

Indian Journal of Ancient Medicine and Yoga

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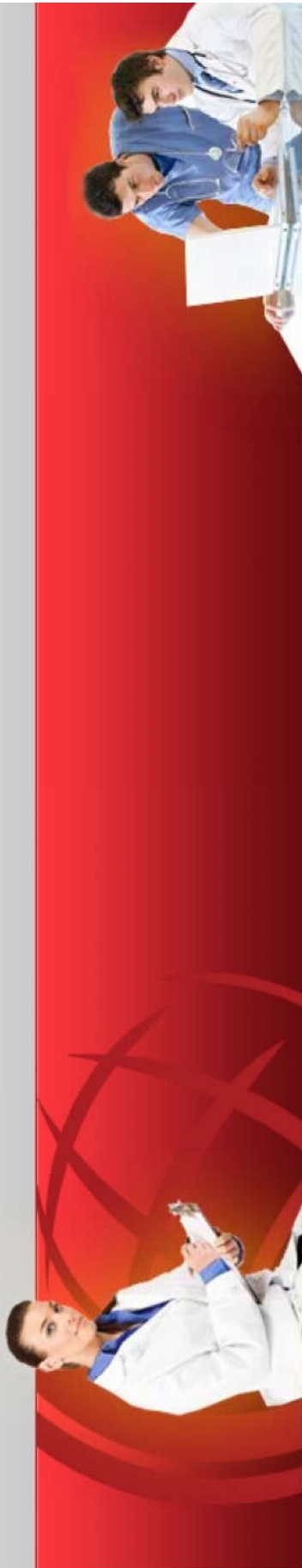
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A Randomized Controlled Study to Evaluate the Wound Healing Effect of Vimlapana Karma and De-cicatrization in the Management of Dushtavrana

Awasthi Avanindra*, Shindhe Pradeep S.**

Abstract

Context: The wound-healing process consists of four highly integrated and overlapping phases: hemostasis, inflammation, proliferation, and tissue remodeling or resolution [1]. Chronic non healing ulcer includes Diabetic foot ulcer (10%-15%), Pressure ulcers (2.7%-9% acute) (2.4%-23% chronic) [2]. Treatment of *vrana* depends on different *avastha* of *vrana* and are explained under the heading of *shasti upakrama* by Acharya Sushruta. Among *shasti upakrama*, *Vimlapanakarma* is the preliminary treatment modality for *vrana shotha*[3]. **Aims:** To compare the effect of *Vimlapanakarma* and De-cicatrization on primary intension of healing of *Dushtavrana*. **Materials & Methods:** 30 patients fulfilling the inclusion of *Dushtavrana* were randomly selected and divided into 2 groups, comprising 15 patients in each group. Source of patients were from OPD, IPD of *Shalyatantra* of KLEU's BMK Ayurved Mahavidyalaya & Hospital, Belgaum. Control group (De-cicatrization) & Trial group (*Vimlapana karma* will be done every day continuously for 7 days followed by dressing with *Jatyaditaila*). **Results:** Patients treated with de-cicatrization showed difference in pain, size, shape, discharge, smell when compared with *Vimlapana* group it showed lesser relief in *shula* and *daha*. *Vimlapana karma* has shown significant results within the groups. **Statistical Analysis Used:** It was analyzed using student t test (paired and unpaired), Mann whitney u test, Wilcoxon signed ranked test and Chi square test, using software graph pad prism version. **Conclusion:** *Vimlapanakarma* has shown significant results when compared with De-cicatrization in the parameters like pain, burning sensation & wound contraction (*Akruti*) in the present study.

Keywords: De-Cicatrization; *Dushtavrana*; *Vimlapana Karma*; Wound Healing.

Introduction

Healing of *vrana* is natural process but due to interference of vitiated *doshas*, *vrana* become *dushta* and normal healing gets delayed. *Dushta vrana* is very common problem encountered by surgical practioner. The presence of *Dushta vrana* worsens the patient psychological and physical state to great extent. *Dushta vrana* needs an effective management. Chronic non healing ulcer includes Diabetic foot ulcer (10%-15%), Pressure ulcers (2.7%-9% acute) (2.4%-23%

chronic) [2].

Treatment of *vrana* depends on different *avastha* of *vrana* and *Vimlapana karma* is the preliminary treatment modality for *vrana shotha*. In *vrana shotha* there is obstruction of *vata* and *kaphadosha*, to relieve such obstruction, to sensitize the cell in and around wound and to enhance rate of wound healing *Vimlapana karma* is selected [4].

Common features shared in these include a prolonged or excessive inflammatory phase, persistent infections, formation of drug-resistant microbial biofilms, and the inability of dermal and/or epidermal cells to respond to reparative stimuli etc. In aggregate, these pathophysiologic phenomena result in the failure of these wounds to heal [5]. De-cicatrization is defined as meticulous excision of dead, damaged or infected tissue to improve the healing potential. De-cicatrization is done to remove unhealthy cicatrized tissue of the wound and to make it healthy which facilitates the wound healing [6].

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In *Sushruta Samhita* the detailed management of ulcers, encompassing 60 upakramas [7] covering all aspects from the points of its occurrence to its total healing is mentioned. *Taila* is one among them for *shodhana* and *ropana*. To accomplish these goals the research is focused on four principal molecular and cell processes of healing wounds: inflammatory cell infiltration and cutaneous immune function, keratinocyte activation and migration, endothelial cell function during angiogenesis, and fibroblast activation leading to scar formation. We seek to establish how these molecules orchestrate the temporal and spatial events important for wound closure [8]. As main aim of wound healing is restoration of arterial function, controlling infection, anti inflammatory, control of drainage of fluids, etc the study was taken up to evaluate the results & benefits from the tropical use of *Vimlapana karma*, as well as its effectiveness over de cicatrization by taking *jatyadi taila* dressing.

Materials & Methods

Drugs

Jatyadi taila was collected from GMP certified KLE Ayurveda pharmacy, Belgaum and authentication has been done with the help of CRF, K.L.E.s Ayurveda College, Belgaum.

Source of Data

The patients suffering from Dushta Vrana were selected from outpatient and inpatient department of Shalyatantra of KLE'S BMK Ayurveda Mahavidyalaya and Hospital, Belgaum. Sample size - 30 patients

Duration of the Treatment

1. Duration of the treatment - 7 days.
2. The procedure was carried out daily from day 1 to day 7

Observation Period: Patient were observed on 1st day (i.e. Before Treatment) following after treatment Observation was done on 7th day.

Diagnostic Criteria: Diagnosis was made on the basis of *lakshanas* Like *Puya-Srava*, *Puti-Gandha*, *Daha*, *Raga*, *Vedana*, *Paka of Dushta Vrana* [9].

Study Design

In these clinical trial patients were randomized by

computerized block randomization into 2 groups.

- Group-A (Trial group)- were treated with *vimlapana karma* with *jatyadi taila*
- Group-B. (Control group)- were treated with de-cicatrization of wound

Inclusion Criteria

- Subjects aged between 20 - 60 years.
- Subjects of either sex
- Subjects suffering from *Dushtavrana lakshanas* as per classics and with specific characters like,
 - o *Puya-Srava*
 - o *Puti-Gandha*
 - o *Daha*
 - o *Raga*
 - o *Vedana*
 - o *Paka*

Exclusion Criteria

Patients with disorders like Uncontrolled DM, Malignancy, Syphilis, Tuberculosis, Leprosy, HIV positive, HBsAg positive, Burns, Osteomyelitis.

Methodology

The Procedure can be classified under following heading:

- I. Preoperative procedures
- II. Operative Procedure
- III. Post-operative procedure

Pre- Operative Procedures

- Informed consent will be obtained from the patient. Monitoring of Vitals-Pulse will be recorded for rate/rhythm/volume Left arm/sleeping position BP will be recorded with time and date. Consent was taken.
- Things essential for the procedure were kept ready.
- Patient was made to sit / lie down comfortably.
- The affected part was cleaned with Normal saline, removal of slough was done where ever necessary and again ulcer was cleaned with normal saline and part dried.

