



AYURVEDA SEMINAR

13 AUGUST 2017

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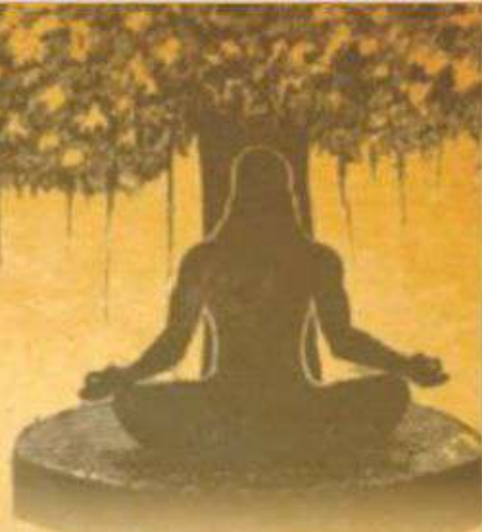


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MEDICAL COLLEGE AND HOSPITAL, LATUR.

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5th Inspirational Memory
LOKNETE HONORABLE VILASRAOJI DESHMUKH

Editor – Dr. Pawar Anand M.



 **AYURVEDA**
SEMINAR
13 AUGUST 2017

5th Inspirational Memory
LOKNETE HONORABLE VILASRAOJI DESHMUKH

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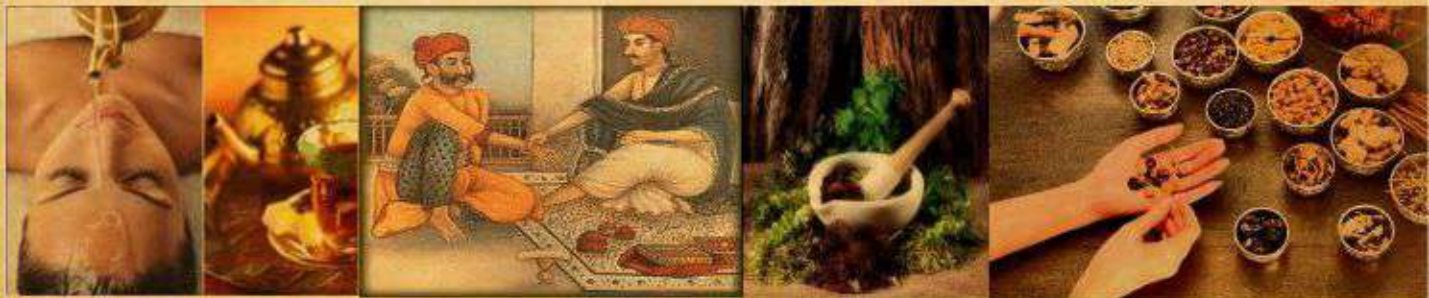


AYURVEDA SEMINAR

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कै.बी.व्ही.काळे (मांजरा) आयुर्वेद वैद्यकीय महाविद्यालय व रुग्णालय
पदव्युत्तर प्रशिक्षण व संशोधन केंद्र, लातूर



 **AYURVEDA**
SEMINAR



Manjara charitable trusts
LATE B.V. KALE MANJARA AYURVED MEDICAL COLLEGE AND HOSPITAL, LATUR

Gandhi Maidan, Behind Bus Stand, Latur Ph. 02382 244677, 247677 Fax : 02382- 244677

E-mail : manjaraayurved1@rediffmail.com

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आमचे साहेब....



मराठवाडा म्हटलं की, काही लोकांना पहिलेछूट छातीत धस्स होतं. कारण त्यांच्या मनांतल्या मराठवाडयात असतो इथला बारा महिने तेरा काळ दुष्काळ, शेतजमिनी भेगाळून टाकरणारे इथल्या अंगजाळ उन्हाचे परजलेले भाले, नाडले गेलेल लोक आणि त्यांच्या डोळ्यात सतत असलेला तिन्हीत्रिकाळ खडकाळ आसवांचा महोत्सव. पण या काळ्याभिन्न फतरांमध्ये जन्म घेतलेल्या एका नेत्यांना आभाळाएवढं विशाल मन घेऊन कर्तृत्वाची झेप घेतली. या फतरांमध्ये त्यांना विकासाची सुंदर लेणी खोदली ... भान हारपुन जाईल अशी मैफल मराठवाडयाच्या या संतभुमीत कुठ तरी रंगलेली आहे.... या समृद्ध मैफीलचं नाव होतं साहेब.

साहेबांनी काही शापांना आशीर्वादासारखं भोगलं. काही जखमांना पुरस्कारासारखं कुरवाळलं. काही दुःखांना विलग म्हणुन कवटाळले. काही सुखांना घेणेकऱ्यासारखं टाळलं. काही अपमानांना सन्मान म्हणून झेलेलं. काही आसवांना डोळ्यांत तोरण म्हणून सजवलं. या सगळ्यातुन त्यांचं जे एकमुस्त व्यक्तिमत्व उभरून आलं. त्यांचं मुल्यमापन अनेकांनी आपापल्या चष्म्यांतुन आगळ्या ढंगानं केलं. म्हणूनच आपल्या मनात काळ्याकभिन्न फतरांमध्ये विकासाची अप्रतिम लेणी खोदणारे विलासरावजी साहेब घट्ट रुतून बसले. ही लेणी खोदताना आणि छिन्नी-हातोड्यांचे घाव घालताना हा माणूस कधी थकला नाही. ... कधी थांबला नाही.... या सगळ्या गाळणीतून मराठवाडयाच्या हाती आले ते हे बाकी साहेब.

आयुर्वेद शास्त्राच्या प्रगती बाबत बोलायचे झाले तर साहेबांनी खरा राजाश्रय त्यांच्या मुख्यमंत्री पदाच्या काळात दिला. त्यांनी प्रत्येक वेळी आयुर्वेद महाविद्यालय व रुग्णालय जास्तीत जास्त ग्रामीण भागात जाळे उभे करण्याचे काम महाराष्ट्रात केले. सगळ्यात जास्त आयुर्वेद कॉलेज उभे राहण्याचे काम त्यांच्या कार्यकाळात झाले. तसेच आयुर्वेद पदवीधारकांना मानाने जगण्याची संधी, नौकरी सुध्दा उपलब्ध झाल्या. प्रत्येक वेळी जेव्हा जेव्हा आयुर्वेद संघटनांतून मागणीप्रमाणे त्यांनी त्याचा विचार करुन त्वरीत निर्णय दिले. सगळ्यात मोठे काम स्व. वैद्य. श्रीराम शर्मा यांच्या नेतृत्वाखाली स्वतंत्र आयुर्वेद विद्यापीठ होण्यासाठी प्रयत्न केले.



डॉ. पी. पी. शहा

बी.ए.एम.एस.(मुंबई)

प्रशासकीय अधिकारी व रुग्णालय अधीक्षक,

माहिती व जनसंपर्क अधिकारी,

कै. बी.व्ही. काळे आयुर्वेद वैद्यकिय महाविद्यालय व रुग्णालय, लातूर

डॉ. मंजुषा पुरी

प्राचार्या

कै. बी. व्ही. काळे आयुर्वेद वैद्यकीय
महाविद्यालय व रुग्णालय, लातूर



सस्नेह नमस्कार,

लोकनेते, तसेच सर्व महाराष्ट्राचे आवडते व्यक्तिमत्व कै. विलासरावजी देशमुख साहेब यांच्या स्मृतीदिना निमीत्त त्यांच्या पवित्र स्मृतीस माझी विनम्र आदरांजली.

