedic formulations. Hence drug Vanshalochan was selected for the study. Standardisation was done with the help of Organoleptic, Physical, Chemical and other parameters. Thus quality of Vanshalochan has been examined which will be helpful for further clinical studies.

INTRODUCTION -

Ayurvedic medicine is mainly comprising of substances and products of herbal, animal and mineral origin. These substances have been used since time immemorial. These various natural products are the part of treatment in other systems like Unani, Homoeopathy, Siddha and Tibba Systems of Traditional Medicine as these are the easily available sources. In this age of modernization the scientifically proved facts will be accepted world wide and hence there is an opportunity to our science to come in the main stream to be a valuable medicinal science accepted worldwide. The researches are very essential in this science as they provide the scientific background to prove with evidence the facts related to improve the health of billions of people. WHO has estimated that near about 70 to 80% population of the world is using natural wealth for their health requirements.

During the last decades there has been a major increase in the use of medicinal plants all over the world. Extensive use of plants and inappropriate measures of cultivation practices have come up with the less availability affecting the quality of medicines. Control measures for cultivation, harvesting, collection, storage, packaging, processing, would be appropriate answer for any problem regarding this field. Adulterations are the common problems that can be eradicated with appropriate use of plant species. Mostly the herbal drugs which are used in various formulations are found in form of various species. The herbal raw material as well as mineral one externally appear similar but may differ in their microscopic and chemical characteristics. Similar species and low quality drugs are used to cope up with the increasing demand for the populations that are essential to be identified with new developing techniques. Thus Drug Standardization techniques play important role in identifying adulteration and maintaining quality of drugs.

SELECTION OF DRUG :-

The drug vanshalochan has been selected for this study in following perspectives.

1. The quality standards of Vanshalochan are not available in pharmacopoeias like A.P., I.P., B.P. etc.
2. The price range of Vanshalochan available in market is from Rs. 100 to 3000 / kg. But the references regarding quality assessment of market samples are not available which is very essential as these samples are used in various formulations by vaidyas and pharmaceutical companies.

So, to establish standards to provide scientific evidence with statistical validation, drug Vanshalochan is selected for pharmacognostic and physicochemical analysis.

MATERIAL :

Procurement Of Samples- Different samples of Vashalochan from different states of India with various price ranges of Rs.100 to 3000 per kg are collected and stored in close contains prior to use.

- Sample 1 - Belgaum- Karnataka
- Sample 2 - Hyderabad- Andhra Pradesh
- Sample 3 - Kottakkal - Kerala
- Sample 4 - Bhopal - Madhya Pradesh
- Sample 5 - Raipur -Chhathisgarh
- Sample 6 - Uttar Pradesh
- Sample 7 - Self collected original sample.

PHOTOGRAPHS OF VANSHALLOCHAN SAMPLES**Sample No. 1****Sample No. 2**

Sample No. 3**Sample No. 4****Sample No. 5****Sample No. 6****Sample No. 7**

This sample is collected from Garden of BSI , Pune belonging to species *Bambusa arundinacea* (Retz) Roxb. This sample has been collected under the guidance of Mr. B.G. Kulkarni, Senior scientist BSI, Pune. 15 bamboos of above given species were cut from BSI Pune. The plants were cut from the bottom near the ground transversely. 2 ft. part of the culm from bottom of each bamboo is taken and this part is cut longitudinally. We got the sample in second internode of the plant from bottom.

Quantity of self collected sample – 0.1 gm

Authentication -Authentication certificate for the authentic species *Bambusa arundinacea* (Retz) Roxb and self collection certificate for Vanshalochan have been taken from BSI, Pune.

EXPERIMENTAL STUDY PROPER -

Physical parameters - These parameters are essential to know the physical characteristics of the drug. Ph indicates the acidic or alkaline nature of the substance. The water content is studied by the moisture content. Ash value shows the percentage of organic and inorganic matter of the drug.

- c) pH
e) Total ash
- d) Moisture content
f) Acid insoluble ash

Extractive values - A) Water extractives

Chemical parameters - The chemical composition of the drug can be studied with these parameters. The range of chemical components is very important to be studied as it denotes the nature and actions of the drug.

Qualitative study for different ingredients like

1. Alkaloids
2. Glycosides
7. Phenolic compounds
3. Proteins
4. Carbohydrates
5. Saponins
6. Steroids

Percentage of Minerals - 1. Calcium 2. Silica 3. Lead 4. Arsenic 5. Iron 6. Potassium 7. Phosphorus 8. Sodium 9. Aluminium etc.

ORGANOLEPTIC STUDY

Sample No.	Colour	Odour	Texture	Taste	Size & Shape
Sample 1	White with grey tinge	Chalky odour	Smooth	Testless	2 x 2 cm
Sample 2	Translucent with bluish yellowish tinge	Chalky odour	Rough	Testless	1.5 x1.5 CmlIrregular
Sample 3	Snow white with light orange tinge	Chalky odour	Rough	Testless	3 x 3 cmlIrregular
Sample 4	Translucent With bluish yellowish tinge	Chalky odour	Rough	Testless	1 x 1 cmlIrregular

Sample 5	Translucent with bluish yellowish tinge	Slightly Chalky odour	Rough	Testless	1 x 1 cmIrregular
Sample 6	White with bluish orange tinge	ChalkyOdour	Smooth	Testless	1 x 1 cmirregular
Sample 7	White with yellowish tinge		Smooth		Small pieces

Ph & Moisture Content

Sample No.	Ph	Moisture content(%)
Sample 1	10.68	1.37
Sample 2	4.38	6.60
Sample 3	11.38	4.4
Sample 4	7.33	5.8
Sample 5	7.55	5.2
Sample 6	7.99	1.35
Sample 7	7.08	0.578

Total Ash & Acid Insoluble Ash

Sample No.	Total ash	A.I. Ash
Sample 1	84.55	2.7
Sample 2	84.98	1.6
Sample 3	88.08	0.39
Sample 4	88.32	0.275
Sample 5	89.59	0.28
Sample 6	98.91	2.07
Sample 7	93.02	—

Water Extractives

Sample No.	Water extractive(%)
Sample 1	2.51
Sample 2	3.796
Sample 3	2.11
Sample 4	2.09
Sample 5	2.9
Sample 6	2.12

Minerals percentage -**Table 25**

Sample No.	SiO₂	Fe	Al	PO₄
Sample 1	7	0.00778	0.004	0.19
Sample 2	2.5	0.00765	0.006	0.07
Sample 3	7.5	0.0069	0.006	0.395
Sample 4	14	0.00685	0.005	0.004
Sample 5	0.1	0.00735	0.005	0.01
Sample 6	0.16	0.00678	0.008	0.0065
Sample 7	0.069	0.05	—	0.1618
Sample (Ref.- Wealth Of India)	90.5 %	0.9 %	0.4 %	1.1 %

Sample No.	K	Na	Mn	CO
Sample 1	4	20.8	0.0113	Nil
Sample 2	8	19.0	0.01438	Nil
Sample 3	7.75	10.28	0.0190	Nil
Sample 4	9	3.2	0.02039	Nil
Sample 5	6.5	26.2	0.0161	Nil
Sample 6	7.5	30.0	0.01634	Nil
Sample 7	0.346	15.02	Nil	0.05

Sample No.	Ca	As	Pb	Cu	Mg
Sample 1	24.8	Nil	0.0025	0.001192	15.4
Sample 2	20.88	Nil	Nil	0.001312	22.27
Sample 3	30.78	Nil	Nil	0.007045	17.99
Sample 4	42.164	Nil	Nil	0.00252	11.4
Sample 5	38.72	Nil	Nil	0.00182	3.998
Sample 6	30.78	Nil	Nil	0.00179	8.8
Sample 7	1.5	Nil	Nil	Nil	0.08

Microbial Assay

Sample No.	Total aerobic count	E Coli	Salmonella	Enterobacteraceae
Sample 1	3×10^2	0	0	0
Sample 2	5×10^2	0	0	0
Sample 3	2×10^3	0	0	0
Sample 4	120	0	0	0
Sample 5	150	0	0	0
Sample 6	135	0	0	0
Sample 7	100	0	0	0

DISCUSSION

The survey of Ayurvedic literature suggests that Vanshalochan is used in the treatment of many diseases like Raktapitta, Kasa, Shwasa, etc. It is used in substantial amount in many formulations to cure the diseases. Because of its effectiveness, adulteration is very much possible with this drug by using cheaper drugs or substances. Hence the study of standardization of Vanshalochan is undertaken to compare samples available in the market to find out similarities and differences between them.

We could not identify and authenticate the sample as there are no quality parameters available as per A.P. and I.P. for this drug. The quality parameters for only four main components are mentioned in Wealth of India i.e. Silica, Iron, Potash and Phosphate. We could compare only these four standard parameters of main components with our seven samples. It is evident from the observations that all the samples do not fulfil the standard criteria of original Vanshalochan. This real fact is to be taken in consideration while using market samples or market preparations for therapeutical use. We have applied organoleptic tests i.e. Colour, Odour, Texture, Touch, Size and Shape which will be helpful in identification of this drug.

All the samples are compared with different parameters like Ash value, Moisture content,

Extractive values etc. Alkaloids, carbohydrates, glycosides, phenolic compounds, saponins, steroids, etc. are absent. The microbial study shows that the total aerobic count of all the samples is within limits as suggested by WHO guidelines. E. coli, Salmonella and Enterobacteriaceae are absent. This fact is the indication of the safety of this drug for internal and topical use and as a crude for manufacture.

CONCLUSION

From the above pilot study for standardization of Vanshalochan, the following conclusions can be drawn

1. Silica is the main ingredient of Vanshalochan. (Percentage 90 %- Wealth Of India, Raw Materials Vol. II , page No. 34.). As shown in none of the samples fulfil this criterion. Percentage of Potash is higher and that of Alumina and Iron are lower in market samples.
2. Ash value shows that all the samples are more inorganic in nature. Organic matter is very less in all the samples.
3. Arsenic and Lead are absent in all the samples. Even if the samples are compared with their respective prices , the quality of the expensive sample is not up to the mark.

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ACKNOWLEDGEMENT -

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Date : 28th February, 2014

An Appeal

English Translation of Charak Samhita, an old Ayurved Book is in progress under guidance of Prof. Dr. P. H. Kulkarni.

Research Papers/Thesis related to Charak Samhita are hereby invited. Research material will be included in one section.

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Research : Experiment

A STUDY ON ASSESSMENT OF MEMORY(SMRUTI) WITH THE HELP OF MEMORY TEST (BY RICHARD C MORPHS) AND ITS CORRELATION WITH SHARIR PRAKRUTI IN FEMALES.

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METHODOLOGY :

The study was performed under two headings :-

1) Literary : The following theoretical points were studied -

- Study of Sharir Prakruti from Samhitas.
- Details about memory as per Modern concept & smruti as per Ayurvedic concept were studied.

2) Practical:

- Assessment of Sharir Prakruti of volunteers from ayusoftproforma(c-dac)
- Assessment of memory of volunteers with help of memory test (by Richards C Morphs)
- Correlation of Memory quotient and Sharir Prakruti

CONCLUSION :

- Kapha Pradhan Prakruti individuals are said to be Smrutivaan or they have good memory.
- Vata Pradhan Prakruti individual have Alpa Smruti or weak (unsteady) memory.
- Experimental study shows that Vata pradhan prakruti have less scoring than other related prakruti types.