Operative Procedure

a. Pradhana Karma-group B

- The procedure was carried out in aseptic conditions.
- De-cicatrization of the wound and dead skin around the wound were cleaned carefully.
- The cicatrized skin was cut and disposed leaving a clean wound at the site.

b. Pradhana Karma -group A

- The procedure is carried out in aseptic conditions wearing surgical gloves.
- *Jatyadi taila* was applied all around the ulcer and *vimlapana karma* was carried out.
- Accordingly to the size and place of occurrence of the ulcer, the various parts of the hands are used for vimlapana procedure.
- In small ulcer-single thumb was used.
- In medium ulcer-the pulp of the fingers
- In bigger ulcer-the whole pulp of the fingers along with the palm was used for the vimlapana slowly/gently around the wound (ulcer) for specific time intervals.

Post-Operative Procedure - Paschat Karma

- After *Vimlapana karma*, the affected part was dressed with *Jatyadi taila* sterile pad and bandaging was done.

Duration of Vimlapana

The *Vimlapana karma* is performed with *Jatyadi taila* around the wound for about 10 to 15 minutes according to the type and condition/stage of wound.

Assessment Criteria: The patient's response was assessed on Subjective and Objective parameters

before and after treatment.

Subjective Parameters

- *Vedana*
- *Daha*

Grading [10,11] - Vedana (Pain)

Pain by VDS Rating (verbal descriptive scale)

Objective Parameters

- Size of the wound
- *Puya-Srava*
- *Raga*

Grading

Srava

Grade 0 - If Vrana wets partial 1 pad of 4x4 cm gauze piece.

Grade 1 - If Vrana wets 1 pad of 4x4 cm gauze piece.

Grade 2 - If Vrana wets 2 pads of 4x4 cm gauze piece.

Grade 3 - If Vrana wets more than 2 pads of 4x 4 cm gauze piece

Raga (Color)

Grade 0 - Normal pigmentation of skin.

Grade 1 - Slight red.

Grade 2 - Reddish black.

Grade 3 - Pale yellow / Blackish / Bluish

Observations and Results

Age wise: Of total 30 patients in Study and Control

Table 1: Showing results of between the groups

Parameter		Group A	Group B	P value	Significance
Pain (VDS)	BT-AT	2.267±0.7037	1.667±0.6172	0.0242	*
Size	BT-AT	1.667±0.6172	1.467±0.9155	0.4877	Ns
Raga	BT-AT	1±0	0.4667±0.5164	0.0022	**
Srava	BT-AT	1.067±0.2582	0.7333±0.4577	0.0575	Ns

Table 2: Showing results of dahabetween groups

Parameter		Group A		Group B		Chi square	P Value	Significance
		BT	AT	BT	AT			
Daha	Present	12	0	10	1	31.8	<0.0001	****
	Absent	3	15	5	14			

Group A: Vimlapana**Picture 1:** Before treatment**Picture 2:** After treatment**Group B: De-Cicatrization****Picture 1:** Before treatment**Picture 2:** After treatment

Group, maximum patients were in age Group 51-60 years followed by age 31-40 years. They were 43.3% and 23.3% respectively.

Sex wise: 23(76.67%) patients were male while 7(23.33%) patients were female

Out of total 30 patients in Study and Control Group,

maximum patients had *Dushtavrana* with chronicity of 7 days to one month (46.6%) followed by 2 months to 6 months (46.6%) and 6 months to more than a year (6.67%). Maximum patients were found having *Dushtavrana* on lower limbs followed by upper limbs. There ratio of *Vatapittaj* (36.6%) was followed by *vatakaphaj* and *pittakaphaj* (30%) each and *pittaj* and *kaphaj* (3.3%) each.

In patients most of the wound looked eczematous and pigmented type followed by glossy red and were having circular wound (46.67%) followed by irregular (23.33%), oval (20%), vertically oval (10%) and rectangular (10%) results were observed between groups as shown in Table 1 and Table 2.

Discussion*Discussion on Age and Sex Distribution*

In present study, it was reported that patients were in the age group of 51-60 years. It confirms that *dushtavrana* are seen predominantly after 50 years of age. The global statistical data signifies it. The distribution of sex was seen more in male than in females. In such conditions there are chances of getting wound by external trauma. Males may neglect it or do not get enough time to rest in case of any injury. Due to this simple wound may turn to *dushtavrana*.

Discussion on Chronicity

Maximum patients were having the *dushtavrana* with chronicity of 1 week - 1 month followed by 2-6 months. The chronicity was due to no response to local treatment, because of severity of *Doshas* mainly *Pitta* and *Vata* and also the negligence towards proper care of *Dushtavrana*.

Effect on Vedana

All the patients had different grades of *Vedana*. The characters of *Vedana* explained are viz *Osha*, *Chosha*, etc were seen. All these symptoms indicate the inflammatory signs, where in we find raise in local temperature, local burning sensation, pain etc.

Pain in case of inflammation will be due to swelling of the local part. The severity of *Vedana* and *Daha* is mainly due to *Pravruddha Pitta Dosh*. *Jatyaditaila* has *Sheeta*, *Snigdha* and *Shlakshnaguna* and has *Pittavatahara* property.

Jatyaditaila and *vimlapana* provided significant relief in pain. This may be due to reduction in the

blocked channels improving blood circulation due to *Vimlapana* and *dravyas* which are *sheeta* and *vrana ropaka* in nature of *Jatyaditaila*.

Effect on Srava

Some patients had *srava* from the *vrana*. *Pitta Dosh*, is responsible for *Pakakriya* and the formation of *Puya* in *Dushtavrana* by vitiating the *Rakta*. Suppurative infection in the wound gradually leads to cell death. The toxins of pyogenic organisms kill the tissue cells and exudates. Liquefaction of the dead tissue is caused by proteolytic enzyme released from the dead polymorphonuclear leukocytes. The resulting yellowish fluid is nothing but the pus.

Vimlapana removes the locally increased *Dosha's* and debriments, which are the prime cause for *Srava*. It promotes the reduction of swelling, the dissolution of the organized blood-clots. The using of *Vimlapana* promotes the local immunity as well and other than this it has *raktaprasadaka* effect, stimulating early wound healing and has anti inflammatory effect.

Effect of Treatment on Granulation Tissue

In this study there was slough in all most all patients because of *Dushtavrana*. When Granulation starts the process of healing occurs, which ultimately reduces slough. Hence, these go hand in hand with each other.

The treatment local application of *Jatyadi taila* to *Dushtavrana* in, Group A has resulted in improvement in the formation of Granulation tissue.

Effect on Size of Wound

Most of the patients were found in severity Grade 1 followed by Grade 2 i.e. they were small and medium sized. This is because most of the *Dushtavranas* were of *Nija Hetu*, where *Doshas* are main causative factor. But in case of *Agantuja Hetu*, the external trauma may cause big sized wound followed by *Dosha* involvement.

The treatment local application of *Jatyadi taila* to *Dushtavrana* in-group A has resulted improvement in reduction in size of wound. This has given better results when done along with *Vimlapana* as when compared to decicatrization.

Vimlapana Karma

Vimlapana karma is indicated for *Sthira Shotha* associated with *mandaruj*. Having given oleation and sudation therapies, a surgeon should carry out gentle

local massage with bamboo reeds, the palm or the thumb.