जनतेचे आरोग्य निरामय ठेवणे हे वैद्यक शास्त्राचे तसेच वैद्यक क्षेत्रात कार्यरत असलेल्या सर्वांचे आदय कर्तव्य आहे. हे कर्तव्य पार पाडण्यासाठीच आमच्या संस्थेतर्फे खारीचा वाटा म्हणून दरवर्षी प्रमाणे या वर्षीही कार्यशाळा आयोजित केली आहे.

या कार्यशाळेचा उद्देश की सर्व महाविद्यालयातील विद्यार्थी एकत्र यावेत. त्यांना तज्ञांचे मार्गदर्शन लाभावे व त्यांच्या ज्ञानात भर पडावी, ज्ञानाचे विचारांचे आदान प्रदान व्हावे. कार्यशाळेसोबतच रुग्णांना सुविधा मिळाव्यात या दृष्टीने वेगवेगळे कॅम्प ही घेतले जातात. त्याचा रुग्णांना निश्चीतच फायदा होतो.

मांजरा चॅरिटेबल ट्रस्टचे अध्यक्ष मा. आ. श्री. दिलीपरावजी देशमुख साहेब व सर्व विश्वस्त यांच्या कुशल व कल्पक मार्गदर्शनानुसार आमच्या महाविद्यालयाचे काम चांगल्या प्रकारे प्रगतीपथावर आहे. कार्यशाळा यशस्वी करण्यासाठी महाविद्यालयाचे प्रशासकिय अधिकारी व रुग्णालय अधीक्षक, सर्व प्राध्यापक, सर्व वैद्यकीय अधिकारी, व कर्मचारी आणि महत्वाचे म्हणजे सर्व विद्यार्थी व आपणसर्वजण या सर्वांचे मनपूर्वक आभार.

प्राचार्य

कै. बी.व्ही. काळे आयुर्वेद वैद्यकीय
महाविद्यालय व रुग्णालय, लातूर

EDITORIAL

Dr. Anand M. Pawar

M.D. (Panchakarma) GAU,IPGT and RA ,Jamnagar
HOD and Associate Professor (Panchakarma Dept.)
Late B.V.Kale Manjara Ayurved Medical college, Latur
vd_ananda@rediffmail.com.9405647469



Ayurveda is getting transmuted into Ayurveda form a revealed shastra to heuristic by research and development process, as an evident based science and art of health and healing. The world is waking up to this grand healing wisdom of India. The developed nations of the world are now keen on taking up Ayurveda as a way of life, as a repertoire of safe remedies and last but not the least as a novel view of structure of life and its interacting universe. Such a novel view will provide a fresh direction to the current ongoing revolution in molecular medicine. Biotechnology and holistic health, the 21st century will then belong to Ayurveda.

So in this regard, To Promote the Ayurveda, to encourage the upcoming new practitioners & student in the field of Ayurveda and spread the Ayurveda in such a way that every human being of the society will be benefited and have a healthy and disease free life. To fulfill this purpose, since last 4 years we are conducting Ayurveda seminar by late B.V.Kale Manjara Ayurved Medical College and hospital under the umbrella of Manjra charitable trust which is founded by our great leader, honorable Loknete Shree Vilasraoji Deshmukh sir for the sake of humanity to provide health and help in all sections of society by various means and above Ayurveda institute is one of them .

Our institute runs by Manjara Charitable Trust, Successfully by the blessing & support from president of the institute, Great visionary, Respected Shree . Dilipraoji Deshmukh. Former ex. .State Sports Minister and honorable Shree. Amitji Deshmukh. Executive Trustee of Manjara Charitable Trust.

We have organized one day state level Ayurveda seminar on the occasion of 5th inspirational memory of Loknete Shree Vilasraoji Deshmukh. The invited speakers for this seminar are Vaidya Parikshit Shevde ,Vaidya Harish Patankar ,Vaidya Suvinay Damle , Vaidya Malwade Ganesh . We are publishing special issue on this occasion of research articles of our staff, PG students and undergraduate students. This seminar is organized in association with Maharashtra Council of Indian Medicine(MCIM),I am thankful to MCIM president Dr Ashutosh Gupta and vice president Dr Dattatray Patil .I am thankful to Mr Pramod Tandale publisher of Ayushi International Interdisciplinary Research Journal. It's my honor to be a part of this event and as a editor of this special issue ,I am thankful to Manjra charitable trust and respected, honorable Dilipraoji Deshmukh sir and Amitaji Deshmukh sir, also thankful to Principal of our college Dr Manjusha Puri madam, vice principle Dr Sunildatta Mulje sir ,Administrative officer Dr P.P. Shaha sir and RMO Suryakant Chavan sir, for giving me this opportunity, I am thankful to all my teaching staff, office staff and students who supported me throughout to complete this magazine, I am Thankful to editorial board members Dr Amol Patane and Dr Sariput Bhosikar sir , I am thankful to printing press and designer Shree Umesh Yechwad sir.

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Assessing the effect of Aahariya Dravya on Nadi with respect to Prakruti and Rasa using instrumentation and visualization based techniques

Vaidya Harishchandra Patankar

Smruti Ayurved –

Aarogyavardhini Chikitsalaya, Pune

Md (Scholar), Kriya Sharir,

Dr. D.Y. Patil Ayurved

College& Research

Centre Pimpri, Pune-18

Dr. Aniruddha Joshi

(Ph.D.)

Atreya Innovations, Pune

Vd.Shital Uttam Roman

Research Guide

M.D. (Kriya Sharir)

Kriya Sharir Dept.

Dr.D.Y.Patil Ayurved

College& Research

Centre Pimpri, Pune-18

Purpose

Ayurvediya grantha quotes the correlations between Aahariya dravya, Prakruti, Rasa and their effects on the nadi. This study was to understand the effects of rasa on nadi through instrumentation and its verification through the shlokas.

Flowchart of the study

- **Protocol for data collection**
- **Find 10 healthy students with consent**
- **For every student**
 - Find the prakruti through questionnaire
 - Find the baseline of the pulse patterns for the student considering data of 3 hours empty stomach for 10 days
 - Find the change in patterns in experiments of after drinking ginger tea for 3 days, eating roasted Bengal grams for 3 days and drinking very sweet milkshake for 3 days.
- **Collate the results for all the experiments**

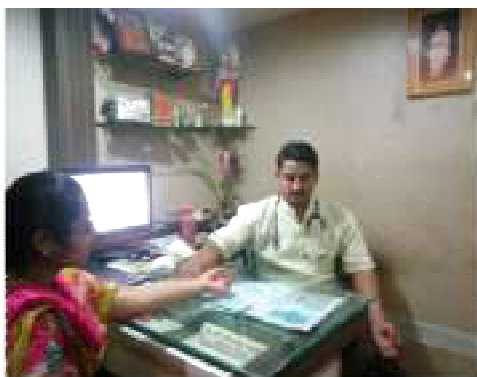
Protocol for data collection

- **Investigators**
 - Domain expert : Dr. Harish Patankar
 - Technical expert : Dr. Aniruddha Joshi
 - Research Guide : Dr. Sheetal Roman
- **Study site**
 - Smruti Ayurved - Aarogyavardhini Chikitsalaya, Pune
- **Subjects**
 - 10 Healthy students of age 20 without any medical conditions
- **Data collection**
 - Questionnaire : Prakruti determination
 - Instrument : Nadi Tarangini (three pressure sensors)
 - Data format : Time series of 1 minute with 500 Hz sampling rate