INTRODUCTION

Ayurveda is a science of life, it is existing from many decades and is as beneficial and fruitful as it was in past. *Dhee*, *Dhruti*, *Smruti*, are Manas Shakti mentioned in Ayurveda. Smruti prevents Mana from Adharm Aacharan (which leads to diseased state of body) by recalling previous experience of particular Adharm Aacharan. Smruti is a knowledge originated from our past experience.

According to sir monier Williams –memory is said as remembrance or remeniscene. According to Wikipedia –memory is the process in which information is encoded, stored & retrieved.

In Ayurveda persons are categorized according to Prakruti. It is of 2 types -

1 - SharirPrakruti

2 - ManasPrakruti.

Reaction of a person to any physical & mental stimuli depends upon his/ her prakruti.

Prakruti differ from person to person there course of reaction also differ for same stimuli.

This topic deals with study of memory(Smruti) with respect to DoshajPrakruti.

SELECTION OF TOPIC

Memory is generally considered as a capacity-a way to call up important facts or episodes from past but it is much more infact it provide the continuity of consciousness that allows the concept of being ourself', creating the ongoing narrative that make life truly ours. Memory is crucial in daily lives of people of all ages. In office one require efficient working memory for staying focused, remembering important information & keeping appointment etc. Students need for reading, comprehensive, complex problem solving, test taking etc

We use working memory in social situations and in our relationship listening & been attentive to needs & concern of other required use of working memory. It helps to remember important facts such as name, dates etc. Hence memory as a subject need to be studied more precisely. this study will be beneficial for further research. this topic will help us to establish relation between sharirprakruti&smruti as referred in samhitas.

AIM & OBJECTIVES

This study was conducted with following aim & objectives

Aim :

Correlation of Prakruti&memory(Smruti) with the help of memory test(by Richards C Morphs)

Objectives :

To study SharirPrakrutifrom Samhitas.

To study Smruti from Ayurveda & memory from modern point view.

To do quantitative assessment of memory with the help of memory test.

To study the correlation between Smruti and Sharir Prakruti.

MATERIALS & METHODS

MATERIALS :

- The literary work was done with the help of ancient Ayurvedic texts (Charaksamhita, Sushrutasamhita, AshtangaSangraha&Hridaya) as well as modern literature in connection with memory.

- A standard “Prakruti Questionnaire” according to the format from C-DAC was utilized to assess the Sharir of the subject.
- Memory test was used in this study for quantitative estimation of memory in volunteers.

METHODOLOGY :

- A group of 20 healthy female students from B.A.M.S (first year) College of Ayurveda were taken as subjects for the project.
- The SharirPrakruti of these subjects was assessed with the help of a standard “Prakruti Questionnaire” according to the format from C-DAC.
- Assessment of memory is done with help of memory test (by Richards C Morphs).
- Memory quotient then compared with SharirPrakruti of volunteers.

INCLUSION CRITERIA

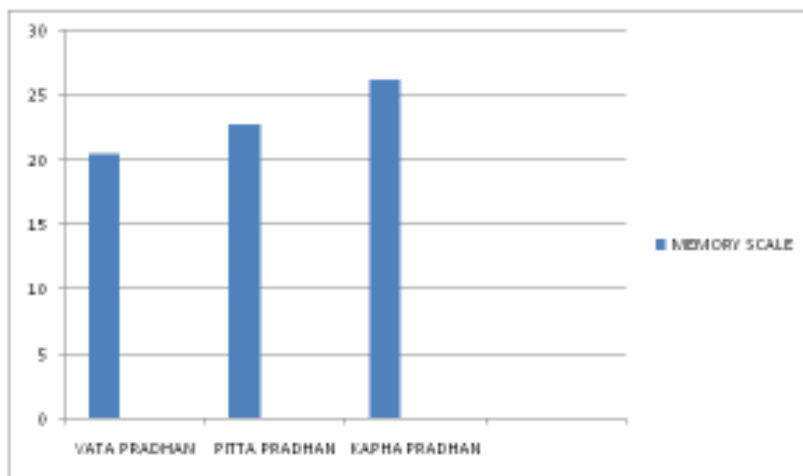
- Sample size- 20 healthy female individual.
- Age- 17 to 24 years
- Individual without any major physical & mental illness.
- Individual studying under same course.

EXCLUSION CRITERIA

- Male subject.
- Above 24 yrs.
- Individual suffering from any mental & physical illness.

OBSERVATION

S.NO	KAPHAADHIKYA PRAKRUTI	PITTAADHIKYA PRAKRUTI	VATAADHIKYA PRAKRUTI
1	24	23	20
2	27	22	21
3	26	18	21
4	29	24	20
5	28	26	
6	28	21	
7	22	23	
8	26	26	
MEAN	26.25	22.8	20.5

**CONCLUSION :**

- KaphaPradhanPrakruti individuals are said to be Smrutivaan or they have good memory.
- VataPradhanPrakruti individual have AlpaSmruti or weak (unsteady) memory.
- Experimental study shows that VataPradhanPrakruti have less scoring than other related Prakruti types.
- Average mean of Kaphapradhan is more than other two dominant SharirPrakruti is seen in this experimental study.

SCOPE AND LIMITATION

Scope :-

- Further study can be done with large sample size.
- Separate study based on age & gender can be conducted.
- Study on before & after effects of Pranayam, meditation etc on memory can be done.

Limitations :-

- 1 - This study was limited to only 20 individuals.
- 2 - This study was limited to only female subject

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Research : Experiment

Comparative Pharmaceutical-Analytical Study Of Chyavanaprasha Avaleha With Special Reference To Charaka Samhita And Sharangdhar Samhita.

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ABSTRACT :

Now a day mainly for immunity power of human is poor as due to consumption of fast food and modern lifestyle. There for need of Rasayan chikitsa is needed. In ayurveda one of the branch of Astang Ayurved is Rasayan chikitsa. In that part most effective easy medicine is Chavanprash which is described by charaka first and then many aacharya. In that sharandhara also told slightly different part of Chavanprash. There for the analytical comparison between both formulation done.

INTRODUCTION :

Avaleha or *Leha* is intended for internal administration and it is semisolid preparation of drug by addition of Guda, sugar or sugar candy and boiled with prescribed drug decoction or drug juice etc. liquid. It can be consumed along with some Anupaana.

The word *Avaleha* has been originated from the *Lih Aswadane*, here *Lih* is Dhatu and *Aswadane* is the Kriya. *Leha* is one among the four types of food items, they are *Peya*, *Leha*, *Bhakshya* and *Charnya*. Hence Acharya Charak describe Chyavanaprasha *Avaleha* in Rasayana Adhyaya. Shortly, *Avaleha* is taken by licking with good palatability. This indicates the metabolism and absorption of this pharmaceutical dosage starts from the mouth itself, because of presence of more quantity of glucose, fructose etc. sweetening agents. *Avaleha*'s acceptance is more with comparing to other varieties of Ayurvedic dosage forms.

Various Indian holy books like Mahabharat, Puranas etc., relate that the 'Royal Vaid', named 'Ashwini Kumar brothers', the twins, who were medical advisers to Devas during Vedic times (10,000 years ago), first prepared this formulation for Chyawan Rishi at his *Ashram* on Dhosi Hill near Narnaul, Haryana, India), hence the name *Chyawanprash*. The first historically documented formula for *Chyawanprash* appears in *Charaka Samhita*, the ancient Ayurvedic treatise.

AIMS & OBJECTIVES :

To prepare *Chyavanaprasha Avaleha* with special reference to Charak Samhita.

To prepare *Chyavanaprasha Avaleha* with special reference to Sharangdhara Samhita.

To do analysis of both sample and comparative study done.

MATERIALS & METHHODS:**MATERIALS:****DRUG:**

All drug were taken as per the ref. from Charaka samhita and Sharangdhar samhita with given proportion after identification and authentication. Raw drug taken from GMP approved pharmacy and fresh drug collected from Botanical garden.

APPARATUS :

1. Patra.
2. Khalwa.
3. Stirrer.
4. Cloth.
5. Vessel. Etc.

METHOD :

Both type of the Chyavanaprasha Avaleha were prepared with the SOP as given in charaka samhita and sharangdhar samhita.

OBSERVATION :

1. Coarse powders of drugs were taken.
2. Kwatha was reduced to 1/4th.
3. Decoction: Rasa – Amla.
Roopa – Faint brown.
Gandha – Smell of Amalaki.
4. Amalaki pulp was obtained in smooth paste form.
5. After frying in Ghrita / Ghrita and Taila, pulp became brownish-red.
6. *Siddhi Lakshanas* were observed at the end of Paaka, like –
 - i. Tantumayatwam.
 - ii. Apsumajjati.
 - iii. Kharatwam.
 - iv. Pidite Mudra.
 - v. Gandha Varna Rasodbhavam.

ANALYTICAL REPORTS:

Sr. No.	Parameter	Unit	Charaka	Sharandhara
1.	Loss on drying at 105°C	%	10.36	15.66
2.	Acid-insoluble Ash	%	0.47	0.93
3.	Ph	-	3.37	3.34
4.	Bulk Density	gm/ml	1.27	1.23
5.	Total Soluble Solid Content	%	58.55	52.58
6.	Fat Content	%	0.62	0.53
7.	Reducing Sugar	%	2.31	1.23
8.	Total Sugar	%	27.41	26.31
9.	Moisture	%	10.36	15.66
10.	Total Minerals	%	1.06	2.03
11.	Protein	%	0.89	2.62
12.	Fat	%	0.62	0.53
13.	Crude Fibre	%	3.39	3.54
14.	Carbohydrate	%	83.68	76.620
15.	Energy	Kcal/100g	343.86	317.73

CONCLUSION :

- Chyavanprash prepared according to classical reference shows good results in analytical parameters.
- Total sugar percentage exhibits solubility of the product and nutritional value in terms of carbohydrates.
- More sugar content shows good palatability and easy for intake.
- Leha is advantageous in the view of shelf life, dose fixation, packing and dispensing.
- Further scope for study – Preclinical and clinical evaluation of Chyavanprash.
- As Charaka Samhita reference is show low LOD than Sharangdhara Samhita reference.
- In Charaka samhita Chyavanprash show Total Soluble Solid Content, Carbohydrate Total Sugar is high as compare to Chyavanprash prepared by Sharangdhar samhita.

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Research : Literary

Literary Research–The intense need of time (With Special Reference to *Ayurvedic* Manuscripts)

*Dr.Pallavi Dattatray Nikam

Abstract :-

Review of existing literature is the basic and the most important step of any type of research work. In case of research in *Ayurveda*, researcher predominantly depends upon the published ancient *Ayurvedic* literature for initiation and further progression of his research work. This literature is the only source of fundamental as well as applied knowledge of ancient *Ayurveda*. But unfortunately a big part of this treasure is still under cover in the form of unpublished manuscripts. These manuscripts are the valuable primary sources for researchers in various areas of research.