In *Vimlapana karma* procedure the rhythmic circular rotations are made around the wound initially slowly and later with applying pressure so that the surrounding area becomes warm by increase in local raise of temperature by friction with pulp of the fingers. So, the first objective of *Vimlapana* procedure i.e. *abhyanga* is carried/ brought out by *Jatyadi taila* and the second objective i.e. *swedana* is carried out by continuous friction of the wound surrounding skin with physicians finger pulps. Practice of *Vimlapana karma* in *Dushta Vrana*, thus helps release of the local vaso-constriction is relieved thereby aiding/improving the micro & macro circulation to the wound site. It improves the anoxic condition of the wound and reduces the inflammation by which the wound healing process is ensured. Mechanotransduction is defined as the transformation of a mechanical stimulus into a chemical signal or the resulting cellular signaling cascade after an external mechanical deformation of tissue[12]. Studies suggests that Massage acts as an immune modulator. It influence apoptotic signaling of neutrophils, results in decreased release of proinflammatory cytokines [13] thus promotes tissue repair. Additionally, the mechanical forces result in the release of beta-endorphins, which aids in pain relief [14]. *Vimlapana karma* along with *Jatyaditaila*, aided in re-epitheliazation by reducing infection, maintaining moisture & optimizing the molecular environment to the wound in the present study.

Discussion on Mode of Action of Jatyadi Taila

Most of the ingredients of *Jatyaditaila* are having *tikta*, *kashaya rasa* and *laghu, rukshagunas*. *Kashaya rasa* does *shoshana* and hence helps in *vrana ropana*. *Tikta rasa* does *twak -mamsashtireekarana & lekhana*, it might help in increasing tensile strength of the wound. *Katu Rasa* has *vrana shodhana & avasadana* properties. *Tutha*: It is one among the ingredients of *Jatyaditaila*, having *lekhana karma*. *Tilataila* helps in reaching the minute channels by means of its *sookshma, vyavayi, vikasigunas* and helps in reducing *vedana*. As *Jatyaditaila* includes the drugs which possess both *shodhana & ropana* qualities it helps in proper healing of *vrana*.

Conclusion

Vimlapana karma has shown significant results when compared with De-cicatrization in the

parameters like pain, burning sensation & wound contraction (*Akruti*) in the present study. The effect of *Vimlapana karma* with *Jatyadi taila* in dushta vrana was statistically significant, relative to all the Subjective and Objective parameters. *Vimlapana karma* has maximum impact on the satisfactory element of the patient with favorable results in treatment of *dushta vrana* avoiding amputations. *Vimlapana* is, economic, feasible and easy to practice without any complications with minimal equipment. *Vimlapana karma* will be more beneficial when used along with the other *upakramas* told in the *vrana chikitsa*.

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A Comprehensive Study of Pramana Shareera W.S.R. to Lalaata Pramana and its Relation with IQ

Pragalbh M.R.*, Poojarani K.P.**, Hinduja P.S.***

Abstract

Background: Ayurvedic literatures pertaining to *Shareera Rachana* furnish detailed description on measurements of body and its elements. *Pramana* defines the concept of measurement of various biological entities. It bears an ample importance in medical applied science. Work on *Pramana Shareera* has been already taken in recent years. But still the fixation of exact anatomical location has to be clarified and demarcated. Intelligence is a property of mind that encompasses many related abilities, such as the capacity to reason, to plan, to solve problems, to think abstractly, to comprehend ideas, to use language, and to learn. Intelligence quotient or IQ was a score derived from one of the several different standardized tests to assess intelligence. *Acharya Vagbhata* mentioned that *Kapha Prakruthi* person having *Mahalalaata* (broad forehead) and also they will have more intelligence, truthfulness, etc and same explanation will get in *Jyotishastra*. **Objective:** The main aim is to study about *LalaataPramana* mentioned in Ayurvedic classics and modern literature, its relation with IQ and fixation of exact anatomical location to measure *Lalaata Pramana*. **Methodology:** The total of 100 volunteers was selected for the study. Vital data like Age, Sex, etc were documented. The length of middle phalanx of right and left middle fingers and forehead length were measured. IQ of individuals assessed with WAIS method. **Result:** The Pearson's correlation coefficient equation and Instat Graphpad computer software was used for finding relation of forehead length and IQ of subjects. Statistically insignificant ($P>0.05$) Moderate Positive Correlation ($R=0.23$) was found among forehead length and IQ of individuals as per the study. **Conclusion:** Within limits of the present study, moderate relation was found in *LalaataPramana* and IQ.

Keywords: *Pramana*; *Lalaata*; Forehead; IQ.

Introduction

Pramana Shareera has been explained to play a major role in determination of life span of a person. It is told that the person having appropriate measurements will attain long and a healthy life [1,2].

The concept of *Pramana Shareera* has been meticulously explained in Ayurvedic classics. As early as 1000 B.C. *Pramana Shareera* was described by

Acharya Charaka and *Sushruta* and later by *Acharya Vagbhata*. *Acharyas* have explained the *Pramana* of different *Anga- Pratyangas* of the body [3,4,5].

PramanaShareera has been explained to be utilized in the examinations of the patient [6]. The *vaidya* has to and must examine the patient's *AngaPratyanga Pramana* to assess the life span to decide whether the treatment that is to be given by him would be fruitful or not [7].

Anguli is the unit measurement of the different *Anga-Pratyangas* of the body [8,9,10].

In modern science *Pramana Shareera* is correlated with anthropometry which is useful only for physical measurement in order to assess height, age, sex etc [11,12]. It is an integral part of Forensic science as it helps identifying the individual [13]. Whereas the ayurvedic concept of *Pramana Shareera* not only gives measurements of different body parts but also gives valuable information regarding life span of the person, strength etc [14,15].

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In the classics *AngulaPramana* of different parts of the body is categorically mentioned but their relation amongst each other has not been widely dealt with, other though we get a reference in *Ashtanga Hrudaya* where *Acharya* has quoted the relation of the hasta and *Ayama* of the *Shareera* [16]. A few works have already been carried out in this regard but relation of the forehead measurements mentioned in our classics with the intelligence of a person has still not been carried out. Hence this topic has been selected.

Materials and Methods

The evaluation of *LalaataPramana* and its relation with IQ in healthy individual was carried out in 100 volunteers.

Inclusion Criteria

- Healthy individuals ranging from 25-45 years will be taken for the study.

Exclusion Criteria

- Congenital deformities, history of fractures in skull, pathologies pertaining to bones of the skull and metabolic disorders

Assessment Criteria

- Individuals were selected as per inclusion and exclusion criteria.
- Length of the forehead was measured.
- IQ was assessed with the help of questionnaire method.
- Data collected was analyzed for the estimation of *pramana of lalaata* and its relation with IQ.

Methodology

All subjects satisfying the inclusion and exclusion criteria were selected for the study. A consent form was prepared and obtained after explaining purpose and scheduled procedures of the study. A case proforma was prepared to record the details of the volunteers.

Prior to the study, examination of volunteers was carried out to ensure the normal stature and morphology of head especially of forehead. Length of forehead was measured and IQ was assessed by WAIS method.

Measurement of Forehead

Subjects were asked to relax the facial muscles.

Fontal Eminences were marked and both were joined by a transverse line. Nasal depression identified and marked at the root of spine.

Perpendicular line from the point of nasal depression to the transverse line. Thus the forehead length was measured

Measurement of Swaanguli

Subject's length of the middle phalanx middle finger was measured in centimeter.