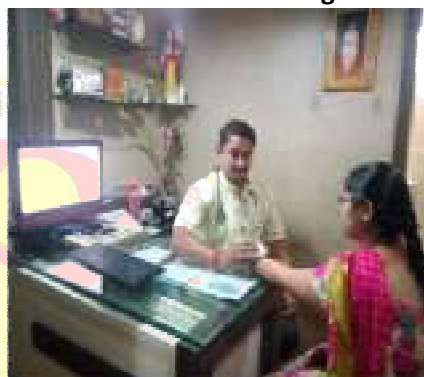
Methods

For storing and visualizing nadi patterns, we used the pressure sensors based system Nadi Tarangini (Atreya Innovations Pvt. Ltd. Pune). The data was collected at Smruti Ayurved - Aarogyavardhini Chikitsalaya, Pune, of 10 students, both male and female of age 20. Firstly, nadi signals of the students with 3-hours empty stomach were collected for 6 days at 5pm, which formed their individual baseline. Then on 9 different days at the same timing, the students had ginger tea for 3 days, roasted Bengal grams for 3 days and very sweet milkshake with ice-cream for 3 days. Nadi signals were recorded every day before and after the aahar.

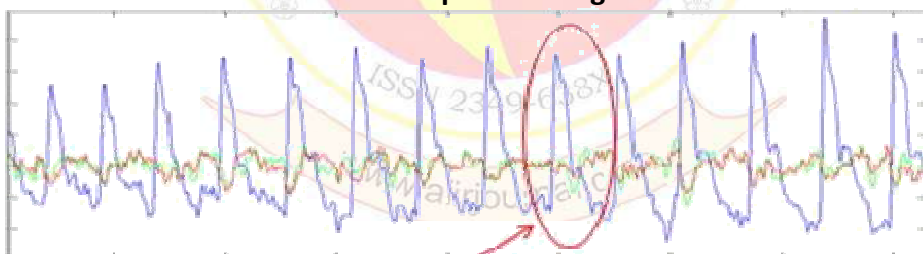
Manual Nadi



with Nadi Tarangini



Sample Pulse Signal



K-means clustering is used to know the best
1 pulse beat from full 1 minute data



Results

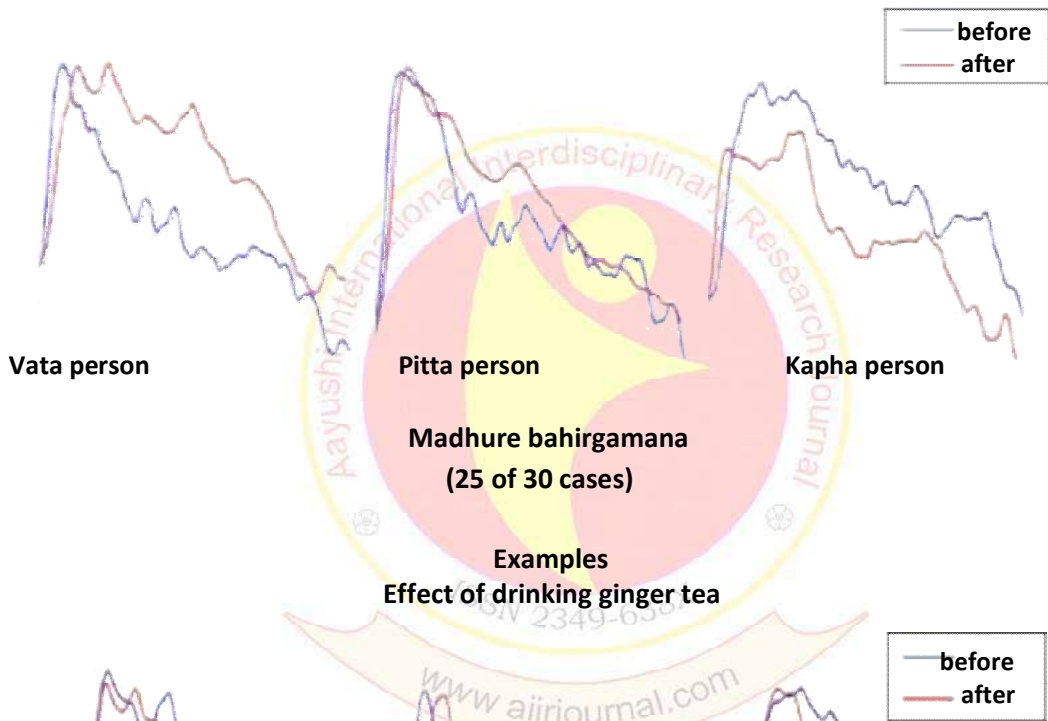
Out of 30 cases of drinking the sweet shake (10 students X 3 days), for 25 cases, the nadi pattern was flowing above their individual baseline nadi pattern. This is aligned with the shloka “Madhure bahirgamana”. In case of ginger tea, out of 30 cases, for 19 cases, the pattern was fluctuating around the baseline (like bee humming at same

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position). This is aligned with “Katuke bhrugasnnibha”. Finally, for Roasted Bengal gram, out of 30 cases, for 22 cases, the nadi pattern was flowing slightly below their individual baselines but with rigidity and increased area. This is aligned with “Kashaye kathina mlanaa”. The results in all the three cases show maximum correlation when exactly opposite Rasa and Dosha based prakruti is assessed, and minimum when similar properties were assessed. Results are shown below graphically.

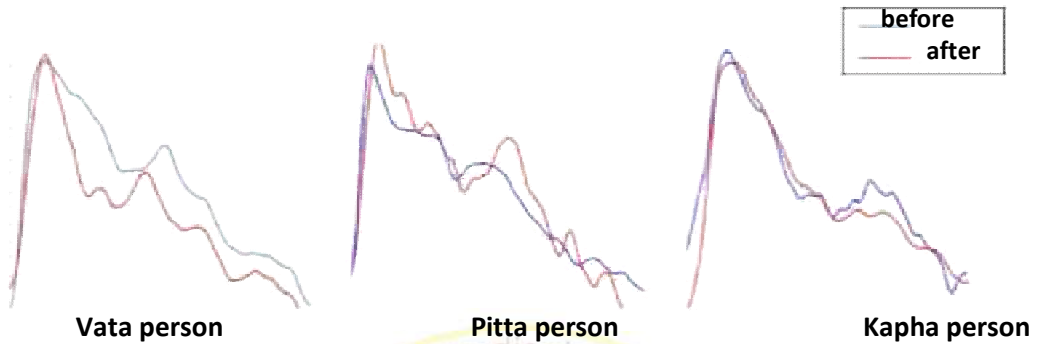
Examples

Effect of drinking sweet milk shake



Katuke bhrugasnnibha (19 of 30 cases)

Examples
Effect of eating roasted Bengal grams



Kashaye kathina mlanaa
(22 of 30 cases)

Conclusion

Instead of subjective nadi parikshan methodology, through this instrumentation and visualization based simple experiment, we showed that it is easy to understand and learn the underlined meanings of granthokta shloka for nadi.