From the available medical manuscripts of *Ayurveda*, only about 2% have been published yet.¹ It means that whatever *Ayurveda* we are learning and researching is on the basis of these 2% published treatises only. Undoubtedly, these available treatises prove very very helpful by fulfilling the needs of practitioners and researchers of *Ayurveda*. But knowing all is always best than knowing partial or none. Because knowing is the first step of learning. Even in any type of research work 'thorough knowledge of all aspects of the subject' is needed to yield something worth. Therefore, research on unpublished manuscripts and publication of them is very important by the research point of view.

In this paper/article, an attempt is made to throw a light on the importance of literary research in *Ayurveda*, with special reference to manuscripts.

Introduction :-

Manuscripts are the hand written or manually written original documents. Thousands of years ago when printing technology was not available, knowledge or any information was preserved or stored by writing it on leaves or barks of specific plants. Stones, metallic surfaces, wooden barks were also being used for that. All such documents are known as manuscripts. The science of studying manuscripts is known as '*manuscriptology*'.

Today there are available many such manuscripts belonging to various fields along with medical field. It is estimated that about 1, 00,000 manuscripts of *Ayurveda* have been produced over the long period of 1500 BC to 1900 AD which contain different aspects of positive health, medicine and surgery² but the detailed and accurate data about the number, extent and distribution of these manuscripts are not available. These are stored in various

government and private institutes in India and abroad. Several may present in personal possessions of some people who even unaware of their importance. These manuscripts are huge oceans of knowledge containing innumerable pearls of *Ayurvedic* principles and information.

In current era when *Ayurveda* is not the main health system with its monopoly; the important primary source of knowledge of *Ayurveda* is ancient *Ayurvedic* literature indeed. It serves as authentic guidelines not only for practice but also for research in *Ayurveda*. But unfortunately out of available ~1 *lakh* manuscripts of *Ayurveda*, only about 2% have been researched and published yet. It clearly indicates that apart from traditional *vaidya* families, remaining people study, teach, practice and research *Ayurveda* only with the help of these 2% published material. Still the *Ayurveda* is being accepted globally and the whole world is being influenced by its importance as a science of life and is taking its benefits for saving thousands of lives. Then just imagine, what may be the scenario if all the available manuscripts of *Ayurveda* will be studied and published. It will definitely prove very beneficial for human beings all over the world.

Literary research in *Ayurveda*-

Department of AYUSH [*Ayurveda, Yoga, Unani, Siddha and Homiopathy*] of government of India considered the revival, preservation, translation, critical analysis, systematization and publication along with digitalization of texts and manuscripts as important aspects of literary research in *Ayurveda*.³

First of all collection and classification of maximum number of manuscripts of *Ayurveda* which are scattered all over the world is essential. Because there is possibility that many manuscripts are on the way to vanish due to negligence. There may present many manuscripts in the personal possession of unaware heirs of ancient scholars of *Ayurveda*. Protection and preservation is also very important but challenging business for *manuscriptologists*. Translation and critical analysis of manuscripts need the scholars who have knowledge of *Ayurveda* along with that of multiple languages and scripts. So, definitely this literary research work is also a team work like other type of research works. This is not an easy task indeed. Therefore to perform this gigantic work there is need of collaboration of various scholars of *Ayurveda* and languages like Sanskrit along with many trained people and experts in this field.

Importance of manuscripts and their research-

1. Manuscripts are certain proofs of well developed *Ayurveda* science in ancient India. They contain various subjects of *Ayurveda* which are studied and researched in India. *Ayurvedic* knowledge is not present only in manuscripts which are exclusively of *Ayurveda* but also in the manuscripts of *Vedas, samhitas, puranas, jyotish granths* and the various philosophical scriptures. So, the collection of all this knowledge of *Ayurveda* at one place and preparation and updating the index of references according to various subjects of *Ayurveda* and about *Ayurveda* is essential. This will prove very helpful for learners and researchers of *Ayurveda*.

2. These manuscripts are treasures of a huge knowledge so may contain answers for many queries of students, practitioners and researchers of not only *Ayurveda* but also that of contemporary medical sciences. They may give solutions to many current problems being faced by people in health systems. So, they should be collected and researched before they become unavailable or go vanished like section of *nidaana* in *Kaashyapa Samhita* which is one of the basic treatises of *Ayurveda*. When a manuscript gets lost or destroyed, then the knowledge or that work permanently gets lost for the future generations.
3. Many commentaries like '*Dravyaratnaakar Nighantu/ Jawra Dhumaketu*' on basic texts of *Ayurveda* are still in the form of manuscripts.⁴ If such commentaries are researched and published they may prove helpful for easy and better understanding and application of *Ayurveda*.
4. Literary research in this area may discover many medical facts which are not yet understood and so are under research. This ultimately may avoid repetition of research work.
5. Collection and research of maximum number of available manuscripts of *Ayurveda* about a specific topic is very essential to identify the correct, original version of that topic as there are many different readings available of that topic. For example- Suppose, during description of one drug two different readings are found as '*krumikoshthanu*' and '*krimikushthanu*'; and both these appear correct in that context, then it becomes very difficult to identify the correct one. So, in such cases availability of multiple copies of the same on different manuscripts, many times solves this problem.
6. As written before, published literature from authentic manuscripts serves as standard authentic literature for practitioners and researchers of *Ayurveda*. So, it also has medico legal importance.
7. Despite the best efforts to protect the available manuscripts, they are being degraded. Because being organic matter, manuscripts have a specific life time. This speed of degradation even is more in the hot and humid climate of India. So, their study and publication is the only way to save them.

All the principles of *Ayurveda* science have been developed or say explored through very dedicated and honest scientific research work by ancient scholars as internal evidences suggest.⁵ It must not be an easy job to copy down this huge knowledge on manuscripts in the absence of printing aids. Following lines by an anonymous scribe describe this nicely.

The hard physical work done for writing manuscripts and so asks to look after them as a son. Further even the harder job must be to preserve these manuscripts over a long period of thousands of years despite various internal and external attacks by various rulers and presence of other destructive factors like nature, vandalism, personal jealousies, migration of scholars, etc. all above factors caused destruction of *lakhs* of valuable manuscripts. Still

our ancestors protected some of them as much as they could. So, now it's our job to carry forward their work to utilise the precious *Ayurvedic* knowledge for the well being of whole society.

'Publish or perish' is the important law in the world of research. It is perfectly applicable to these manuscripts. So, if we want to save this precious knowledge of *Ayurveda*, *Ayurvedic* scholars must come ahead to engage themselves in this literary research work though it doesn't seem as much glamorous and economically worth as clinical research. Otherwise we will lose large number of these manuscripts because of mere negligence.

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Research : Literary

“Conceptual study of Agni in Digestion and Mandagni”

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Abstract :-

Jatharagni (Digestive Fire) enables the food to be transferred in to nutrients useful for the body. If it is weak or defective it is not able to digest the food properly. Then the Aahar-Ras and other Dhatus will not receive proper nourishment, all the metabolic processes & activities will become in-effective. In these days due to spicy food, medicines, milk-products, tobacco, alcohol, irregular food habits, Sleeping disturbance, pain-killers, antibiotics, oral-contraceptives, steroids, suppression of urges, mental stresses, depression, excess intake or lack of water, night awaking & day sleeping mankind get Mandagni and suffered from many painful diseases. About 60% of people are suffering from Mandagni and having constipation with other complications. So it is a demand of time to know about Agni, Mandagni & its importance in Digestion, by which we get healthy life without having any disease.

Introduction :-

Acharya Sushrut had described the features of a healthy person that the Doshas must be in equilibrium, the Digestive fire must be in balance state, Malas(wastes) must be in a normal state. The sensory & motor organs & Mind, Aatma must be also in a pleasant state. (Shu.Su.15/48).

Jatharagni(Digestive Fire) enables the food to be transferred in to nutrients useful for the body. If it is weak or defective it is not able to digest the food properly. Then the Aahar-Ras and other Dhatus will not receive proper nourishment, all the metabolic processes & activities will become in-effective.

When Agni is less in quantity(Mandagni) it will causes many Diseases. Due to weak digestion Aam-rasa & Mala will produced which will causes all the Abdominal Diseases (Ash.Hri.Ni.12/1).

In our day to day life due to spicy food, medicines, milk-products tobacco, alcohol, irregular food habits, Sleeping disturbance, pain-killers, antibiotics, oral contraceptives, steroids, suppression of urges, mental stresses, depression, excess intake or lack of water, night awaking & day sleeping mankind get Mandagni and suffered from many painful diseases. About 60% of people are suffering from Mandagni and having constipation with other complications.

So it is the demand of time to know about Agni, Mandagni & its importance in Digestion, by which a common man get healthy life without having any disease. It is also a need of modern medical science to be healthy by avoiding harmful habits in our daily life. So I have selected this topic to study in detailed about Agni in Ayurveda.

Review of Literatures :-

The information about the concept of Agni in Digestion and its importance is mentioned in Ayurvedic Samhita Granthas. The detailed study of Jatharagni and Mandagni had been reviewed for collection of study material.

Aims & Objectives :-

1. To study about the concept of Agni, its types & its importance in Digestion.
2. To Study about the cause, symptoms, treatment (trisuutra) of Mandagni.

Materials :-

1. Charak Samhita, Sushrut Samhita, Astang Hridaya & other Samhitas.
2. Modern Medicine Books & Articles on Agni & Mandagni.

Methods :-

A Fundamental Collective Study on Agni and its importance in Digestion with Mandagni from Ayurvedic Samhitas as follows :-

- In Brahma-Sutra :- Agni has been described as “a sign of life”.
- According to Acharya Yaska :- “Agni” = A+G+Ni where “A” denotes meaning “to go”, “G” denotes meaning “to burn”, “Ni” denotes meaning “to carry” it means that Agni carries everything in it, moves everywhere and metamorphoses substances, burns, assimilates & grows.
- According to Shabda-Kalpadruma :- 61 Synonyms of Agni have been compiled which helps in explaining the nature and functions of Agni.

Agni are the enzymes or “fire” that drive all digestion and metabolism in Ayurveda. Agni digests the least amount of food in the greatest amount of time.

Agni has been divided into 13 types according to the function and site of action. These are :-

1. **Jatharagni** – The Agni present in the stomach and Duodenum.
2. **Bhutagni** – Five Agni from five basic Elements.
3. **Dhatwagni** – Seven Agni present in each of the seven Dhatus.

1. **Jatharagni** is the most important one, which digests four types of food and transforms it into Rasa and Mala. 2. **Bhutagni** act on the respective bhautika portion of the food and thereby nourish the Bhutas in the body. 3. **Dhatwagni** act on the respective Dhatus by which

each Dhatu is broken into three parts. In this way, the entire process of transformation consists of two types of products—Prasad (Essence) and Kitta (Excrete). The former is taken for nourishment while the latter one is thrown out, which otherwise defiles the body if it stays longer.

Jatharagni :-

Acharya Charaka had considered that Dehagni is the cause of life, complexion, strength, health, nourishment, lusture, oja, teja (energy) and prana (life energy). (Cha.Chi. 15/3). If the Agni of a person is vitiated, the whole metabolism in his body would be disturbed, resulting in ill health & disease. Hence, Agni is said to be the base (mool) of life. (Cha.Chi. 15/4).