IQ Measurment: (WAIS METHOD)

IQ questions would be found on IQ tests. These questions are intended to assess a variety of mental abilities and skills, and therefore cover a wide range of different types of intelligence. Below are some general examples of the types of questions that might be found on an IQ test:

- Analogies (mathematical and verbal)

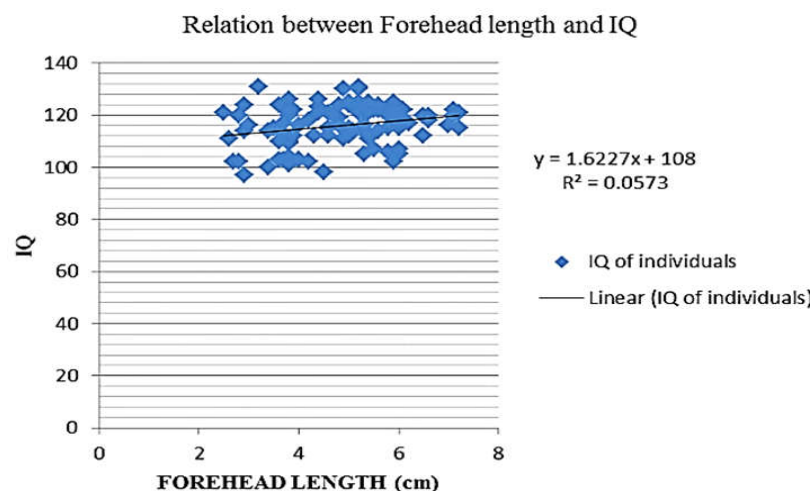


Fig. 1:

- Pattern driven (spatial and mathematical)
- Classification
- Visual
- Spatial
- Logical

While those are the general areas that an IQ test might examine, it is useful to see more specific questions. Here are a few test questions that could be encountered on an IQ test:

Relation between Right Forehead Length and IQ

In the present study, Pearson's correlation coefficient (r) for the two variables i.e. forehead length and IQ of the volunteers, is found to be (+) 0.23, and two tailed P value is <0.05. There is Moderate Positive Correlation between the Forehead length and IQ of the individuals and the Pearson's correlation coefficient (r) is significant statistically as per the study. Slope or Regression co-efficient (B) of the line in the Scatter diagram is obtained as B = 0.1524. Y intercept (A) is calculated as A = 13.284. Regression equation (Y = A + BX) is found to be Y (IQ of individual) = 13.284 + 0.1524 * X (Forehead length).

Discussion

Age

In the present study of 100 volunteers, 74% belong to 25 - 30 years of age group; this may be due to the study conducted in colleges at Moodbidri and Trivandrum.

Gender

70% were males and 30% were females.

Religion

83% belong to Hindu religion, 8% belong to Muslim, 9% belong to Christian and 0% were from other religion, this may be due to the study conducted area was Hindu community dominant.

Habitat

The study conducted both in rural and urban areas, but majority (73%) was belonging to rural domicile.

Angula

The average Angula obtained from the study was 1.2cm.

Discussion on Lalaata Pramana and IQ

In the present study, Pearson's correlation coefficient (r) for forehead length and IQ of the volunteers, is found to be (+) 0.23. The P value obtained was >0.05. Thus there is Moderate Positive Correlation between the Forehead length and IQ of the individuals and the Pearson's correlation coefficient (r) is not significant statistically as per the study.

Acharya Sushrutha while explaining Pramana Shaareera it is mentioned that, the Lalaata Pramana is 4 Angula. In the present study it's almost same as explained.

In the current study it is found that there is a significant relation between Lalaata Pramana and IQ of an individual. While explaining about Kapha Prakruthi Lakshanas, it is told that they have more Lalaata Pramana as compared to other Prakruthis, and they are also having more intelligence.

The intelligence is more contributed by frontal lobe, which is situated in the anterior cranial fossa. The anterolateral boundary is by frontal bone. There may be a chance of increase in size of skull bones according to the brain volume.

Conclusion

Pramana was the criterion to measure the stature and dimensions of the body parts as they are the tools to assess the patient before and after treatment. Anthropometry of the contemporary system is defined as the study of the human body in terms of bone, muscle, adipose tissue and correlated with risks of systemic as well as life style disorders.

Individualistic approach of Pramana Shareera helps to plan the treatment and decide the prognosis depending on the results of Dashavidha Pareeksha. Applicability of Pramana Shareera in the assessment of disease prognosis and mortality is true from centuries.

The descriptions of specific anatomical landmarks for Lalaata are not explained by Ayurvedic authors or commentators. With the available references in Ayurvedic and contemporary science from the frontal eminences to the dipression at the root of nose was considered as length of Lalaata in the present study.

The study entitled "A Comprehensive Study Of Pramana Shareera W.S.R. To Lalaata Pramana And Its Relation With IQ" gave a positive result in proving the relation of Pramana of Lalaata & the height of the healthy being.

- By the study it's found that there is a significant relation between lalaatapramana and IQ of an individual.
- Alternate hypothesis H_1 accepted and null hypothesis is rejected

Source of support: Nil

Conflict of Interest: None Declared

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A Randomized Controlled Trial to Evaluate the Lithotriptic Action of Mutrala Kashaya in Mootraashmari W.S.R. Urinary Calculi

Salma H.*, Santosh Y.M.**

Abstract

Urinary calculi is one of the commonest diseases of urinary tract. The male- female ratio 3:1. 12% of population have renal calculi in their life time. *Mutrala kashaya* is propraetary formulation includes 8 drugs & has been pre clinically evaluated as a diuretic & lithotropic activity on wistar rats which showed diuretic activity by increasing urine output by restoring the electrolytes Evaluation of diuretic And lithotropic Activity of Mutrala Kashaya In Wistar Rats therefore a study was planned to evaluate the *mutrala kashaya* in comparison with *varunadi kashaya* was undertaken for clinical trial in *Mutrashmari*. The objective of the present study was to evaluate the efficacy of *mutrala kashaya* as lithotriptic action w.s.r. urinary calculi ingredients *Ushira, Gokshura, Kushmanda, Punarnava, Dhanyaka, Varuna, Kullatha, and Pashanabheda* 20-60 years Age group patients Total 30 patients were selected for the clinical study, were randomly divided in two equal and identical groups consisting of 15 patients in each group by using computerized block randomization table. The patients of group 'A' and 'B' were given *varunadi kashaya* and *MutralaKashaya* 25 ml BD for 45 days were given on 0th, 15th, 30th & 45th day each follow up assessment were done in both the groups. As per the pre and post test was showned significant relief in renal colicky pain, burning micturition, with in physiological range in urinary pH level and reduction in calculi size.

Keywords: *Varunadi Kashaya; Mutrala Kashaya; Mutraashmari; Urinary Calculi.*

Introduction

Urinary stone has become a burning problem in the era of the modern medicine because of its high recurrence rate even after best available treatment. In India approximately 5-7 million patients suffer from kidney stone disease [1,2] among 1/1000 of Indian population needs hospitalization due to kidney stone disease. Among them 12% of population have renal calculi in their life time [3]. The incidence of calculi varies as per geographical distribution, sex and age group. The recurrence rate is 50 to 80%. The incidence of Peak age is 3rd to 5th decade, majority of patients report regarding onset of disease in second decade of

life. [4] *Ashmari* one among the *Astamahagada* formed in the urinary system. *Basti* is the *Saddyā pranahara marma* So, *Marma* treatment is essential otherwise patient will die at last. [5]

The formation of urinary calculi at any level of urinary tract, clinically it is characterized by colicky pain as they pass down along the ureter and manifest by haematuria [6]. The method of management of urinary calculi are mainly surgical. Even though they are useful, they involve considerable amount of risk and are also expensive. The recurrence after surgery is also high up to 50% in the light of above situation, it is highly relevant to search for an alternative treatment which is both effective and inexpensive. So many single drugs among these ganas have been scientifically proved pre clinically and clinically as diuretic, lithotropic, anti-inflammatory, antispasmodic and antimicrobial [7] Among them the *Mutrala kashaya* is preparatory formulation which includes 8 drugs like *Punarnava (Boerhavia diffusa Linn)*, *gokshura (Treibulus terrestris Linn)*, *pashanabeda (Bergenia ligulata Wall)*, *varuna (Crateva nuroala Buch-Ham)*, *dhanyaka (Coriandrum sativum Linn)*, *ushira (Vetivera zizanoids Linn)*, *kushmanda (Benincasa hispida*

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Thunb), *kulatha* (*Vigna unguiculata* Linn).