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Rasa Sindura's Rasayana Effect

Dr. Sunil V. Mulje M.D.(Ayu.),

H O D & Professor,

Dept. of Rachana Sharir

Late B.V.Kale Manjara Ayurved Medical College

& Hospital, Latur

Dr.Sunil Mahindarkar,

M.D.,

Associate Professor & HOD, Sharir Kriya

Late B.V.Kale Manjara Ayurved Medical College

& Hospital, Latur

Abstract

Parada exhibits wide range of therapeutic merits with different potencies after under going Moorchana, Bandha and Mrita. Among these, Moorchana is intended to render the chapaltva of parada and potentiating it. Kharaleeya Rasayana, Parpati Rasayana, Kupipakva Rasayana and Pottali Rasayanakalpas comes under Moorchana varieties. Among these varieties Rassindura is a Kupipakvarasayanakalpana which is an unique technique in terms of it's ingredients and preparation.

Keywords : Parada, Rassindura, Rasayana.

Introduction:

Advancement of every science depends upon its methodological research. During golden period of Rasasastra, practice of mineral therapy became more frequent after developing specific pharmaceutical techniques which rendered metals and minerals into the Bio-compatible forms and free from the malicious and unsympathetic effects.

Pharmacotherapeutically Rassindura Reduces tissue oxidation rate, Increases urination and gaseous interchange,

Rasayana: The means and methods by which one gets the excellence of rasa etc. is known as rasayana. A part from the excellence of rasa, the individual is endowed with psychic excellence like sharp memory, etc. by virtue of Rasayana therapy.

Labhapayohi Sastanam Rasadeenam Rasayanam (Ca. Ci. 1/1/7-8).

A person undergoing rejuvenation therapy attains longevity memory, intellect, and freedom from disease, youth, excellence of luster, complexion, and voice, excellent potentiality of the body and the sense organs, vak-siddhi respect and brilliance.

Aims & Objectives : To Explore the versatility of Rassindura

Materials And Methods:

Rasa Sindura (Rs):

The ancient Hindu alchemists were well aware of this mercurial preparations since time immemorial. After several alchemical and pharmco clinical trials mercurial preparations like rassindura were brought into medical practice of olden days.

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Rassindura (RS) is a Kupipakvaparakalpna which is Sagandha, Sagni, Bahirdhuma, Kanthastapreparation. The chief ingredients are

1) shoditaParada 2) shoditaGandhaka in the ratio of 1:6.or 1;5,or 1;4 or 1;2 or ;1;1,and Bhavanadravyavatankurswarsa. This Rasa Sindura is considered as RaktaBhasma of Parada. ShadgunaBalijaritaSindura contains 87.28 % HG and 12.72 % Sulphur. (CCRAS standards).ShadgunaBalijaritaSindura is considered as superior among all Rassindura.

Observations:

Rassindura is claimed as Yogavahi, Vrushya, NadiBalya, Rasayana, Vajeekara, Controls Jvara, Prameha, Shula, Bhagandara, Kshaya, Gulma, Pandu, Sthoulya, Vrana, Agnimandya, Kustha, Manasvikara. Also it increases the strength of Nadi and Snayu. With appropriate anupanas (Vehicles) it may be used in all the diseases.

As per the suitable anupana, Ras Sindura acts on multi disciplinary ailments viz.

- Vata Roga**— Honey, Mamsa Rasa, Tail or Lasuna,
- Pitta Roga**— AmlakiChoorna and Misri,
- Kapha Roga**— Zinger (Ardrak) Swaras and Honey,
- Vajikarana**— SalmalimoolaChoorna or VidaryadiGana,
- Dhatu Vridhhi**— AbrakaBhasma or SwarnaBhasma, Vidari Kanda Choorna,
- Swasa**— VibhitakiKwatha or Swaras of Vasa,
- Balavridhi**— GuduchiSatua, Kasa, Swasa,
- Soola**— Trikatu, Bharangi and Honey,
- Sukra Vridhhi**— Akarakaraba, Bhang, Misri, Masa, or with Banana.

Discussion:

- Rassindura – acts with vehicle direction on respiratory cells and membranes.
- It eliminates the micro and macro impurities of Respiratory System.
- It acts as anti-inflammatory, mucokinetic and mucolytic agent.
- It modifies the sensitivity and immunological status of whole trachea bronchial tree.
- Probably enhances IgG antibodies.
- Strengthens the membranes, smooth muscles, Vascular Strictures.
- Smoothly balances the Gaseous exchange, ion transfusion.
- Nourishes the trachea bronchial tree structure with its catalyzing effect.
- Prevents further invasion and damage of the system.
- It boosts up the debris elimination activity.
- Acts also at Gastro oesophageal Reflex diseases and hence prevents the secondary influence of GIT on RS.
- Regulates Reticulo Endothelial system, TLC %, brings back AEC and ESR.
- Diuretic effect clears the intracellular metabolic wastes.

14. Also acts at higher Respiratory centers & Hypothalamus Pituitary Cardio Respiratory axis (HPCR) and regulates respiratory rhythm.
15. Augments membrane stabilizing effects on Respiratory System.
16. As it is mercuric sulphide absorbed and excreted without any ion tissue perforatory activities unlike inert salts. So it may be acting as catalyst, Respiratory free radical scavenger immunopotentiator, Haemopoetic agent, Gross anti septic, Tonic, Alterative, AntiPhlogistic and above all as it proves to be a potent tissue nutrient enhancer and body weight modifying agent. It can be best termed and used as Rasayana WSR to Respiratory System.

Summary:

Pharmacotherapeutically Rassindura Reduces tissue oxidation rate, Increases urination and gaseous interchange, Haemopoiesis (invivo and invitro), Body weight gain, Tissue nutrition improved, immunomodulator, Galagogue, Purgative, Indirect Cholagogue, Anti Phlogistic, Antiseptic. In stomach it combines with albuminous juices and absorbed, In intestines small portions absorbed and rest is excreted as sulphide. It is Anti toxins in syphilis. As per different methods of administration it cures all diseases. (IMM, Vol II, AKNADKARNI: 76)

Conclusions:

- A skilled physician should use Rasaushadhi for the welfare of Ailing humanity.
- Mercurial preparations are devoid of taste, quick acting and useful in all conditions.
- RS is kupipakvarasayana of mercury hence it is safer than other modes of administration.
- RS is non toxic, tolerable, effective in smallest doses.
- RS with vehicle dependently acts multicentrically.
- RasSindura is a nutrient, antioxidant, free radical scavenger, immunopotentiator, detoxificant, adaptogenic, antistress, antiageing, antidegenerative, antimicrobial, anabolic, and tolerant in paediatric practice and hence it can be better used as rasayana and specially in sensitive problems of respiratory disorders.