According to Ashtanga Hridaya, Jatharagni is the Agni or bioenergy present in the Jathara (stomach and duodenum). It is the seat of grahani (duodenum), so called because it withholds the food for a certain time inside the Amasaya (stomach) to facilitate digestion. It is considered to be the most important because each and every nutrient that one ingests first comes to the Jathara and is subjected to the action of Jatharagni. It digests the food materials that consist of the five basic elements and transforms it for utilization by the respective Dhatus paramanus (tissues). It is also responsible for separation of the food material into the essence portion (Prasad) and the waste products (kitta) in our body. (Ash.Hri.Su. 12/8).

It is directly related to Dhatvagni or bioenergy in the cells and their metabolic processes, with ultimate tissue metabolism or Dhatu-Paka process. All the Dhatvagni depend on the normal, healthy state of Jatharagni. If the Jatharagni is hyperactive (Tikshna) or hypoactive (Manda), it will cause an excessive or retarded action of the Dhatvagni. This disturbed action ultimately leads to various disorders. Jatharagni is the main important Agni that controls the function of all other 12 Agnis. All the Agnis are totally dependent on the status of Jatharagni. (Cha.Chi. 15/39-40).

According to modern medicine, metabolic processes, division and multiplication are going on in all cells (Dhatu paramanu) of our body from birth till death. The cell is the functional unit of the body. The constituent parts of the body, if further divided into the atoms are sure to become innumerable as such cells or atoms are exceedingly numerous, very minute and ultrasensory. In the conjunction and disjunction of cells, the activating factors are Vata and the nature of action.

Jatharagni is also classified into four categories according to its performance of digestion in the human being namely: - **Vishamagni, Tikshanagni, Samagni and Mandagni.** **Vishamagni** changes between digesting food quickly and slowly. When this Agni is affected by the Vata Dosha, it creates different types of udargataroga. (Cha.Chi. 15/50). **Tikshnagni** means very quick/very sharp/very fast. Tikshnagni is a state of very quick digestion of food, regardless of the type of food. (Cha.Chi. 15/50).

Acharya Shushrut states that when the power of digestion is increased from normal to above normal, food digests very quickly and produces hunger or the desire for food. When food is digested, the throat, the mouth cavity and the lips become dry with a burning

sensation. This condition is known as “Bhasmak Roga” according to Ayurveda.

Samagni digests and assimilates food properly at the proper time. This thus increases the quality of the Dhatus (supportive tissues of the body). Persons having Samagni are always hale and healthy. (Cha.Chi.15/51).

Mandagni “Mand” means slow. The meaning of the Mandagni is slow digestive power or digestive capacity. Those who are having Mandagni eat very little and are unable to digest the smallest amount of food. (Cha.Chi.15/51).

Causes of Mandagni(indigestion) :-

- Excess intake of water.
- Irregular posture after intake of food.
- Suppression of manifested natural urges.
- Awakening at night & sleeping in day time.
- Jealousy, Fear, Anger, Greed, Pain, Depression.
- Spicy foods, chilly, oily foods, medicines, milk products, tobacco and alcohol.
- Medications like pain killers, antibiotics, oral contraceptives, steroids and Intestinal parasites.
- Diseases of pancreas, liver, gall bladder, intestinal infections etc.
- During pregnancy, premenstrual period, menopausal period in women. (Ma.Ni.6 & 8).

Diseases by Mandagni (Indigestion) :-

A variety of uncomfortable sensations mainly in the upper abdomen occur due to indigestion. The discomfort may be experienced as pain, pressure, burning sensations, bloating, excessive gas, belching, nausea or fullness after eating a small amount of food. (Ma.Ni.6/27).

- Heartburn: Also called ‘reflux oesophagitis’, this is caused by the abnormal function of the muscle valve situated at the junction of the food pipe and the stomach. Chronic heartburn may result in narrowing of the food pipe and therefore block the passage of food.
- Gastritis: It is the term used for diffuse inflammation of the lining of the stomach. The symptoms are discomfort in the upper part of the abdomen, loss of appetite, nausea and feeling full after eating small portions of food.
- Peptic ulcer: Pain in the upper and middle part of the abdomen is one of the common symptoms of peptic ulcer. Endoscopy is the best method to diagnose peptic ulcer. To manage it, one should stop smoking and use of non-steroidal anti-inflammatory medicines.
- Irritable Bowel Syndrome: This is one of the commonest disorders of the intestine where there is long-term disturbance in the bowel functions and pain in the abdomen for which no apparent cause can be detected. Symptoms include bloating of the abdomen, sense of incomplete passage of stool, excessive gas and audible sounds from the intestines.

- Gall Bladder diseases: Stones in gall bladder and its inflammation are two main causes of symptoms of indigestion. Gall stones may block the tube of the gall bladder and cause moderate to severe pain. An ultrasound examination is the best way to diagnose gall stones. These stones need treatment only if they cause symptoms. Surgery is the main treatment for troublesome gall stones.
- Liver diseases: Hepatitis, or the inflammation of the liver, leads to symptoms of indigestion. Symptoms include pain in the upper and right part of the abdomen, loss of appetite, nausea, vomiting and jaundice.
- Pancreas diseases: Chronic pancreatitis can cause pain in the upper abdomen, which is often related to meals. It can also lead to deficiency of the digestive enzymes produced by the pancreas. Normally indigestion that is not associated with diseases of the organs of digestive system does not lead to serious disease conditions but indigestion that appears first time in a middle-aged person needs detailed examination and investigation by a doctor.

Treatment for Mandagni(Indigestion) :-

- Virechan is the line of treatment for Mandagni in common.(Cha.Chi.13/61).
- Fasting completely for a day helps to normalize,imbalanced agni& digest Aama.
- Consuming liquid foods, boiled vegetables or fruit juices for 2- 3 days also improves agni and relieves indigestion.
- Avoid the factors (mentioned above) which cause indigestion.
- Mix a ½ tea spoon of lemon juice, ½ tea spoon ginger juice and little salt in a cup of water and consume thrice daily.
- Drinking ½ glass of warm water once in 2 hours increases agni and digests ama.
- Cook ½ cup of rice with 4 cups of water with crushed ginger (1") and salt. Powder long pepper (2 or 3)and fry it in a spoon of cow's ghee and add it to gruel. Consume this when it hot. This is very light to digest &relieves colic pain.
- Consuming well balanced food balances doshas and agni and hence keeps the body healthy and free from diseases.

Conclusion :- As a civic is cautious in the duties of the city and the charioteer in those of the chariot, a wise person should be cautious in duties relating to his own body. (Cha.su.5/103).

- When the power of digestion – (Agni) is not good or when you don't feel hungry then you should not eat and wait until you get proper hunger.
- Proper digestion can happen only when we take food with proper hunger.
- If food is taken when there is no hunger or heavy food is taken when there is less hunger will lead to indigestion further to any disease of the body.
- In short prevention from the cause of any disease is the basic principle of treatment of any disease. If we avoid the things that can produce Mandagni,then we can achieve a healthy life

Research : Literary

Role of Gayatri Mantra meditation In Stress Management

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ABSTRACT

Ayurveda is the divine science of life being practiced since time immemorial. Researches in the field of Ayurveda give emphasis to health prophylaxis along with treatment. Ayurveda classifies individuals according to Prakruti. There are two types of prakruti-Sharirprakruti and manasprakruti. Sharirprakruti belongs to Vataj, Pittaj, kaphaj and Manasprakruti belongs to Satva, Rajas and tamasprakruti. Stress is one of the main predisposing factor of various lifestyle disorders. Recent researches suggest that Satvapradhanprakruti people manage stress in a better way as compared to Rajas & Tamas. So chances of lifestyle disorders is more in Rajas & Tamas dominant people & less in Satva dominant people. Meditation of the Gayatri Mantra awakens the subtle energy centres of the body and hence induces the spiritual illumination and enhances the satvaguna. Chanting of gayatri mantra modifies individual's manasprakruti from rajas pradhan and tamaspradhanprakruti to satvapradhanprakruti. Thus, it is significant that the prolonged meditation of the Gayatri has a cumulative effect on our body and our mind. Mind becomes sharper and immune system is more stronger. Our energy centers, including our main Chakras, are activated by the vibrations of the Gayatri mantra and this has a positive and healing effect on our mind and life (Prana). It excels the force of Rajoguna which provokes the hidden potentials and progress of life. It refines the tamoguna which creates chastity, endurance, provides courage to fight against injustice. Thus, it enables the individual to follow the path of satvaguna and hence least affected by ill-effects of stress.

Keywords : Prakruti, manasgunas, gayatri mantra, stress, lifestyle disorders.

INTRODUCTION

Ayurveda is the divine science of life being practiced since time immemorial. Researches in the field of Ayurveda give emphasis to health prophylaxis along with treatment.

Ayurveda divides persons according to prakruti. They are of two types :

- SharirPrakruti,
- ManasPrakruti.

Sharirprakruti belongs to vatta, pitta, kapha and manasprakruti belongs to Sattva, Rajas

and Tamas. Rajas and Tamas are considered as the two doshas of the manas (mind).

Sattva : The illuminating, pure or good quality which leads to clarity and mental serenity. Sattva is full of love. Sattva is light, light giving full of knowledge.

Rajas : The quality of mobility or activity which makes a person active, energetic, tense and wilful.

Tamas : The dark and restraining quality which obstruct and counteracts the tendency of rajas to work and of sattva to reveal. Tamas is full of destruction. Tamas is heavy, covering and obstructing light.

In spite of this different nature they help mutually in creation. The quality of sattva leads towards the divine and tamas towards the demonic while in between these two stands rajas. Purity of the body and mind is another prerequisite for concentration of mind and proper meditation.

Stress is the enigma that is plaguing humans increasingly in the present days. We are neither being able to stop stress nor control stress. Modern life style and modern occupations are fuelling more and more expectation 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 roots in stress at one or other point of time.

Recent researches suggest that Satvapradhan prakruti people manage stress in a better way as compared to Rajas & Tamas. So chances of lifestyle disorders is more in Rajas & Tamas dominant people & less in Satva dominant people. It is impossible to change sharir prakruti but a person can definitely change the percentage of satva, rajas and tamas in his manas prakruti. He can achieve more powerful and superior quality of mind with the help of self-psycho analysis and by evolving oneself with philosophic thoughts by nurturing self mind with positive emotions. Various means to overcome rajas and tamas are described in Upanishads, allied literature and even in Charak Samhita. One of such effective means is to chant the Gayatri mantra.

The Gayatri Mantra:

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्

The Gayatri Mantra in English :

Aum Bhoor Bhuvah Swah Tat Savitur Vareniyam Bhargo Devasya Dhimahi Dhiyo Yonah Prachodayat

Aum : The divine sound of Aum teaches us that our individual consciousness is a subset of the Universal Consciousness, that pervades this Universe. Therefore we should live life in a manner that upholds the flag of Universal Consciousness.

"Bhoor" : teaches us to identify and modify those traits that destroy us and replace them with those that uplift us in an all round manner.

"Bhuvaha" : tells us to carry out our appointed duties very meticulously and after having done the same and accept the results as God's grace. We should engage in actions and Karma that uphold the welfare of all.

"Svaha" : emphasizes the importance of developing a balanced thought process where we can face both joy and sorrow, pain and pleasure, profit and loss, good and bad with equanimity of character.