Aims and Objective

To evaluate the efficacy of Mutrala kashaya as lithotriptic action W.S.R. Urinary Calculi.

Materials and Methodology

In the present research work, an ayurvedic proprietary formulation Mutrala kashaya is used in management in Mutrashmari to assess the lithotriptic action. All ingredients were procured from GMP certified Ayurvedic pharmacy. KLEU'S BMK Ayurveda Mahavidyalaya. with following reference number RefNo- KLE / AP/164/2016-1.

Collection and Authentication of Raw Drugs

Raw drugs required for the preparation of *Mutrala Kashaya bharad* were procured from GMP certified KLE Ayurveda pharmacy, khasbag, Belagavi. All the raw drugs were authenticated from the Central Research Faculty of KLEU's Shri. B.M.K. Ayurveda mahavidhyalay, Shahapur, Belagavi.

Inclusion Criteria

- Patients with the chief complaints of pain (KUB-area).
- With a diagnosis of *moothrashmari* ultrasonographically calculi measuring 1- 10mm.
- With a normal renal profile (serum blood urea, serum creatinine).
- Calculi anywhere in KUB

Exclusion Criteria

- >10mm urinary calculi.
- Patient suffering from sever hydronephrosis

Assessment Criteria

The results were evaluated by subjective parameters, mainly based on clinical observation before and after treatment by grading.

Subjective Parameters

1. Pain (Assessed by VDS) [8]

Gradings for the Assesment Criteria

1. *Vedana (Pain)*: As the patient or the sufferer himself expresses the pain in his terms it was graded from mild to worst unbearable pain No pain, Mild pain, Modrate pain (discomfoting), Sever pain (Distressing), Very sever pain (Horrible) and Worst unbearable pain (Excruciating pain) 0, 1-2, 3-4, 5-6, 7-8, 9 -10 Grading were given respectively.

2. Burning Micturation

No burning micturition -0, Occasional burning micturition-1, Occasional burning micturition, required treatment - 2, Constant burning micturition required treatment-3. Constant severe burning micturition but did not show relief even after treatment-4.

Objective Criteria

1. Size of stone : Assessed in Millimetres

Investigations

1. Size of stone : Assessed in Millimetres USG- KUB.
2. Renal profile.
3. Urine pH

Duration: Treatment was given up to 45 days

Follow up Study: Follow up of patients was done upto i.e., 15th day, 30th day and 45th day. to assess the effect of treatment.

Statistics Analysis: Wilcoxon signed rank test , Man whitney U test Unpaired t test , paired t test

Observations & Results

30 subjects of Mutrashmari were selected for this clinical trial. They were randomly divided into two groups i.e. Group A and Group B. Group A was treated with Varunadi kashaya and Group B was treated with Mutrala kashaya .

General & specific location wise calculi distribution in group A and B see Table 1

Number of Calculi: See Table 2.

Effect of therapy on expulsion, change in size, Change in location & No change in size: Group A wise calculi distribution 41.37% were changed in size, 27.58% were expulsion of calculi, 20.68% no change in size, remaining 10.34% were changed in location.

Group B wise calculi distribution 15(51.72%) were changed in size, 11(37.93 %)were expulsion of calculi, 3(10.33%) calculi were changed in location. See Table 3.

Table 1: General and specific location wise calculi distribution in group A and B

Location Group B	No of calculi BT	%	No of calculi AT	%
General location				
Rt kidney	13	44.82	8	44.44
Left kidney	15	51.72	8	44.44
UVJlf	1	3.44	2	11.11
Total	29		18	
Specific location				
Upper	12	41.37	3	16.66
Middle calyces	9	31.03	9	50
Lower calyces	7	24.13	4	22.22
UV J lf	1	3.44	2	11.11
Total	29		18	

Location Group A	No of calculi BT	%	No of calculi AT	%
General location				
Rt kidney	14	48.27	9	42.85
Left kidney	14	48.27	12	57.14
UVJlf	1	3.44	0	0
Total	0	0	0	0
Specific location				
Upper	12	41.37	3	14.28
Middle calyces	7	24.13	10	47.61
Lower calyces	9	31.03	8	38.09
UV J lf	1	3.44	0	0
Total	29		21	

Table 2: Showing the no. of calculi in Group A & B before & after treatment

	Group A			
	No of stones BT	%	No of stone AT	%
< 4mm	8	27.58	11	52.88
4-6mm	19	65.51	10	47.61
>6mm	2	6.89	0	0
Total	29		21	

	Group B			
	No of stones BT	%	No of stone AT	%
Below 4mm	6	20.68	4	22.22
4-6mm	20	68.96	13	72.22
>6mm	3	10.34	1	5.55
Total	29		18	

Table 3: Effect of therapy wise distribution on Calculi in group A & B

Effect of Therapy	No of Calculi Group B	%	No of Calculi Group A	%
Expulsion	11	37.93	8	27.58
Change in size	15	51.72	12	41.37
Change in location	3	10.33	3	10.344
No change in size	0	0	6	20.68

Table 4: Effect of mutrala kashaya and varunadi kashaya on pain Pain between the groups (Man whitney U test)

Variables (Pain)	Groups	Mean	SD	P Value	Significance
Baseline	Group A(BT-AT)	1.333	0.8997	0.5694	NS
	Group B(BT-AT)	1.2	0.7746		
30 days	Group A (BT-F1)	2.133	1.302	0.6480	NS
	Group B (BT-F1)	2.4	0.8281		
45 days	Group A (BT-F2)	2.133	1.302	0.2306	NS
	Group B(BT-F2)	2.733	0.7037		

Table 5: Burning Micturation between the Groups (Mann whitney U test)

Variables (BM)	Groups	Mean	SD	P Value	Significance
Baseline	Group A(BT-AT)	0.4	0.5071	0.2906	Ns
	Group B(BT-AT)	0.1333	0.5164		
30 days	Group A (BT-F1)	1.267	0.4577	0.0575	Ns
	Group B (BT-F1)	0.9333	0.2582		
45 days	Group A (BT-F2)	1.4	0.5071	0.0512	NS
	Group B(BT-F2)	1	0.378		

Effect on pain: see Table 4

Effect on Burning Micturation: see Table 5

Effect on pH - See Table 6

Discussion

In this series of 30 patients of Mutrashmari. There will be more chances of vitiation of vata dosha plays important role for sthana samsraya of kapha in those persons leading to the formation of Ashmar. In this series maximum number of the patients i.e. 24 (80%) were *kati shoola* followed by *nabhi shoola* 5(16.66%) and remaining 1(3.33%) were *mutrakrichra*.

Atyavila mutrata, udara shoola, mutradhara sangha sarakta mutrata shows disease was having chronic history. In this series maximum number of the patients i.e. 18 (60%) was of single, followed by 4(13.33%) were number of three and four stones, 3(10%) two in number, and minimum was 1(3.33%) multiple i.e. > 4 stone were present. Calculi wise distribution 15(51.72%) were changed in size, 11(37.93%) were expulsion of calculi, 3(10.33%) calculi were changed in location. There is significant reduction of pain with in the group A and Group B. But in between the groups it is insignificant. It shows both the drugs are acting on the pain in same way. Pain is the *pratyatma lakshana* of *dushita vata*, on the contrary the most of the drugs in *mutrala kashaya* are having *snigdha guna* and *madhura vipaka*. Hence the pain reduction was seen.