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Pottali Kalpanaan – Exploding Myths

Dr.P.P.Shah

Administrative Officer,
& Hospital superintendent
Late B.V.Kale Manjara Ayurved Medical College
& Hospital, Latur

Dr.Maruti T.Narhare

Associate Professor,
Dept. of Rasshastra & alpana
Late B.V.Kale Manjara Ayurved Medical College
& Hospital, Latur

Abstract

Pottali kalpana can be understood as a specific pharmaceutical technique which is intended for keeping different constituents in their processed, purified, incinerated, sindhoora from into unique complex formula.

Pottali kalpana is a peculiar type of precious kalpana is vanishing and presently very limited knowledge regarding pottali is available. So many Pottali kalpana references are available from classics. Very few pottali kalpas eg. Hemagarbha pottali are in use. Many preparations have lost their identity.

Keywords : Pottali, Parad, Tamra, Pottali paka, Gandhaka

Introduction

Pottali Kalpana is highly evolved pharmaceutical technique in which the ingredients will be in shoditha form' incinerated form or even in Sindhoora form. Pharamceutical techniques are boon to the medical field. The speciality of pottali kalpana lies in bindibg different varieties of drugs into a Single molecule form and thereby minimizing the dose.

Physicians were in need of an emergency medicine which can be used in small doses and with less number of recipes. The pottali kalpana was invented with a vision for convenience in transportation, administration dose fixation, preservation and enhancement of properties.

Review of Literature

A. Concept of Pottali

- Etymology
- Necessity of pottali kalpana
- History of Pottali kalpana
- Classification

1.Etymology : Most of the derivations connate the meaning of pottali as To concise, To compact a Substance, To minize a Substance, To minize a Substance, Making into bundle , pocket of the Substances or to put different substances into a bundle or pocket which seams Similar in case of pottali Kalpana.

विस्तारितस्य वस्तुनो अल्पीभवनम् पोट्टं
पोट्टलाति गृह्णाति इति पोट्टली

Pottali can be defined as to collect scattered materials, into a compact and comprehensive size. Otherwise technique or processing which gives compactness to the scattered.

2.Necessity of pottali kalpana: Physicians were in need of an emergency medicine which can be used in small doses and with less number of recipes. The pottali kalpana was invented with a vision for convenience in transportation, administration dose fixation, preservation and enhancement of properties.

3.History of pottali :There were no references regarding pottali kalpana form Vedic literature. But pottali word was used for different purposes in Ayurvedic literature pottali word is found in Charaka samitha in different contexts mainly meaning the word for bundling the various herbal drugs by a piece of cloth and to apply for sudation in various diseases.

But from the point of Rasa shastra, pottali kalpana should be considered as separate kalpana of metallo-mineral drugs evolved in order to keep multiple components like Bhasma, Dhatu,Ratna etc.,into a compactly Processed one.

The first and foremost mentioning regarding pottali kalpana is found in Rasa Ratnakata of 12th Century A.D.

There after Rasaendra Sara Sanghrraha of 13th Century A.D. has mentioned 5 pottali kalpas in his text.

Contemporary to Rasendra Sara Sangraha. Author of Rasa Prakash Sudhakara. Acharya Yoshadhara has formulated six pottali kalpas,s.Acharya Rasa Vagbhata, author of Rasa Ratna Samuchaya futher developed six pottalis in his text.

Author of Rasandra Chintamani, Acharaya Dundulanatha of 14 Cenruey A.D. has mentioned 3 pottali yogas in his text which are mere repetition of previous texts.

Acharya Anantha Deva suri, author of Rasa Chinthamani of 14 century A.D. has mentioned six pottali kalpas in his text which are unique and original yogas form the author.The only Specialty of the author is thata he had mentioned first time the method of preparation of Hiranya garabha pottali in dola yantra by molten sulphur. While the previous authors are mentioned if by putapaka samskara.

Sharangadhara Samhita kara also repeated four pottali yogas from previous text.After words texts like Bhava Prakasha, Rasa koumdhi and Rasa Kamadhanu have jist recompiled some in Atisaradilarana by kaparda poorana and subjecting to puta paka.Rasa koumidhi mentioned Shanka grabha Pottali.Acharaya Chudamani,author of Rasa Kamadhanu of 17th century A.D.has mentioned 8 Pottali kalpanas

Author of yoga Ratnakaras has mentioned six pottali kalpas of which 2 varieties of Hema grabha pottali are the fundamental and contribution of the author. Besides this he developed the pottali paka procedure by sulphur bath in iron vessel.

Acharya Sri Govinda Das, author of Bhaishajya Ratnavali mentioned five pottali kalpas which are compiled from previous works.

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In 20th century A.D voluminous, compilatory text like Bharath Bhaushajya Ratnakar Rasyoga Sagara. Rasarantrasara & Siddha prayoga Sanhagra have compiled many pottali yogas from previous text. Shri yadhavji Trikamji, author of Rasamrutha has mentioned many kalpanas of pottali.

4. Classification of pottali

1) As per ingredients

- a) According to Parada Content-
- b) With parada eg. Ratna Garbha Pottali, Hemagarbha Pottali

2) According to Gandhak Content-

- a) Pottali with Gandhaka – Ratnagarbha Pottali, Hemagarbha Pottali, Rasagarbha pottali.
- b) Pottali without Gandhak – eg. Vajra Pottali (R.P.S.)

3) As per Gandhaka paka-

- a) By Dola yantra eg. Hemagarbha Pottali (Rasamrutha)
- b) Without Dola yantra eg. Hiranyagarbha Pottali (II) (Yoga Ratnakara)
- c) Swedan by Krusara Primarily and followed by Sulphur bath eg. Hemagarbha Pottali (XI) RYS
- d) Gandhaka Taila eg. Hemagarbha Pottali (S.B.M .)

Methodology of Pottali Kalpana

This was systematically achieved by two basic procedures viz.,

1) Putta paka Samskara

2) Pottali Paka.

1. Putta paka Samskara

For the purpose of putpaka, various putas are mentioned viz., Gaja puta, kukkuta. Puta. Bhudhara puta, Banda puta, Banda puta etc., Apart from the general Puta Paka procedures some special techniques are adopted for the purpose of Putapaka of pottali. Ex. Lokanatha pottali, Shankagraba Pottali

2. Pottali Paka :

In the Course of Preparation of Pottali, the following points are taken in the Consideration especially for those prepared in the medium of molten sulphur.

- 1) Ingredients 2) Binding agent (Swasa for bhavana) 3) Shape of Pottali 4) Drying of Pottali 5) Container 6) Cloth (7) Quantity of Sulphur for Paka 8) Agni Pramana 9) Paka Kala (10) Paka lakshana 11) Paschat karma.

Ingredients:

In maximum number of pottalis, Mercury, Gandhaka and Gold are taken as one of the ingredients. Gold is used in two forms for therapeutic use, either in bhasma form or foil form

Binding agent:

During the rubbing and mixing of the ingredient one liquid media is used to bind the materials and to give shape of the pottali to it. Mainly Gritha kumari swarasa is used

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for binding and trituration of pottali , besides is besides , babul Nirvana, Tulsi Swarasa, Chitraka are asvavacated by the groupe of some authors (Rasyana sara , R.Y.S., R.R.S)

Shape of pottali

Some texts opine the shape “Sikhara rambhika kara” means the base being wide with narrowly pointed towards the top resembling the shape of the pyramid (Rasayana sara) another text Fruit of (Araca catchu nut) in shape and size (Va.Ci).