"Tat" : signifies that we should not look upon the pleasures attained via the body and senses to be the be all and end all of our life. Sensory pleasures and their benefits are transient in nature (short term feel good pleasures) and spiritual pleasures in contrast are lifelong and eternal.

"Savitur" : emphasizes that we gain wisdom, righteous intellect, good health, righteously gained wealth, righteously gained name and fame etc.

"Varenyam" : tells us to imbibe only those traits that are truly exalted.

"Bhargo" : tells us to imbibe purity in our body, mind, wealth, health, home, dress and behavior .

"Devasya" : signifies developing a generous, divine and farsighted thought process.

"Dhimahi" : signifies developing the ability to imbibe good qualities, great character, divine glories and high thinking.

"Dhiyo" : refers to development of our intellect . It signifies to us that we should not blindly follow an individual, ritual, literature or sect just because a crowd of people is doing so. Instead we should apply discriminating intellect to understand what is just and right and follow the same.

"Yonaha" : signifies to us that we should imbibe all good qualities for not just our well being but also for the benefit of those around us.

"Prachodayaat" : signifies the quality of Inspiration. It signifies to us that we live our life in such a way that we are a source of inspiration to others, so that they too may live life in the same righteous, wise way.

Meaning of the Gayatri Mantra in Summary : It is a form of meditation(prayer) to the Almighty Supreme God, the Creator of the entire Cosmos, the essence of our Life Existence, the remover of all our pains and sufferings and the One who grants us our happiness. We beseech HIS divine grace to imbue within us HIS divinity and brilliance which may purify us and guide us on the path of righteous wisdom and intellect.

GLORY OF GAYATRI MANTRA

The Gayatri mantra is a meditation to protect one from all human sins, physical dissipation and to bestow knowledge, health and longevity. This mantra is supercharged with power and has been suggested to mankind under the Vedas. Gayatri mantra has a dynamic force and enjoins the brahmachari (bachelor), the grahasthas (house holder) and the vanaprastha (forest dweller), all to repeat this sanctified mantra at least 108 times a day. Gayatri Mantra is the first mantra to be taught in schools in the olden days as it enabled the students attain

righteous and far sighted wisdom and energized them to absorb the studies ahead of them. The Gayatri Mantra is a part of the Rig Veda Samhita, Mandala III, 62 – 10. The Maithrayani Upanisad explains the meaning and importance of meditation of Gayatri mantra. The chanting of Gayatri Mantra activates the network of nerves in the mouth and stimulates specific glands. This modifies the individual's personality out of the rajas and tamaspradhanprakruti towards satvapradhanprakruti (It remove ignorance from the subconscious and thus help in the emergence of light of spirit within the individual soul).

SCIENTIFIC BASIS OF GAYATRI MEDITATION

There are twenty-four letters in Gayatri-Mantra which are related to twenty-four such glands located in the body which, on getting stimulated, activate and awaken the powers of mind for righteous wisdom (satvaguna). The syllables of gayatri mantra are uttered by different parts of the mouth such as throat (larynx), tongue, teeth, lips and the root of the tongue. During speech, the nerve-fibres of the particular parts of the mouth from which sound emits stretch up to various parts of the body and exert pressure on the corresponding glands. There are various large, small, visible and invisible glands in the body. Uttering of different words has its impact on different glands and by such impact the energy of these glands gets stimulated.

The performance of Gayatri meditation serves as a primary route for self purification (increasing satvaguna and decreasing rajas and tamas). It enhances the, Atma Shakti and protects them from the devastating effects of sins.

CONCLUSION

This shows chanting of gayatri mantra can modify individual's manasprakruti from rajas pradhan and tamaspradhanprakruti to satvapradhanprakruti. Thus, it is significant that the prolonged meditation of the Gayatri has a cumulative effect on our body and our mind. Mind becomes sharper and immune system is more stronger. Our energy centers, including our main Chakras, are activated by the vibrations of the Gayatri mantra and this has a positive and healing effect on our mind and life (Prana). It excels the force of Rajoguna which provokes the hidden potentials and progress of life. It refines the tamoguna which creates chastity, endurance, provides courage to fight against injustice. Thus, it enables the individual to follow the path of satvaguna and hence least affected by ill-effects of stress.

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Review Article

PREDIABETES

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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. Diabetes Mellitus (DM) comprises a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of DM exist and are caused by a complex interaction of genetics, environmental factors and lifestyle choices. DM is the leading cause of end-stage renal Disease (ERSD), non traumatic lower extremity amputations and adult blindness. Diabetes is raising an epidemic all over the world esp., in country like India. Increasing worldwide, DM will likely continue to be the leading cause of morbidity and mortality in near future.

Epidemiology

The worldwide prevalence of DM has risen dramatically over the past two decades. It is projected that the number of individuals with DM will continue to rise in the near future. It is believed to be one of the main criteria for deaths all over the world. Important concern of concentrating on diabetes mellitus is its prevalence particularly Type 2 diabetes is rising all over the world. Prevalence of type 2 diabetes rises with increasing age. More people may remain undiagnosed esp. in our country where we have very less health concern. If obese people with impaired glucose tolerance (IGT) and pre-diabetic persons are included along with known diabetics in India, we may find billions of diabetics. Another important issue is medical expenditure on medicines, investigations, regular follow-ups, any disability occurring in between, its surgical corrections its overall management, rehabilitation etc. is financial burden on diabetics. If one cannot afford it life remains miserable and at risk. No doubt for survival & expectancy of life in these pts. finances are needed. Major cardiovascular risk factors are usually present, before the diagnosis of type 2 diabetes as well as during the course of the disease. Hence life span or life expectancy of diabetics lowered undoubtedly.

On this background more research studies are needed in preventive & curative way which are directed at the disease (DM) and complications of micro & macro vascular disease which will lead to reduced costs of diabetics in the future. Ayurved not only prescribes the management of diabetes & its complications but also advocated preventive measures, so that there won't be occurrence of the diseases & its complications. The principles and teachings of Ayurveda should be hence followed in diabetes care.

One interesting thing I have to mention here is the prediabetes or upcoming diabetes is defined by the ADA (American Diabetes Association) in the year 2002. A person with impaired fasting glucose (IGF –BSL- 110-125 mg/dl) 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.

Charakacharya, 2000 years back defined the signs & symptoms of Prameha (DM) as 'Prameha Purvarupan' which is the preclinical, asymptomatic stage of the diabetes, where the disease may be delayed & may be reversed by intensive life style changes esp. diet & exercise.

Pre- Diabetes

Type 2 Diabetes Mellitus is preceded by a period of IGT (impaired glucose tolerance/ Glucose challenge Test). This test will diagnose whether diabetes exists or not by indicating whether or not the body is using glucose. Pre-diabetes, also known as "impaired glucose tolerance" is a health condition with no symptoms, it is a state that occurs when a person's blood glucose levels are higher than normal but not high enough for a diagnosis of Diabetes.

It is found that people who develop Pre- diabetes develop type 2 diabetes during an average 3 yrs follow up. Other studies show that many people with Pre- diabetes develop type 2 diabetes in 10yrs.

It is very important to diagnose pre-diabetes earlier as treatment of the condition may prevent more serious health problems. It is commonly seen that the health complications associated with type 2 diabetes often occur before the medical diagnosis is made. People with Pre-diabetes can prevent or delay the development of type 2 diabetes through changes in lifestyle that include modest weight loss and regular exercise. People with Pre- diabetes, intervening early can turn back the clock and return increased blood sugar levels to the normal range. By indentifying the signs of Pre- diabetes before diabetes occurs, one can prevent type 2 diabetes all together and lower the risk of complications associated with diabetes like cardiovascular disease, atherosclerosis, diabetic microangiopathy, diabetic neuropathy, nephropathy and retinopathy. Etc.

Studies have shown that people with pre- diabetes can prevent or delay the development of type 2 diabetes through changes to their lifestyle that include modest weight loss and regular exercise. Thus persons with Pre- diabetes, intervening early can actually turn back the clock and return increased blood sugar levels to normal range.

HETU

Addiction to the pleasure of sedentary habits, sleep, curds, soup of the meat of domesticated and aquatic animals and animals inhabiting marshy lands, milk preparations, freshly harvested food articles, freshly prepared alcoholic drinks, preparations of jaggery and all kapha aggravating factors are responsible for the causation of Prameha.

Person's sleeping during day time, not exercising (not doing any kind of physical work),

addicted to the pleasure of sedentary habits, excess dietary habits like cold, oily, sweets, and fatty food and more of liquid preparations are prone to get prameha in the future.

The following factors help in immediate manifestation of prameha due to kapha:

1. Frequent and excessive intake of fresh corns like hyanaka, yavaka (a variety of *Hordeum Vulgare* Linn.), Cinaka, uddalaka, naisadha, itkata, mukundaka, mahavrihi, pramodaka and sugandhaka.
2. Intake of pulses like fresh Harenu (*Pisum sativum* Linn.) and Masa (*Phaseolus radiates* Linn.) with ghee.
3. Intake of meat of domesticated, marshy, and aquatic animals.
4. Intake of vegetables, tila (*Sesamum indicum* Linn.), oil cake of tila, pastry, payasa (kheer-a type of milk preparation), krushara (gruel preparation of tila, rice and black gram), vilepi (type of gruel preparation with four times of water) , and preparations of sugarcane.
5. Intake of milk, fresh wine, immature curd, and curd which are mostly liquid, sweet and immature in nature.
6. Avoidance of unction and physical exercise
7. Indulgence in sleep, bed rest and sedentary habits.
8. Resorting to even such regimens which produce more of kapha, fat (cholesterol) and urine.

The following factors help in immediate manifestation of Prameha due to aggravated Pitta :

1. Intake of hot, sour, saline, alkaline, and pungent food.
2. Intake of food before the digestion of previous meal (ajeerna bhojana).
3. Exposure to excessively hot temperature (hot climate) , heat of the fire, physical over exertion and anger.
4. Eating mutually contradictory food items.

Vata gets immediately aggravated in individual whose body is affected due to following reasons :

1. Excessive intake of astringent, pungent, bitter, rough, light, cold things.
2. Excessive indulgence in sex and physical pleasure.
3. Excessive administration of emesis, purgations, asthapana type of basti and nasya (oleation therapy).
4. Suppression of the manifested urges, fasting, assault, exposure to heat, anxiety, grief, excessive blood letting, staying awake at night and improper posture of the body.

Risk factors for Type 2 Diabetes mellitus :**(Should get tested for Pre- Diabetes)****1) Family History of diabetes (i.e. parent or sibling with type 2 diabetes)**

It is strongly believed that it is due to some genes, which pass from one generation to another. It depends upon closeness of blood relationship if mother is diabetic, risk is 2-3%, father is diabetic, risk is more than the previous case and if both the parents are diabetic, it has much greater risk for diabetes.

2) Obesity & fat distribution (i.e., $\geq 20\%$ desired body weight or BMI $\geq 27 \text{ kg/m}^2$)

Being overweight means increased insulin resistance that is if body fat is more than 30%, BMI ≥ 30 , waist girth 35 inches in women or 40 inches in males.

3) History of GDM (Gestational Diabetes mellitus)

Or, delivery of baby over 9 lbs. (1lbs. = 450gms)

4) Age ≥ 45 yrs

Increased age is a factor, which gives more possibility than in younger age. This disease may occur at any age, but 80% of cases occur after 50yrs, incidences increases as age does in this group. Type 2 cases often (but not always) start after 40 yrs (or still later), patients are often (but not always) obese and have physical under activity.