Pain is also due to the obstruction of vata dosha by ashmari. The drugs and dosage form having *bastishodhaka* and *Mutra virajaneeya* property of subsides the vata and enhances the karma of Apana vata, hence relieves the pain with (p value 0.0009). There is significant reduction in both the groups, but non significant between the groups. By the action of *Kshaya*, *Tikta* and *Madhura rasa* of *mutrala kashaya* subsides the *kupita pitta*. Hence reduction of *mutradaha* seen with (p value of 0.0001). There were present of RBC in urine microscopy in group A & group B in 4 patient in each group. After the treatment

there was no RBC's. It may be because of *kashaya*, *Tikta rasa* which subsides *pitta*. With in the group A and Group B Significant reduction was shown but non significant between the groups. As the drugs of *Mutrala kashaya* is having *Kahsya* and *katu rasa* along with *madhura rasa*. To reduce the size of the stone, the *lekhana* property is required, it is taking care by *katu rasa* and *Kahsya rasa* by their *lekhana karma*, Hence reduction of calculi size with expulsion of calculi found significant with p value of 0.0003 which suggests its lithotriptic action.

5 patients i.e. 33.33% who had neutral pH of 7, followed by 7 patients 46.66% had pH of 6, 3 patients presented with pH which constituents acidic urine. Alkaline urine is more favorable for growing phosphate stone and acidic urine for uric acid stone. Hence maximum patients were of 7 i.e. 46.66% with pH of 6 which shows significant result with p value 0.0009.

Screening of Drugs on the basis of their Karma [1] 70% of drugs are *Laghu*, *Ruksha guna* & *Medohara karma*. *Kapha vatahara dravya* 40% of *Madhura rasa* 40% of *kashaya rasa* does *Pitta hara* 40% of *Madhura rasa* 20% of *Laghu*, *snigdha guna* *Vata hara* 50% *Sheeta virya pitta hara* 50% *Ushna virya Kaphahara*. *Gokshura* -Alkaloid are proven to inhibit the nucleation and growth of calcium oxalate crystals but also has cyto protective role [3].

Aqueous extract of *Gokshura* showed that it has diuretic activity, which was slightly more than furosemide and showed the effect of potassium sparing. It has also showed to increase the tonicity of smooth muscles along with diuretic activity there by expels the stone from the urinary tract [4]. *Cardiac glycoside* which is present in *kashaya*, will act on kidney and expel more urine [5].

Saponin glycoside will act as anti bacterial agent. *Mannitol* which is present in *dhanyaka* [7] will act as an osmotic diuretic [6]. Many inorganic (e.g.: citrate magnesium) and organic (e.g. urinary prothrombin fragment 1, glycosaminoglycans, osteopontin) substance. So it may be by supporting these factors, *kashaya* might have reduced the size and symptoms of calculi.

Conclusion

Significant relief in Renal colicky pain, burning micturation, urinary pH level alteration and reduction in calculi size were similar in both the groups. Trial drug *Mutrala Kashaya* and control drug *Varunadi Kashaya* shown similar effect. However expulsion of calculi was more in *Mutrala Kashaya* group.

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Pain Management in Submucosal Fibrosis with *Alternanthera Sessilis*: An Adjuvant Therapy

Kadambari Anil Solankure*, A.S. Pethkar**, Arun Kumar B. Biradar***, Sandeep S. Sagare***

Abstract

Oral Submucous Fibrosis (OSMF) is a chronic debilitating disease of the oral cavity characterized by inflammation and progressive fibrosis of the submucosal tissues. It results in marked rigidity and an eventual inability to open the mouth. The buccal mucosa is the most commonly involved site, but any part of the oral cavity can be involved, even the pharynx. It is characterized by oral pain and burning sensation upon consumption of spicy foodstuffs, increased salivation, change of gustatory sensation, dryness of the mouth and trismus. It also represents with impaired mouth movements, Dysphagia to solids, Hearing loss due to stenosis of the eustachian tubes and Nasal tonality to the voice, etc. Number of medical and surgical therapies is still in progress to obtain the best therapeutic remedy for its effect management. But, still no drug is approved for the better management of this condition. On the contrary part the incidence of this condition is rising due to faulty food habits and addictions since childhood. Along with the routine management application of topical anesthetic agents to control the local symptoms is a common practice, which alter the taste perception and alter digestion of food significantly. *Matsyaakshi* (*Alternanthera sessilis*) is a traditional drug of choice for controlling the pain in oral cavity. This controls the pain in oral cavity rather than altering the taste perception and thus, does not interfere with the digestion

Keywords: Oral Submucosal Fibrosis; Matsyakshi; Dysphagia; Trismus; Eustachian; Anaesthesia.

Introduction

Oral Submucous Fibrosis (OSMF) is a chronic debilitating disease of the oral cavity characterized by inflammation and progressive fibrosis of the submucosal tissues. It results in marked rigidity and an eventual inability to open the mouth. The buccal mucosa is the most commonly involved site, but any part of the oral cavity can be involved, even the pharynx.

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Oral Sub mucosal Fibrosis: [4,5]

Pathology of OSMF is not well established. Histopathologically the condition involves Connective tissue Progressive accumulation of fluid, constriction of blood vessels, hyalinization of collagen & fibrosis, Epithelium – Progressive atrophy, hyperkeratosis and parakeratosis

The clinical phase involves 3 stages

1. Stage of stomatitis and vesiculation
2. Stage of fibrosis
3. Stage of sequelae and complication

Clinical Grading of OSMF

Grade I: Only blanching of oral mucosa without symptoms

Grade II: Burning sensation, dryness of mouth, vesicles, ulcers

Grade III: In addition to Gr. II, restriction of mouth opening

Grade IV: In addition to Gr. III, palpable fibrotic bands all over the mouth without involvement of tongue

Grade V: Grade IV and involvement of tongue

Grade VI: OSMF with histologically proves oral cancer

Investigations

- Complete Hemogram – Decrease Hb, Increase Eosnophils
- ESR is raised in 50% of individuals
- Serum proteins – Decrease albumin, increase Y – globulins
- Electromyography – EMG of temporalis, buccinators, etc
- Exfoliative cytology–Morphological characteristics are examined

Ayurvedic View

The explanation of oral sub- mucosal fibrosis doesn't exactly co-relate with any of the disease explained in Ayurvedic classics.

Some of the clinical features of talu kachhapa, explained by Sushruta and Vagbhata in the context of Talu gata roga. According to Sushruta (Su. Ni. 16/43) the vitiated Kapha dosha causes painless, slowly progressive elevation like that of back of tortoise [1]. According to Vagbhata

(A.H, 21/39), the vitiated Kapha dosha causes swelling in talu, resembling the back of tortoise [2].

Conservative Management

Discourage from chewing betel nut and tobacco. Avoid spicy food and restrict chillies, treat periodontal and periapical diseases and maintain oral hygiene. Multi-vitamin (Vit. A & B complex) & Iron supplements. Use of topical analgesics and anaesthetics to control the pain and burning sensation symptomatically. Systemic corticosteroid therapy. Topical application of Triamcinolone acetamide 0.1% with neomycin. Betnosol 0.5mg tablet dissolve in water and used for gargle.

Sublingual Injections

Fibrinolysin, Gold, Vitamin A and D, Corticosteroids. Steroids as advised are Cortisone 20mg / 100mg daily for a total 1500 – 2500mg can be given orally / parenterally, Hydrocortisone with lignocaine is most effective in early / moderate advanced cases, Hyalase – Hyaluronic acid decreases fibrinogenesis, 1500 i.u. of Hyalase + 1 ml of 2% lignox – Twice weekly for 3 weeks, 1500 i.u. of Hyalase + 4 ml of Dexamethasone – Twice weekly for 7 weeks, Placental extract & dexamethasone – Temporary improvement, POTABA – Potassium Amino Benzioc Acid – It decreases collagen formation and intern decreases fibrosis.