Further a text mentions the shape as Karaya manasca vartika means pottali should be in the shape of varti and approximately weighing of one karshya (12gms).

Container:

The Container in which Pottali is to be boiled in the molten sulphur media Should be of earthen one, and it should be smeared with ghee properly before e to the Gandhaka paka (R.Chi.) where as some other text mentioned Ayasapatra (Iron container) for the same (Yoga Ratnakara)

Cloth :

Most of the authors opine to use the silk cloth to tie the pottali for Gandhaka paka but the layers of the cloth to be tied varies from 1 to 4 sand witched witch fine powder of sulphur in different text (R.Y.S.,R.S.Y.R)

Quantity of sulphur :

Some texts prescribe the quantity of sulphur to be equal with the weight of pottali taken (Y.R.) where as others opine 2 to 6 times to the weight of the pottali, Gandhaka Should be taken (R.S.).

Agni pramana :

All the authors are mentioned the pottali paka by indirect heat application and in mandhagni.

Paka kala:

Different views are found in rasa shastra text regarding the duration of paka of pottali They are yamardha, yamaika, Ghatika Dwitayam, Ghatdwaya, Dwiyanam which indicahed the duration of paka from 1 hr. to 8 hr. but yoga Ratna kara, Rasamrutham mentions the paka kala upto the attainment of Vyomavarna of Gandhaka.

Paka lakshana:

Some Signs have been mentioned in the Rasa Shastra text for the determination of perfect paka of pot tails they can be categorized under the following headings.

a) As per the colour of the Gandhaka

The paka of pottali is considered perfect or completed when the colour of the sulphur becomes vyoma varna Sky colour by Lakshmi pathi shastri on yoga Ratna kara P.P- 420 Yadhavji on Rasamruta Neelashyama (Bluish black by V.M.Dwivedi on B.R.S.

b) Mettalic Sound produced by the pottali when banged against the container or any hard substances

c) Burning of cloth : During the processing when the cloth containing pottali is burn, that sign is considered as one of the paka lakshanas of pottali.

Paschat karma :

The pottalis are taken out after attaining paka lakshanas and the silk cloth is removed by cutting with it sharp instrument. When the pottali become cool pottalis are polished with a knife to remove the superficial Coating of Gandhaka adhered to it and kept in suitable containers for therapeutic uses.

Mode of administration:

This pottali should be rubbed over a scratch stone for desired number of rotations by applying madhu or gritha as a medium and whole paste is administration orally.

Discussion

- Care should be taken to keep pottali always immersed in molten sulphur with out touching to the bottom and sides of the pot.
- Heat should be regulated properly to maintain within the range of 120 C – 140 C throughout the process to keep the sulphur in liquid form.
- Pottali Should be tightly tied taking care that pottali is surrounded by fine powder of Gandhaka dusted over silk cloth
- Silk cloth should be unwrapped from the pottali immediately after the completion of the Procedure in warm state.
- Pottali Should be scrapped by the blunt edges of knife to remove the outer layer of Gandhaka on it.

Confirmation of paka:

Pottali become so hard the when banged against the pot produced the metallic Sound. Molten Sulphur turned to reddish brown and to almost black and catching of fire.

Conclusion

Pottali kalpana can be understood as a specific pharmaceutical technique which is intended for keeping different constituents in their processed, purified, incinerated, sindhoora from into unique complex formula.

This specific technique developed for potentiating the constituents, Stabilizing firm binding between the constituents forming a coordinating complex with high therapeutic efficacy.

When the constituents are individually prescribed, naturally the recipe becomes more in quantity. When all these constituents kept in a complex form with suitable samskara dose can be minimized with wide Spectrum of therapeutic actions.

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Efficacy of Sitopaladi Churn with Rasa Kalpa in Allergic Rhinitis**Dr.Vandana Digambar Kamble (Ghate)**M.D.Kayachikitsa (Mumbai)
Professor & H.O.D (Kayachikitsa)
Late. B.V. Kale Manjara Ayurved Medical
College & Hospital,Latur**Dr.Aruna S.Rupnar**Assistant Poffessor,
Sharir Rachana Dept.,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital,Latur**Abstract-**

Day by day our life becomes race. Everybody want to run fast to fulfil our daily requirements for our life. So everybody from childhood have stress. So day by day we feel impatience in life. in our ayurveda it is named as Asahatva or in modern science it is called allergy. cocren to above concept one sutra is mentioned in Charaka Chikitsa Sthana 16.

Key Words- Sitopaladi Churn with Rasa kalpa, Allergic Rhinitis**Introduction**

Selection of sitopaladi churn with rasakalpa in allergic rhinitis is based on today's polluted weather and changing lifestyle hence allergy means asahatwa of weather changes and dietary factors also.

Allergic rhinitis is described in charaka chikitsasthana trimarmiya chikitsa chapter including shir, hridya and basti.

Rhinitis comes under vyadhi shirorog means urdhwajaturgat vyadhi. It is the khaphasthana according to ayurveda

In pratishyaya all etiological factors are described including adharniya vegdharana, ajirn, over speech, exposure to dust, over anger, change in weather, headache, late night sleep, divaswap, ativyavaya, over depression and over exertion in fuel and industrial area. due to this etiology allergic rhinitis aggravated and become hetu of other respiratory disease.

So the use of this drug helps to recover the disease and has a property of rasayan means recurrence of disease is prevented and this drug combination has property of expectorant, bronchodialator, appetizer, mild laxative, antiemetic and aphrodisiac property etc,

Aim & Objective

To see the efficacy of sitopaladi churn with Rasa kalpa in allergic rhinitis.

Material and Methodes-

Due to allergy, our sadhaka pitta gets vitiated so we suffer from allergic conditions, such as rhinitis, urticaria, conjunctivitis, motion sickness, depression, etc. in this conditions very simple and easily available and very suitable for all age groups herbal preparation Sitopaladi Churn with rasa kalpa is used.

Sitopaladi Churn is described in Rajaykshama Vyadhi as a vyadhipratyanik chikitsa.

Almost all diseases are described in rajayakshama vyadhi as trirupa,shada rupa and ekadaasharupa.

When this herbal preparation with rasakalpa in allergic conditions acts as a yogavahi kalpa and it increases bioavailability of drug.this combination gives symptomatic relief.

Sitopaladi churn with lakshamivilas rasa plays an excellent role in immune deficiency disease like allergic rhinitis,bronchitis,brhanchial asthma,etc. Sitopaladi churn with shwshakuthar plays an excellent role in copd,pleural effusion.emphysema, pneumonitis and all bacterial infections.

Review of Literature

In ayurved sitopaldi churn described in rajayakshma vyadhi chikitsa 8 Rasa kalpa are described in rasatarangini and yogratnakar

Observation

Allergic rhinitis which is commonly occurring disease in all season and almost all immune compromised patient or protein energy malnutrition disease which in ayurveda described as Apatarpanjanya vyadhi in which deha, agni, bala, oja, varna, kshaya is observed. Sitopladi choorna along with rasakalpa have best results in above patients and improve symptoms like Rhinorrhoea, Agnimandya, Weight loss, Skin change in colour, Alertness and concentration etc.