5) Previously identified IFG (Impaired Fasting Glucose) or IGT (Impaired Glucose Tolerance)**6) Hypertension (BP $\geq 140/90$ mm of Hg)****7) Polycystic Ovarian Syndrome****8) Poor diet**

Malnutrition related diabetes : Improper nutrition, low protein and fiber intake of refined products are the expected reasons for developing diabetes.

9) Sedentary lifestyle

Sedentary lifestyle is a global public health problem. Persons with such lifestyle are more prone to diabetes, when compared to those who exercise thrice a week, are at lower risk of falling prey to diabetes.

10) Stress

Either physical injury or emotional disturbance is frequently blamed as the initial cause of the disease. Any disturbance in corticosteroid or ACTH therapy may lead to clinical signs of the disease.

11) Sex

It is commonly seen elderly esp. males but strong evidence of developing diabetes in females with multiple pregnancy has been observed or in females suffering from Polycystic Ovarian Syndrome (PCOS)

12) Drug induced

Clozapine, olanzapine, risperidone, quetiapine, & ziprasidone are known to induce type 2 DM

13) Infection

Some of the staphylococci are supposed to be responsible factor for infection in pancreas

PURVARUPA (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. The clinical features manifested incompletely due to the pathogenic process being minimal should be taken as the specific prodromal features of the disease.

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 taalukantha shosha-dryness of the mouth, throat & palate
5. Pipasaam-polypepsia
6. Aalasya-fatigue
7. Malam kaaye- exudation of excreta from the body
8. Kayachhidreshu padeham- feeling as if the body covered with extraneous material
9. Shatpada pipilikabhishcha- swarming of ants over the body, attraction of ants by the body
10. Mutre abhidhawanti pipilikaashcha- swarming of ants on the urine, urine attracting ants
11. Mutrecha mutradoshan- different doshas entered the urinary tract in vitiated conditions
12. Swedo angagandha- sweating ,emanation of foul smell from the body
13. Snigdha picchil gurugatranaam- heaviness of the body
14. Saada- fatigued, weakness
15. Shwasa- breathlessness

16. Talu gala jivha danteshu malotapatti- excessive formation of excreta from palate, throat, tongue, dentures etc.
17. Vruddhishcha nakhanaam- excessive growth of nails
18. Sheetapriyatvam- liking for cold things
19. Keshyavruddhi- excessive growth of the hair
20. Hrunetra shravanopadeha- exudation of excreta from eyes, tongue and ears
21. Shithilatvam ange- flabbiness of the body
22. Sweda- sweating
23. Shayyasanswapnasukha tarbhashanga- liking for constantly lying on the bed, sitting, sleeping and leading an easy life , a feeling as if the cardiac region is covered with extraneous material
24. Ghanaangata- corpulence of the body
25. Paridaaham- burning sensation
26. Suptatachaangenshu- numbness of the body

SYMPTOMS OF PRE-DIABETES

Although most people with pre- diabetes have no symptoms at all. Symptoms of Diabetes may include unusual thirst, a frequent desire to urinate, blurred vision, or extreme fatigue. Very obese children and very obese adolescents may show pre-diabetes & diabetes like symptoms. Medical investigations like Fasting Plasma Glucose (FPG), & Impaired Glucose Tolerance (IGT) may show signs that suggest pre- diabetes may be present.

Investigations and Diagnosis

Diagnostic tests for Prediabetes are Fasting Plasma Glucose test (FPG) & the Oral Glucose Tolerance Test (OGTT) and are done for all ages and races .If blood glucose level is abnormal following the FPG, it is Impaired Fasting Glucose (IFG) .If blood glucose level is abnormal following the OGTT,it is Impaired Glucose Tolerance (IGT).

FPG Test Results

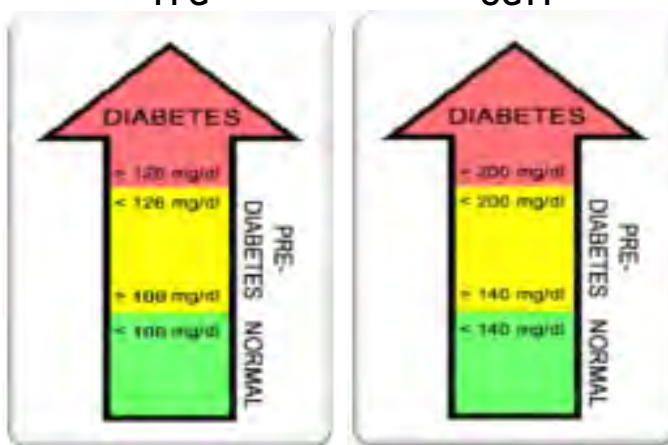
Condition	FPG
Normal	<110 mg/dL
Pre-Diabetes	110 mg/dL-125 mg/dL
Diabetes	> 126 mg/dL on two or more tests

OGTT Test Results

Condition	OGTT
Normal	< 140 mg/dL
Pre-Diabetes	140 mg/dL-199 mg/dL
Diabetes	> 200 mg/dL

FPG

OGTT



Diabetes types & reversal

Types Of Diabetes	Normal Glucose Tolerance NGT	Hyperglycemia			
		Impaired Fasting Glucose Or Impaired Glucose Tolerance	Diabetes Mellitus		
			Not Insulin Requiring	Insulin Required For Control	Insulin Required For Survival
Type 1	→			→	→
Type 2	→	→		→	→
Other Specific	→	→		→	→
Gestational Diabetes	→	→		→	→
Time	→				→
FPG (mg/dl)	< 110	110 – 125		≥ 126	
2 hrs PG (mg/dl)	< 140	140 – 199		≥ 200	

DIAGNOSIS OF PRAMEHA ACCORDING TO AYURVED

In a person who finds premonitory signs & symptoms of Prameha also with excessive urination, should be diagnosed as Pramehi. Also who finds total or atleast half of these signs & symptoms with excessive urination, is diagnosed as Pramehi.

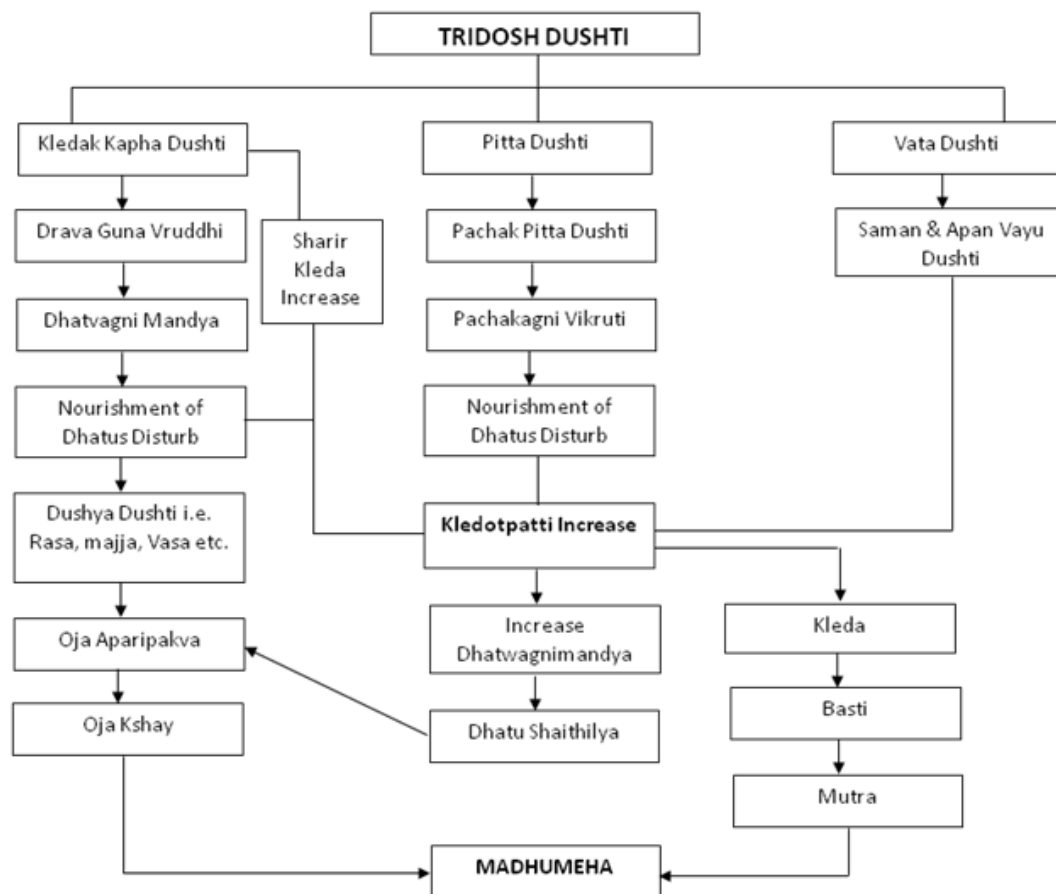
PRAMEHA UPADRAVAS

Complications of prameha are thirst, diarrhea, fever, burning sensation, weakness, anorexia, and indigestion. Carbuncles which putriify the muscle tissues like alaji and vidradhi appear during the chronic stage of the disease.

CHRONIC COMPLICATIONS OF DIABETES MELLITUS		
MICROVASCULAR	MACROVASCULAR	OTHER
1. EYE DISEASE A. RETINAOPATHY (NONPROLIFERATIVE & PROLIFERATIVE) B. MACULAR EDEMA C. CATARACTS D. GLAUCOMA	1. HEART A. CORONARY ARTERY DISEASE	A. GASTRO INTESTINAL (GASTROPARESIS, DIARRHEA)
2. NEUROPATHY A. SENSORY AND MOTOR (MONO AND POLY NEUROPATHY) B. AUTONOMIC	2. WHOLE BODY B. PERIPHERAL VASCULAR DISEASE	B. DERMATOLOGIC
3. NEPHROPATHY	3. BRAIN C. CEREBRO VASCULAR DISEASE	C. GENITO URINARY (UROPATHY / SEXUAL DYSFUNCTION)

Samprapti

All pramehas finally leads to madhumeha. Tridosha and rest sampratpti ghataks take part in the pathogenesis of madhumeha as follows :



TREATMENT OF PREDIABETES

1. Lose modest amount of weight (5-10% of total body weight) through diet and moderate exercise, such as walking-30mins a day and 5 days a week.
2. Treatment for cardiovascular risk factors, such as smoking, tobacco chewing, hypertension and high cholesterol.

Pramehas get immediately cured by different types of strenuous exercises, unction, bath, sprinkling of water over the body and application of ointment made by sevyā (ushira), tvak,

ela, aguru, candana, etc.

Factors responsible for the causation of different types of Prameha should be avoided even after these pramehas are manifested. For the prevention of the occurrence of a disease different etiological factors are described during the treatment of that particular diseases (even after its manifestation)

Patients suffering from Prameha can be classified into two categories .viz.,

- 1) Those who are **Obese and strong**
- 2) Those who are **Emaciated and weak**

Patients belonging to the latter category should be given nourishing therapy. Patients of the former category who are strong and who have more doshas in the body should be administered elimination therapy.