Surgical Treatment

Absolute indications are Severe trismus, Dysplastic / neoplastic changes and Surgical Techniques. Excision of fibrotic bands with split thickness skin graftin, 1st technique with bilateral temporalis myotomy or coronoidectomy, excision of fibrotic bands with reconstruction.

Ayurvedic Management

Matsyaakshi (Alternanthera sessilis) is a traditional drug of choice for controlling the pain in oral cavity. This controls the pain in oral cavity rather than altering the taste perception and thus, does not interfere with the digestion. It is widely available in India, as a weed. It is used as a food and medicine which is in practice since long time with no side effects. Its young shoots contain protein 5% and iron 16.7 mg/100 g. Leaves also contain a good amount of alpha- and beta-tocopherols. It is rich in anti-oxidant, b-carotene and Vitamin C & iron, Sitosterol, campesterol, a-spinasterol, Oleanolic acid, rhamnoside, 24-

methylene cycloartenol, cycloeucalenol, lupeol, 5-stigmasta-7-enol and its palmitate. The herb is used as a galactagogue, cholagogue, abortifacient and febrifuge. The leaves are used like spinach, and in soups. Applied externally on acne and pimples. The dosage includes advising 2-6 g powder of any part plant.(API Vol. II.) [3].

Prognosis

No definite cure and management is available for OSMF. Only symptomatic relieving measures should be done. Biopsy is to confirm the diagnosis and early identification of dysplasia. Cases with dysplasia to be managed along with the line of management as CA in situ. Non-dysplastic / mildly dysplastic cases must be kept under long term observation with necessary preventive measures.



Picture 1: Oral Sub- Mucosal Fibrosis



Picture 2: Matsyaakshi Plant

Discussion

The OSMF, is a disease of unknown origin and with poorly understood histopathologically. The clinical features are burning sensation in oral cavity, sensitivity to sour bitter and salty etc. The cases in which tongue is also involved will hamper the appreciation of food and taste. Lack of proper appreciation leads to hypostimulation of Superior and Inferior nuclei which controls the submandibular, sublingual and parotid glands and intern hampers the digestion. Matsyakshi is rich in B- carotene, Vitamin C and iron. It has properties like cooling, analgesic and antiseptic. It is immunomodulator, antimicrobial, antifungal analgesic antipyretic, anti-oxidant, hematenic and hepato-protective.

Conclusion

Utility of Matsyaakshi in OSMF to control pain as an adjuvant therapy. This drug might help to improve taste perception, subsequently the digestion of patient may improve, also may help in improving general well being of the patient. This drug is immunomodulator and rich source of micronutrients, antioxidants, iron, Vitamin A and Vitamin C, hence may improve health of oral mucosa. This drug is proven as antimicrobial and antifungal. Thus, cleans up the oral cavity and reduces the irritation of mucosa due to stasis of saliva, which contributes in continuation of pathophysiology of OSMF.

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Indian Journal of Anesthesia and Analgesia	4	7500	7000	586	547
Indian Journal of Biology	2	5500	5000	430	391
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Indian Journal of Communicable Diseases	2	8500	8000	664	625
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Indian Journal of Emergency Medicine	2	12500	12000	977	938
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Indian Journal of Hospital Administration	2	7000	6500	547	508
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Indian Journal of Maternal-Fetal & Neonatal Medicine	2	9500	9000	742	703
Indian Journal of Medical & Health Sciences	2	7000	6500	547	508
Indian Journal of Obstetrics and Gynecology	4	9500	9000	742	703
Indian Journal of Pathology: Research and Practice	4	12000	11500	938	898
Indian Journal of Plant and Soil	2	65500	65000	5117	5078
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Journal of Orthopaedic Education	2	5500	5000	430	391
Journal of Pharmaceutical and Medicinal Chemistry	2	16500	16000	1289	1250
Journal of Practical Biochemistry and Biophysics	2	7000	6500	547	508
Journal of Psychiatric Nursing	3	5500	5000	430	391
Journal of Social Welfare and Management	3	7500	7000	586	547
New Indian Journal of Surgery	4	8000	7500	625	586
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Significance of Charakokta Garbhini Paricharya in Modern Era

Asha F. Hosur*, Mamatha K.V.**, Veena Kupati***

Abstract

Pregnancy is a long and very special journey for a woman. It is a journey of dramatic physical, psychological and social changes, of becoming a mother, of redefining family relationship. Garbhini paricharya or antenatal care is the unique contribution of Ayurveda in the field of obstetrics. The increased caloric requirement is to the extent of 300 over the non-pregnant state during second half of pregnancy. The increased demand needs to be compensated by exogenous supply of diet or drugs. Masanumasikagarbhini paricharya has been advised to get proper nutrition and good progeny by Acharyas. Acharyacharaka has advised use of anuvasanabasti with oil, prepared with madhuragana. Yoni pichu of this oil should be given for lubrication of garbhasthana (cervix) and garbhamarga (vaginal canal and perineum) to sukhaprasava.

Keywords: Garbhini paricharya Caloric Requirement; Ksheera; Anuvasanabasti and Yoni pichu.

Introduction

Pregnancy is a long and very special journey for a woman. It is a journey of dramatic physical, psychological and social changes, of becoming a mother, of redefining family relationship and taking on the long term responsibility for caring and cherishing a new born child, though a joyful event it needs a lot of care and concern.

Attainment of Shreyasipraja, the best progeny in all the aspects is everyone's dream.

How to do this genetic engineering to have the best in all? But without this genetic engineering also our ancestors procured world famous philosophers, prophets, and the best human beings. Garbhini paricharya or antenatal care is the unique

contribution of Ayurveda in the field of obstetrics and most important aspect in the whole area of Prasuthi Tantra, because all other aspects depend on this period. It is observed that maternal weight gain during pregnancy does influence birth weight of the infant. Hence, to prevent nutritional deficiencies, with the delivery of low birth weight and preterm infants, maternal nutrition should be monitored and advised wisely.

The diet during pregnancy should be adequate to provide for

- The maintenance of maternal health.
- The needs of growing fetus.
- The strength and vitality required during labor.
- Successful lactation

The increased caloric requirement is to the extent of 300 over the non-pregnant state during second half of pregnancy. The increased demand needs to be compensated by exogenous supply of diet or drugs especially when the majority of women remain active during pregnancy. The pregnancy diet ideally should be light, nutritious, easily digestible and rich in protein, minerals and vitamins. Proper planned diet during pregnancy has an important impact throughout the life of an individual.

Here we have quoted some studies, which shows that nutrition during pregnancy how affects the individual life later in period.

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Diet during pregnancy and the offspring's blood pressure 40yrs later concludes that, intake of animal protein and carbohydrate in late pregnancy may influence their offspring adult blood pressure. This may be mediated through on placental growth.

Study conducted by Dept. of pediatrics, University of Auckland, New Zealand on **Nutrition and fetal growth** reveals that Nutrient supply to the fetus is a key factor in the regulation of fetal growth. Nutritional effects may also persist over more than one generation.

Study conducted by Rowett Research institute, BucksburnAberdarn, UK-Demonstrated that overnourishing the boom to promote rapid maternal growth throughout pregnancy results in a major restriction in placental mass and leads to a significant decrease in birth weight relative to moderately fed.

Objectives

Masanumasikagarbhini paricharya has been advised to get proper nutrition and good progeny by Acharyas and we will try to analyze as to the benefits of this regimen from a different viewpoint.