Summery and Conclusion –

One herbal preparation along with Rasakalpa has very good results in Immunodeficiency disease like Allergic Rhinitis.This drug increases bioavailability of Rasakalpa.It has good absorption capacity.Nobody has got adverse effect during treatment.The patient has taken medicine upto one month with honey after that patient has advised to take RasayanaChikitsa and suggest some Pathyapathya according to prakruti and even seasonable changes.

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Interpretation of Hypertension in Ayurvedic Parlance

Dr.S.R.Khandare

Associate Professor,
Department of Rognidan,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Dr.Sariput N.Bhosikar

Assistant Professor,
Department of Agadatantra,
Late B. V. Kale Manjara Ayurved Medical College
& Hospital,Latur

Abstract

Hypertension is a disease of modern day. It is a silent killer disease. In modern science treatment is directed to control the blood pressure but complete cure is not possible. Patient has to take the medicine for life long. The complications of disease itself and its medicine are varied. Ayurveda can provide a panacea if the pathophysiological aspects of hypertension are put forth in terms of Dosha, Dhātu and Mala ideology. Hence this review study was undertaken.

Keywords: Hypertension, Ayurveda, Dosha, Dhātu, Mala etc.

Introduction:

Hypertension is a very common ailment among intellectual and ambitious persons, who are high up in business, profession & social ladder. This disease can be diagnosed with the help of instrument-Sphygmomanometer. Ayurveda is a clinical science depending upon the subjective and objective signs and symptoms available on patient. Hence for studying the disease like Hypertension, we have to adopt a very cautious approach, by preserving basic fabric of Ayurved.

Blood pressure (B.P) is related with hemodynamic mechanism. Blood Pressure is a product of cardiac output and peripheral resistance¹. As per Sharira described in Ayurved blood is a mixture of Rasa and Rakta dhātu. In Ayurveda circulation of blood in the body comes under “Rasa dhātu paribhramana”. In this circulation, Hridaya and 24 Dhamanis works as the basic channels and Vyana vāyu plays an important role in the maintenance of hemodynamics².

Aims and Objectives

The aims and objectives of the present study are as follows:

1. To correlate the Ayurvedic concept with hypertension of modern science
2. To review the ayurvedic literature and modern literature.

Literary Review

Role of Udana vāyu:

Not only Vyana vāyu but also Prana and Udana vāyu plays vital role in contraction (sankochkrut Udana) and relaxation (vispharkrut Prana). Unimpaired muscular activity (bala), energy utilization (oorja), and propulsion (prayatna) are the functions of udana vāyu³. ‘Vishada’ cleanses the channels and ‘laghu’ which is having ‘Akasha-Agni-Vāyu’ constitution facilitates normal hormonal activities and energy utilization. Thyroxine vitiates Udana and increases cardiac output there by systolic B.P.

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Thus increase in laghu and vishada guna results in Udana dysfunction, Bala kshaya and thereby hypertrophy and cardiac failure.

Role of Apana vayu:

Fall in blood pressure causes increased secretion of Renin. Renin acts on angiotensinogen and converts it into Angiotensin-1 Angiotensin 1 is converted to Angiotensin 2 by angiotensin converting enzymes.(ACE) Angiotensin increases B.P by two ways .1)By vaso constriction(sankoch) 2) By the release of aldosterone from adrenal cortex which causes retention of water and sodium leading further increase in B.P⁴. by regulating Kleda. The equilibrium of udaka in body is maintained by several feedback type regulatory mechanisms like sweating, thirst and micturition reflexes. Rasa dhatvagni and Apya bhutagni activities and also by Apana-Prana-Vyana cycle. When functions of “Apana and vega pravartan” are disturbed, ‘prana’ gets stimulated which in turn stimulates Vyana vayu in hridaya. Hence “Vyana vayu, Prana vayu, Udana vayu & Apana vayu plays an important role in etiology of Hypertension in relation to vata. Hence we can say that dysfunctioning of vyana vayu, udana vayu, and apana vayu becomes important etiological factor for hypertension.

Role of sadhak pitta:

Sadhaka pitta which is situated in Hridaya gets dushita in hypertension. Patient presents symptoms like irritability, stress, fear, confusion, anxiousness. Looking into the signs and symptoms of hypertension, involvement of sadhaka pitta is very much evident.

Role of Avalambaka kapha:

Avalambaka kapha controls action of vata dosha, helps in dharana of hridaya & expulsion of blood from heart.

Dhatu-vichar:

Rasa-dhatu-

Rasa dhatu i.e saumya and jal tatva pradhan dhatu gets dushita due to stress factor i.e. “chintyanam atichintnat”⁵ and causes disturbances in gunas of rasa dhatu like drava,snigdha, sheeta,mrudu, pichil, guru.

When there is Drava guna kshay in Rasa dhatu it causes shabdhaasahishnutha⁶. Due to Ruksha guna vridhi and kshay in snigdha guna causes loss of Bala (power), Vaichitya, Arati, & Glani in manas bhavas. Kshay of mrudu guna causes gatyatmaka vikruti in action of heart. It creates shaithilyata in cardiac muscles.

Rakta-dhatu-

Acharya Charak has described a set of diseases caused by Rakta dhatu and most of these entities forms symptomatology of hypertension.

For eg. 1.Akshiraga, 2.Buddhi sommoa 3.Krodhaprachurta 4.Mada 5.Kampa 6.Klama 7.Sirahsula 8.Sweda 9.Tamadarsana 10.Rakta pitta 11.Santapa.^{7&8}

Mamsa- Medo dhatu-

As per the etiological factors explained in modern medicine, Hypertension may be categorized as a santarpanotha vikara and all the santarpanotha vikara are the result of dhatu vridhi. Mamsa medo dhatu vridhhi due to pichil guna which takes place due to kapha vridhi causes Dhamani-pratichaya in blood-vessels by lepana karma. This disease characterized by fullness and thickening of blood vessels included in one of twenty disorders resulting from increased kapha.⁹

Siragatvata:

The increased vata affects the blood vessels, nerves and give rise to spasms and thinness or laxity dilation and fullness of blood vessels. The clinical manifests are awareness of pulsation of blood vessels dull pain in various parts of the body emaciation and oedema. The spasm of the blood vessels can give rise to Hypertension.

For further understanding pathogenesis of various types of hypertension, analysis of avarana process is necessary. Avarana of increased Pitta dosha (Avrita) by Sama Prana vayu (Avaraka) causes Murcha, daha, bhrama, Shula, Vidaha.¹⁰ Avarana of increased Pitta dosha by Sama Udana vayu i.e. Pitta avrita udana vayu which causes murcha, daha, vidaha, ojo-vishramsas.¹¹

Avarana of increased Vata by increase Dosha & Dushya:

In this condition the symptoms of increase Avaraka and Avrita both will be available. In this disease, hypertension usually Vata (avrita) Pitta, Rakta, meda (avaraka) all will be increased leading to the avarana complex of Vata.

Manas Guna Vichar:

Satva guna helps in regular function of heart. Increase in Rajo guna described as fight or flight response the adrenal medulla secretes stress hormones epinephrine and nor epinephrine which increases blood pressure. Normally the effect of catecholamine on the heart rate is mediated by b-receptor that includes increased heart rate, contractility and conduction velocity. All these contribute to increased cardiac output.