For elimination therapy (Vamana, Virechana) , various recipes are described. After the excreta are eliminated from the body, the patient should be given santarpana or refreshing therapy because apatarpana (fasting) therapy in this condition may produce gulma (cystic tumour) , consumption, pain in phallus and urinary bladder including kidney and retention of urine. Such patients should be given santarpana therapy depending upon their power of digestion.

Factors responsible for the causation of different types of Prameha should be avoided even after these pramehas are manifested. For the prevention of the occurrence of a disease different etiological factors are described to be avoided. These very causative factors are also required to be avoided during the treatment of that particular diseases (even after its manifestation).

Pramehi should live like sanyasi (muni) without covering over the head and should walk bare footed 100 yojan (~300km) or should get in physical work like digging well, ponds etc. or should have their livelihood on urine and cowdung and should always live in the company of cows.

APATHYA (STRICTLY CONTRAINDICATED)

Sitting on the same place continuously (not doing physical work), sleeping during day time, using new cereals, curd in meals, suppression of urge of passing urine, smoking, hot fomentation, blood letting, drinking alcohol, like sauvirak, sura etc taila (oils), ksharghruta (ghee), guda (jaggery), sour foods, sugarcane juice, pishtanna (food rich in carbohydrates) and meat of aquatic animals.

PATHYA (INDICATED)

Vegetables having bitter taste, padawal, (bitter gourd) meat of non-domesticated animals, saidhav lavan (rock salt) and pippali (Piper longum), Shali type of rice, pulses like moong, kulitha (pulses)

FOLLOW UP

If a person's blood sugar levels (BSL) is in normal range, it is advised and reasonable to be checked every 3 yrs, If one is diagnosed for having pre-diabetes, blood sugar levels are to be checked for type 2 diabetes every year at least for 3 years, after the diagnosis.

A large 3 year medical study in patients at risk of developing type 2 diabetes suggests that lifestyle changes with exercise and mild weight loss, and treatment with medications that work to sensitize a person to the actions of insulin, can decrease the chance that a person with pre-diabetes will get type 2 diabetes.

Changing the person's lifestyle habits with increased physical activities and mild weight loss was more effective than medications at reducing the risk of developing type 2 diabetes. For some people with pre-diabetes, intervening early can actually return increased blood sugar levels to the normal range.

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Review Artical

LITERARY REVIEW OF KUPIPAKVA RASAYANA

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ABSTRACT

Rasashastra is science of mineral and herbomineral. Mainly it work on PARADA (Mercurial) preparation. In Rasashastra there are many method to control or convert the Parada (mercury) in the form which is to be work as Rasayana or curing the disease in certain doses. Which is called Murchchana of Parad.Kajjali, Parpati, KupipakvaRasayana PottaliRasayana these all are murchchana of Parada. In these all method KupipakvaRasayana is unique and somewhat difficult method. So an attempt was made to study literary view of Kupipakva Rasayana.

Key Word:-Kajjali,KupipakvaRasayan, Parada, Murchchana

INTRODUCTION

The preceptor of Indian Rasshastra were initially indulged very much in the achievement in dehavada and lohavada .In this Acharyas found mercury and few other metal and mineral.They some toxic and harmful effect minimization some shodhan are done and after that some specific also observe procedure in which maram , murchana , jarana, are done for parad .

As Rasashastra developed the method of effective preparation of drugs are also developed because of as time goes on the human community suffered due to the lot of elements. Kuppipakva method is developed mainly for Ghandhak jarana in which sulphur is added with mercury in different proportion and burns with the help of fire in glass bottle. The aim was to produce strong bond structure between the molecules of mercury and the sulphur, to combet and chronic disease.

THE TYPE OF KUPIPAKVA ARE

On

1) Sagandh 2) Nirgandh

On the basis of corking to bottle during heating proccess

AntardhumTalasth

BahirdhumKanthasth

According to where medicine we get in bottle are of two type.

- 1) Talasth 2) Galasth

Historical Aspect of KupipakvaRasayan

- 1) First try of kupipakva is in musha in 10 A.D
- 2) In 13 A.D shriYashodharaBhatta mentioned Rasa Sindoor Preparation under heading of 'Udaybhas Rasa' in RasprakashSudhakar and Rasa Karpoor as a Ghansager Rasa
- 3) Rassindoor also described in different textbook with different name like Rasachintaman (shrianantdevsoori) Rasaparthiv Rasa Ayurvedprakash Sindoorhan

Material and Method

A) Material (Instrument)

- 1) Kupa
- 2) ValukaYantra
- 3) Burner/ Bhastri
- 4) KhalvaYantra
- 5) Iron Rod Shalaka
- 6) Copper Coin.

B) Drug

- 1) Parad (Mercury)
- 2) Gandhak (Sulphur)
- 3) Metal
- 4) Mineral
- 5) Bhavanadravya

METHODOLOGY

The Kupipakva preparation mainly divided into three phases

- 1) PoorvaKarma (Preheating phase)
- 2) Pradhan karma (Heating Phase)
- 3) Paschat karma (Post heating phase)

1) Purva karma (Pre heating phase)

It include 1) Kajjalipreparationand titration

2) Coating of bottol(kapadmitti)

Use of cotton cloth and multanimitti and according to heat 3,7,10,21 coating done

3) Filling of raw material, it include the filling of kajjali in kachkupi

4) Fix the kachkupi in valukayantra properly that the kupi will heated properly with equil heat from all side

2) Pradhan karma (Heating phse)

It include

1) Heating procedure and temperature pattern the heat is given in three stages

a) Mandagni this is stage where only kajjali melting done this temperature is near about 200-250°C

this show that gandhak only melt

b) Mudhyan Agni

this start from melting of gandhak and fumes then start temperature increasupto 250°C-450°C in this stage we need clearing of mouth by shalaka(hot rod)

c) Tivra Agni

This start when fumes stop from kupipakva then we need the increase heat at maximum limit in this the temperature of kupi increase upto450- 650°C

2) Observations

This include observation of kajjali (with cold rod) stage fumes and heating pattern

3) ShalakaSancharan (Clearing)

This is to avoid the blockge of mouth by gandhak and other gas and breakage of kupi this done with the help of taptashalaka (hot rod)

4) Mudrana (Cracking)

This is for anterdhoomkupipakvarasayan in this we close the mouth of kup with the help of crock which is wooden glass and then with multanimitti.

3) Paschat karma (Post heating)

This include 1) Removal of bottle

This is done after 24- 36 hour of heat stop it is because somewhat Pachan of rasayan done with the help of hot soil and softly remove.

2) Breaking of bottle (KupiBhedan)

Separate the all coating of kupi and then accordingly to the final product the kupibhedan is done which thread wet with kerosene burn around the bottle and then after heating it cover with the wet cotton then sound of kupibhedan comes

3) Removal of medicine

After breaking remove medicine from the kupi carefully and packing done properly.

Some Sidhant (Rules) about kupipakva

- 1) When metal like Nag, Vanges are in medicine then first they melt and mix with Parad and amalgam form and then mix with Gandhak and kajjali form
- 2) When metal like Suvarna (Gold) and Roupya (Silver) mix them first thin plate made and dissolve in Paradi.eJaran.
- 3) Other bhasma of non-metallic material are present in kajjali then first make Parad&Gandhakkajjali then mix other material.
- 4) According to size of bottle fill withkajjali upto 1/3 of volume if it is with Navsager and fill bottle with upto 1/4 of volume with Kajjali containing Navsager.

OBSERVATION

Color of flame from kupi according to metal present

Metal Colour of flame

- | | |
|--------------------|----------------------------|
| 1) Roupya (Silver) | Shwet (white) |
| 2) Suvarna (Gold) | Pit (yellow) |
| 3) Tamra (Copper) | Haritneel (greenish /blue) |
| 4) Nag (Lead) | Dull white |
| 5) Loh (Iron) | Red |
| 6) Vang (Tin) | Karoal (grey) |

CONCLUSION

As the Kupipakva Rasayan are difficult to prepare more precaution must be taken for preparation of medicine.

Review Artical

A review on role of Dinacharya in Premature Aging

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Abstract

Aging is classified as one of the natural and yapya (palliative) diseases in Ayurveda. The share of India's population ages 60 and older is projected to climb from 8 percent in 2010 to 19 percent in 2050, a number greater than the total U.S. population in 2012 increasing the prevalence of chronic diseases and disabilities. 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 in prevention of factors responsible for premature aging.

Keywords : premature aging, Ayurveda, dinacharya, jara, vridhdhavastha

Introduction

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 incomes, 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 disease, etc. predominantly in urban, but also in rural areas. Recent projections by World Health Organisation (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 (Chatterji et al. 2008)³. It has been estimated that a 2 per cent 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. Labour productivity increases as a result of lower mandays lost and the reduction in disability and incapacity. This frees resources that would otherwise have been used for treatments and helps to break the poverty trap.

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. Ritucharya and dinacharya of Ayurveda have a lot of importance in the prevention of diseases.

Modern Perspective of Aging

Primary Aging

The definition of primary aging is the physiologic changes associated with age irrespective of the disease process. Primary aging also leads to decreased homeostatic reserve and, therefore, the elderly cannot tolerate the various disease stresses nearly as well as when they were younger.

Secondary Aging

Secondary aging processes result from disease and poor health practices (e.g. no exercise, smoking, excess fat and other forms of self-damage) and are often preventable, whether through lifestyle choice or modern medicine. The process of aging induces the transformation of the face with changes that are usually classified as either chronological or photo induced and that affect the shape, the texture, and the color of the face. Skin texture is mainly determined by wrinkles, which arise from atrophy of the skin layers, elastosis, and facial expressions.

Ayurvedic Perspective

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 *jirṇa* or *vṛddhavastha* (later stage of life). *Vṛddhavastha* 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, retention, analytic ability, etc.). During this phase there is predominance of *vāyu dosha*. Untimely aging 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 aging. 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 well being, fatigue, cough, dyspnea, anorexia, constipation, joint pain, sleep disturbance and difficulty in adjustment to the weather.⁵

Prevention of premature aging and dinacharya

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 aging.

Hence dinacharya, a concept in Ayurvedic medicine that looks at the cycles of nature and bases daily activities around these cycles is very important in prevention of early aging. It is designed for maintenance of health achievement of a long, healthy active life, providing relief from pain and disease thereby achieving satisfactory enjoyment of life and attainment of self-realisation.

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. (Ashtangasangraha). 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, karaija, 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. (Jivhanirlekha) 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 faeces 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 fragrant substances 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 everyday to prevent dryness of body and stiffness of joints due to ageing in elderly (Ashtanghrudaya). For massaging, tila taila (gingelly oil), sarshapa taila (mustard oil), narikela taila (coconut oil) or any medicated oils like Narayana taila may be used. Oil massage ensures softness

and unctuousness of skin, free movement of joints and muscles; renders nourishment, improves peripheral circulation and eliminates metabolic wastes. (Charak) 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

- Lifetime 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.⁶ 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 efficiency of vital organs, improves skin color, promotes appetite and digestion and prevents obesity and early aging. Aerobic exercises (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, hair cut, clipping of nails etc.

- Marital Life

Person should avoid extra marital sexual relationship and sexual intercourse with a woman suffering from disease to prevent dhatu kshaya in elderly.