Details

तस्मात् अहिताहारविहारान् प्रजासंपदमिच्छन्ति स्त्री
विशेषेण वर्जयेत्।
साध्वाचाराच्च आत्मानां उपचरेत् हितभ्यां
आहारविहाराभ्यामिति। - च.शा. ८/२१

*Somanasyamgarbhadharananamshrestam -
Agryaoushadiprakarana -Charak)*

Nutrition and mental equilibrium are the important basic needs in the maintenance of positive health of mother and foetus. There is scientific evidence that prenatal psychology of mother has profound and persistent influence on physical growth, neurological development, immune competency of foetus etc. and also affects health of child in later life by metabolic imprinting in utero

Garbhinimasanumasikaparicharya

प्रथमे मास

प्रथमे मासे शङ्किता चेद्भ्रमापन्ना क्षीरमनुपस्कृतं
मात्रावत् शीतं काले काले पिबेत्;
सात्म्यमेव च भोजनं सायं प्रातश्च भुञ्जीत ॥
-च. शा. ८/३२

Acharya Charaka advised intake of milk repeatedly in quantity desirable by the woman and should have normal food only twice a day. Sheeta, Snigdha, Madhura qualities of milk increases kapha and that promotes development of embryo.

Milk is rich with proteins, which helps to increase blood supply, aids the growth and development of placenta, growth of breast & uterus.

Calcium regulating hormones are altered such that there is increased calcium absorption by the intestine. The pregnant woman retains about 30gm of calcium, most of which is deposited in the foetus in the third trimester, (50-350mg of ionized cal/day) transferred to foetus.

Vitamin D is also obtained by milk, necessary for calcium absorption.

द्वितीये मास
द्वितीये मासे क्षीरमेव च मधुरौषधसिद्धम् ॥ -
च.सं.शा. ८/३२

2nd month: Acharya Charaka mentioned that madhuraushadhi siddha ksheera is advised for proper growth of the foetus. A Madhura drug is jeevaneeya, increase kapha and helps to pacify the pitta and acts as a Garbhastapakadravya.

Madhura dravya possesses high carbohydrate, low fat with high quantity of proteins. Intake in small quantities is said to be helpful during this time. Hence the madhura drugs are not only helpful for the fetus but also for the mother in following points:

- Carbohydrates – glucose
- Production of ATP
- Amino acid synthesis
- Glycogen synthesis
- Triglyceride synthesis

तृतीये मास
तृतीये मासे क्षीरं मधुसर्पिभ्यामुपसंसृज्य ।
च.सं.शा. ८/३२

3rd month: Acharya Charaka mentioned milk with honey and gritha

Honey is having a Free radical scavenger antibody which helps to increase immunity of pregnant women.

चतुर्थे मास
चतुर्थे मासे क्षीरनवनीतमक्षमात्रमश्नीयात् ।
च.सं.शा. ८/३२

Acharya Charaka has advised intake of butter extracted from milk in the quantity of one aksha (12 gms) or milk with butter.

Butter is rich in Vit. A, E, K, B12, Riboflavin and Folate. Containing minerals like sodium (Na), Calcium (Ca) and Potassium (K) in large quantity. Vit-A aids in glycoprotein synthesis and promoting cell growth and differentiation.

पञ्चमे मास**पञ्चमे मासे क्षीरसर्पि । च.सं.शा.८/३२**

5th month: Acharya Charaka advised Ghrita prepared with butter extracted from milk. This helps in rapid development of growth of fetus.

षष्ठे मास**षष्ठे मासे क्षीरसर्पिर्मधुरौषधसिद्धम् । च.सं.शा.८/३२**

6th month: Acharya Charaka explained Grita prepared from milk medicated with drugs of madhuragana. Ghrita is rejuvenator, nutritive, protects bone marrow and nerve tissue. It is rich in anti oxidants, acts as an aid in the absorption of vitamins and minerals from other food. Growth of fetus becomes slow but lower limbs continue to increase in length. Vernix caseosa and lanugo cover fetus. Brown fat forms and is the site of heat production.

Grita possesses following qualities which is required in development,

- Monoglycerides excess LDL
- LDL-lung surfactant
- Protein - lipid mixture needed pulmonary function alveoli coated with surfactants.
- Because of hydrocarbon chain -energy saver.
- Many intra and intercellular signaling events involve lipid molecule

सप्तम मास**तदेव सप्तमे मासे । च.सं.शा.८/३२**

7th month: Acharya Charaka explained Grita prepared from milk medicated with drugs of madhuragana.

अष्टम मास [९]

अष्टमे तु मासे क्षीरवागूं सर्पिष्मर्ती काले काले पिबेत्; तन्नोति भद्रकाप्यः पौङ्गल्याबाधो ह्यस्या गर्भमागच्छेदिति; अस्वत्र पौङ्गल्यबाध इत्याह भगवान् पुनर्वसुरात्रेयः, न त्वेवैतन्न कार्यम्; एवं कुर्वती ह्यरोगा आरोग्यबलवर्णस्वरसंहननसम्पदुपेतं ज्ञातीनामपि श्रेष्ठमपत्यं जनयति ।

च.सं.शा.८/३२

Acharya Charaka says that in this month rice gruel prepared with milk and mixed with ghrita should be given.

नवम मास [10]

नवमे तु खल्वेनां मासे मधुरौषधसिद्धेन तैलेनानुवासयेत्।

अतश्चैवास्यास्तौलात् पिचुं योनौ प्रणयेद्गर्भस्थानमार्गस्नेहनार्थम् । -च.सं.शा.८/३२

Acharya a charaka has adviced use of anuvasanabasti with oil, prepared with madhuragana.

Vaginal tampon of this very oil should be given for lubrication of garbhasthana (cervix) and garbhamarga (vaginal canal and perineum). Apanavata is the power of labor, helps in easy expulsion of fetus.

Anuvasanabasti and Yoni pichu

- Puranamalashodana
- Vatahara
- Medicated oil acting as anti septic
- Softening the vaginal canal
- Reduces abrasions
- Enhances the ability to stretch and distend

Discussion*Action of AnuvasanaBasti*

- Basti through the enteric nervous system acts on the sympathetic innervations which play a major role in inducing the uterine contraction.
- Also relieves a loaded rectum.
- The drugs absorbed rectally are carried into the systemic circulation which facilitates absorption and systemic exposure of absorbed drugs.

Action of Yoni Pichu

- Acts on the basis of irritation to the uterine cervix cause a nuerogenic reflex through the paraventricular and supra optic nuclei of the hypothalamus which causes the posterior pituitary gland to increase its secretion of oxytocin.
- Initiates reflexes to the body of the uterus, also the effect could be a result of myogenic transmission of signals from cervix to body of uterus.
- Pichu through the Forgyson Reflex which states irritation to cervix increases plasma oxytocin and the prostaglandin levels which are nothing but the hormonal contribution to the uterine contractions

Benefits of Garbhini Paricharya [11]

परमतो निर्विकारमाप्याय्यमानस्य गर्भस्य मासे मासे कर्मोपदेक्ष्यामः।

इएवं कुर्वती ह्यरोगा आरोग्यबलवर्णस्वरसंहनन संपदुपेतं ज्ञातीनामपि श्रेष्ठमपत्यं जनयति

गर्भिण्या गर्भसमये गर्भधारिणीकुत्तिकटीपार्श्वपृष्ठं मूत्रभवति वातश्चानुलोमः संपद्यते

मूत्रपुरीषे च प्रकृतिभूते सुखेन मार्गमनुपद्यते चर्मनखानि च मार्दवमुपयान्ति बलवर्णो चोपचीयते पुत्रं चेष्टं संपदुपेतं सुखिनं सुखेनैषा काले प्रजायत इति॥ च.शा-

Conclusion

Monthly regimen prescribed for garbhini is very comprehensive with broad objectives of antenatal and intranatal management. So, the Garbhini who follows the above said Upakramas becomes Snigdha, gains strength and delivers normally and easily without any complication.

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Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. *J Oral Pathol Med* 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. *Acta Odontol Scand* 2003; 61: 347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antiseptics. State of the art. *Dermatology* 1997; 195 Suppl 2: 3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. *J Periodontol* 2000; 71: 1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. *Dent Mater* 2006.

Personal author(s)

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Reference from electronic media

[9] National Statistics Online – Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ_20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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