- Food

Whole grain, amalaki fruit, mudga (green gram) as also stated in modern medicine are to be consumed daily (Ch. Su. 5. 12). Various types of fruits, shaka varga 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 (Ch. Su. 27). It has curative in chronic fever and wasting diseases. (Su. Su. 45) 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 men⁷ According to Charak and Sushruta all varieties of salts are unctuous, hot, sharp and most exceedingly appetizing, palatable, promoter of digestion, laxative and alleviator of Vata. (Cha.Su. 1, 27) 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.

Conclusion

The highly skewed public health expenditure on curative care has meant lack of resources for preventive health care. Implementing good “preventative” health screening programs such as Ayurvedic daily regimen (dinacharya) and seasonal regimen (seasonal regimen) along with sadvritta are extremely important to prevent lifestyle disorders and foster healthy aging.

Awareness about simple rules of dinacharya should be included in syllabus of moral science of school children. Short term courses and workshops about practicing dinacharya 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 Swasthavritta of various Ayurvedic colleges to progress research on promotive, preventive and therapeutic interventions generally on various degenerating conditions and aging. Income tax exemption and financing relating to preventive health care treatments like panchakarma should be started. Practising dinacharya will not only reduce premature aging but also reduce the disease burden of geriatric diseases, morbidity and DALY.

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CASE STUDY OF FALLOPIAN TUBAL BLOCK

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Abstract

Infertility means not able to achieve conception within certain parameters and is a common problem of about 10% of women aged 15 to 44. Fault can be with the woman (33%), or the man (33%) or with the both sexes or due to unknown problems (33%). Fallopian tubal block is causing infertility in around 40 percent of patients. In the existing system of modern medicine, there is no proper intervention to clear the tubal block. In Ayurveda, *Uttaravasti* and *Yonipichu* are the direct solutions to deliver drug in-situ in the uterus. Present study is a case reporting of fallopian tubal block treated with *Dhanvantaram taila Uttaravasti* and *Yonipichu* (vaginal tampon). Bilateral tubal block was successfully cured with this trail drug and drug delivery methods.

Introduction

A clinical study carried out with the aim of clinical evaluation of effect of *Uttaravasti* and *Yonipichu* (vaginal tampon) with a medicated herbal oil *Dhanvantaram tailam* in bilateral partial tubal block. As per the FIGO manual, tubal factors are causing infertility in around 36-40% of cases. Tubal factors include impaired tubal function, defective ovum pick up, impaired tubal motility, loss of cilia and partial or complete obstruction of the tubal lumen.

Reasons identified for tubal block are pelvic inflammation, endometriosis, previous pelvic or tubal surgery, isthmica nodosa, polyps or mucous debris with in the tubal lumen, tubal spasm, and benign polyps with in the tubal lumen. But in almost half of the patients of tubal block the risk factors are not identified.

In Ayurveda the clinical condition female infertility is known as *Strivandhyatva*. Harita has narrated *Vandhyatva* as failure to achieve a child rather than pregnancy & included *garbhasrava* (abortion) & *mritavatsa* (stillbirth) conditions under this heading. Essential factors described for *garbhadharana* are healthy *garbhashaya* (*kshetra*- reproductive system) *ritu* (season), *ambu* (nutrition), *bija* (ovum and sperm) and normalcy of *hridaya* (psyche) along with normal function of *Vayu* (governing nervous system).

Abnormality of any one out of these factors causes infertility. The word *Yoni* refers to entire reproductive tract which includes uterus and adnexae. Tubal block can be considered under the *Kshetravikriti*. As per Harita, infertility is of five types and tubal block can be considered

under *garbhakoshabhanga*.

Rationale of selection of trial drug and procedure :

Well –prescribed treatment is available for all most all causes of infertility in the existing modern system of medicine. But, to correct tubal block, available therapies are entirely surgical & surgery does not yield satisfying results, indeed further worsens the condition. *Sthanikachikitsa* (in-situ) treatment has been given much importance in treating the gynecological disorders in Ayurveda. Modalities mentioned under the *Sthanikachikitsa* (in-situ treatments) are advanced and perhaps cover all possible modes of local genital drug delivery methods.

The idea behind this is that to treat diseases of internal organs of the body, systemic treatment is necessary, but in case of reproductive tract diseases through in-situ treatment access is possible up to fallopian tubes. Hence in the present study *Uttaravasti* as well as *Yonipichu* are adopted as choice of treatment to deliver the drug at in-situ. These procedures are time-tested and proved to be very effective in curing the severe form of disease.

Vata is considered the main *dosha* for all Gynecological disorders and anywhere in the body *Sangha* (obstruction) occurs due to the aggravation of *Vata* humour. Hence *Dhanvantaram taila* is considered as suitable for *Uttaravasthi* and *Yonipichu* to control *Vata* & to relieve obstruction in the fallopian tubes.

Material and Methods: Study carried out on one patient, which was selected according to the selection criteria after thorough clinical examination & investigations. A patient with the name of Manju, aged about 26 years, was taken up for the study, who came with the complaint of Primary infertility with the diagnosis of bilateral partial fallopian tubal block (diagnosed on HSG) to the OPD of department of Prasuti & Striroga, National Institute of Ayurveda, Jaipur.

Criteria of inclusion :

1. Age between 20 – 35 years
2. Tubal block confirmed by HSG
3. Unilateral / Bilateral tubal block

Criteria of exclusion :

1. Age below 20& above 35 yrs
2. Genital Tuberculosis
3. Pelvic Inflammatory Disease
4. Endometriosis
5. Systemic Tuberculosis
6. Genital malignancy

7. Hydrosalpinx
8. Cervical erosion, Cervicitis, Vulvovaginitis
9. Suffering with any severe systemic illness
10. Peritubal adhesions

Procedure done:

Patient was called on to OPD to administer *Uttaravasti* on the 5th, 7th and 9th days after menstruation for three cycles. Simultaneously *Yonipichu* (vaginal tampon) was suggested to apply daily for three months. After three months completion, patient was investigated through Hystero-Salpingography to find the patency of tubes. Left fallopian tube is found completely patent on post-treatment HSG report.



Discussion: According to Ayurveda, avarodha (block) in any shrotas (channel) of the body is caused by *Vata*, in fallopian tubal block *Apanavata* vitiation is the reason. *Uttaravasthi* is ideal local therapy to be adopted in tubal block, since Vasti is the best therapy to control and regulate *Vata*. Trial drug *Dhanvantaram taila* is very strong and popular *Vatahara* remedy. *Bala* (*Sida cordifolia*) is the main ingredient of this *taila* and hence it acts as *Rasayana* besides *Vatahara*. *Taila* (oil) is having the property to reach minute channels in the body due to its *sukshma* (minute) quality. There by the trial drug might have helped in relieving tubal block. Other main ingredients are *Yava* (barley - *Hordeum vulgare*), *Dashamula*, (ten roots), *Kola* (*Zyziphus jujuba*), *Kulattha* (Horse gram – *Dolichos biflorus*) etc. These drugs too *Vatahara*, and thereby help in further control of *Vata* humour.

Simultaneous application of *Yonipichu* (vaginal tampon) ensures the constant delivery of the trial drug in the reproductive tract, especially in fallopian tubes.

Conclusion:

Hence it can be concluded that the in-situ treatment is giving encouraging results in cases of tubal block and perhaps *Uttaravasthi* and *Yonipichu* and trial drug *Dhanvantari taila* worked in

synergy to relieve tubal block in a short span of three months time. However, to confirm this observation, further large scale evaluation with more accurate parameters is required.

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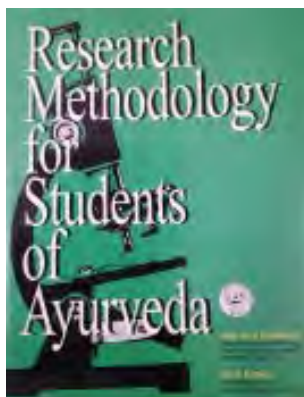
Editorial

Ayurveda Research on modern parameters started in India in the 20th century at university & institutional levels. During last 50 years various research dissertations/projects completed at post graduate level eg. M.D., Ph. D., Fellow etc.

Last twenty five years various Ayurveda conferences organised world wide. Outcome of such deleberations is availabel in published books etc. Such matarial be included in undergraduate, post graduate studies of Ayurveda courses everywhere. Samhitas be explained on these experiments for proper progress of science.

Prof. Dr. P. H. Kulkarni

Book for You



Research Methodology for students of Ayurveda

Editors : Prof. Dr. P. H. Kulkarni & Dr. B. K. Apte

**e-book editors : Prof. Dr. Mugdha Bothare,
Prof. Dr. Atul Rakshe**

'Research' in Ayurveda has stirred diverse emotions. A group feels that there is no scope for Research in Ayurveda, while the other is perplexed regarding suitable methodology. The questions, how & why, may find an answer, though partial only, in the compilation.

The book is not any original contribution, but is a compilation of thoughts and sources of methodology. One will find, that pharmacological methodology is frequently cited, but not described. This is because the instrumentation/methods/resources like animal house and training in planning and executing pharmacological experiments demand rounder background to understand their limitations and for their interpretation in terms of Ayurveda, the basic medical science having 'holistic' philosophy.

The book summarizes theoretical approach of Ayurveda in about 30 pages. Suggestions are given for investigative methods vis-a-vis. 'Mahasrotas' and their 'Dushti'. This is by no means 'complete' but will induce one to further reflect upon and design own approach and develop own methods, too.

The book gives detailed methods chosen for experimentation. The details are based on analytical training programmes.

In order to induct a researcher into use Radioactive - tracer - technique, basic information on materials, resources and instrumentation is given along with a few examples of application of the method, and a few exercises suggested.

An ultra-short compilation on metabolism, micorbiology, immuology (about 12 pages) preceeds write up on radio-isotope methods. This capsule summary of biochemistry is necessary to think in terms of tracer technology.

For planning research and to analyse experimental results and express them with 'confidence', statistics is of paramount importance. The concepts of unbiased sampling, statistical distribution, its attributes like probability standard error, standard deviation and interpretation suing the statistical tables is also given along with the tables. Good directives for diagramatic representation of data are also given.

A note on Toxicology is also included.

To make the compilation more useful for studens, syllabus on "Research Methodology" for M.D. (Ayurved) is reproduced along with a few question-papers.

This is not a 'Guide' for examination, but be viewed upon as a source book on basic information for research workers as well as serious students of Ayurved.

- Editor : Prof. Dr. P. H. Kulkarni/Dr. B.K. Apte
- Pages 210 of Double crown size (18 X 24 Cms.)
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All are cordially invited for

1. Saturday, 26th April 2014 Ayurveda Samhita Diwas, publication of books by Prof. Dr. P. H. Kulkarni felicitation of outstanding personalities.
2. Saturday, 12th July 2014, Guru Pournima Get together of students of Prof. Dr. P. H. Kulkarni.
3. Sunday, 19th October 2014, Ayurveda propagation day/ Dhanwantaree Day. Felicitation of Dignitaries in the field of Ayurveda/ Health Sciences.
4. Articles are invited for Deerghayu International. The Peer reviewed journal of Ayurveda/Health Sciences since 1984 for the October 2014 and January 2015 issues before 31st May 2014.
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