Conclusion

It can be said that in the disease hypertension, involvement of Vyana-Prana-Udana-Apana vayu dusti with Sadhaka pitta dusti with dhatu dusti of Rasa-Rakta Mamsa-Meda. In concepts of avarana it is avarana of Pitta dosha by sama prana or udana vayu. Hypertension, which is over activity of circulatory system enhances catabolic activity and could easily be perceived as an aggravated Vata diseases.

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The Panchamahabhut Sindhant's in the light of Modern Science

Dr.Sunil V.Mahindrakar

Associate Professor & HOD,
Sharir Kriya Dept.
Late B.V.Kale Manjara Ayurved Medical College
& Hospital, Latur

Dr.Maruti T.Narhare

Associate Professor,
Dept. of Rasshastra & alpna,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Abstract

Any object or element that has some size shape & weight & occupies some space in this universe is matter, Energy does not have any size, shape or weight but it can travel through matter or space. Space means the distance or the gap or the empty area in between any two objects

Time no daught is the forth entity in this univers but it is no independat. It is the relative tem that depends upon the motion or the seed that covers the space, and the motion or speed depends.upon force energy.

Panchmahabhuta sindhanta's are the major tools for diagnosis and treatment of various ailment.

Key Words : Panchmahabhuta, Dosh ,dhatu ,mala

Introduction

Every one knows the whole science of Ayurveda Practice is based upon the Bio - physical Principles of life.

Ayu means the life force or the life energy and Veda means the Comprehensive knowledge of Health

In modern science Ayu is known as Bios and bio means the life force or the life energy.Several names give to this life energy such as Atma,Jeevan, chetna, Jeeva , Chaitanya shariiree etc. but the exact nature of the life energy & its dimension are not known even today.

The live force or the life energy is mystery even today. physics is a science that deals with matter. Energy & space, the matter exists in three physical states solids, liquids & Gaseous.

But the energies that are absolutely essential for evolution & continuation of life on this earth are Heat, light & gravitation, a trio given Even at the atomic level & Atomic physics deals with the three particles only the proton, the Electron & Neutron .

Hence here an attempt is made to describe the panchmahabhuta sindhantas in the light of modern science.

Aim and Objectives

To study the Panchmahabhut sidhanta's in the light of physics- modern science

Review of Literature

Panchmahabhut sidhanta's were well explained in all basic Samhita's of Ayurved.Acharay's like charaka ,sushruta , vagbhat were explained in detais about

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theories of panchamahabhut sidhanta, there functions and utility in treating various disorders.

Materials & Methods : The basic principles of life in Ayurveda are three & they are known as siddhants the are

- 1) The panchmahabhoot sidanant structural Principle
- 2) Dosh dhatu mala sidhant functional Principle
- 3) Rasa Veerya vipak siddant -Action Principle

Panch means five & Mhabhotas means basic elements

The basic of the panchmahabhoot siddhant is the presence of trio of physics in this universe & the presence of same tyope of trio in the human dody also the tno of universe are.

The Human body is also composed of same type of trio Any object or element that has some size shape & weight & occupies some space in this universe is matter, Energy do not have any size, shape or weight but it can travel through matter or space. Space means the distance or the gap or the empty area in between any two object. Time no daught is the forth entity in this univers but it is no independat. It is the relative tem that depends upon the motion or the seed that covers the space, and the motion or speed depends.upon force energy.

We know the charaks Lok Purush sidhant , The um verse is known as lok, while the having human body is known as purush.

Observations

1.Matter

Just looking around our self we found a table , a glass a paper, the water & the air around yourself. Scientifically all termed as matter.

Thus the matter exist in three physical states

- 1.Solid states
- 2.liquid states
3. Gaseous states In Ayurved.
1. Solid states of matter is known as - prithvi
- 2.The liquid state of Matters is known as -Aap
3. The gaseus state of matter is Known –Vayu

And collectively prithvi, Aap. & Vayu constiture the three mahabhutas in the panchmahaboo sidhant.

2. Energy

We have already seen that there are several energies present in universe but the energies that are absolutely essential for evaluation continuation & maintenance of the life on this earth are only three again they are the Heat , light & the gravitation.

Without heat & light there will be no vapour , no rain, no water no vegetation, no food & thus no life in Ayurved the heat & the light together is knowns ' Tej mahabhoot ' gravitation is attributed. Thus the fourth mahabhoot is ' Tej ' only

3. Space:

Space means the gap or the empty area in between two stars, two planets, two object two cells or even the two atomic particles.

The hollow structure inside our body like intestines, lungs, & other cavities also constitute the space in Ayurveda.

The empty space is known as Akash and there fore the panch mhabhoot is known as 'Akash '.

Thus the panch mahabhoot viz prithvi, Aap, Tej, Vayu & Akash are the further explaintion of the trio the the universe viz matter, energy & space.

In the human body:

Matter:

Solids - prithvi, bones, museles, liver, spleen, kidney etc.

Liquids - Aap-Blood,lymph, csf, secretions etc.

Gaseous -Vayu-CO₂-O₂indol skatol etc.

Energy : Heat& light-Tes-Agni-Anabolism, catabolism.

Space :

Akash -space between Gastro -intestinal tract, Respiratory tract, the peritoneal caves & other cavities inside our body, the intercellular spaces.

Summary

The live force or the life energy is mystery even today; physics is a science that deals with matter.

Energy & space, the matter exists in three physical states solids, liquids & Gaseous.We can apply the panchmahabhuta sindhantas to each and every material present on earth.

Panchmahabhuta sindhanta's are the major tools for diagnosis and treatment of various ailments.

Conclusion

Ayurved is not at all a simple tradition but it has strong scientific physical foundation.

- Solid states of Matter is known as - prithvi
- The liquid state of Matters is known as -Aap
- The gaseus state of Matter is Known –Vayu
- Heat & the light together is knowns ' Tej mahabhoot ' gravitation is attributed.
- The empty space is known as Akash and there fore the panch mhabhoot is known as 'Akash '

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Analytical aspects of Basti Principles with special reference to Anuvasana Basti

Dr. Rajendra M. Nirgude

Associate Professor & HOD

Dept. of Sanskrit Samhita & Siddhanta,

Late B.V.Kale Manjara Ayurved Medical college

& Hospital, Latur

Abstract

Ayurveda, the science of life, has been proved a key in many unsolved health issues from centuries. The science have its own principles to treat the patients, one of them is Panchkarma (the main five procedures for the purification of the body). Out of these five, the utmost important procedure is Basti. It is mainly related with the treatment of Vata Dosha (a main component amongst triDosha) & administered through rectum. Despite acting on Vata it also acts on other Dosha, all important organs, systems & parts of the body. Hence Basti stands as a unique treatment of Ayurveda with its special peculiarities. It has mainly two types as Asthapana (Niruha) & Anuvasana. Different opinions & methods are mentioned in Ayurveda regarding Asthapana & Anuvasana Basti. Here analysis of such principles has been made with special reference to Anuvasana Basti.

Key Words : Basti, Vata Dosha, Anuvasana Basti.

Aims & objectives:

- 1) To study & understand aspects of *Basti* principles.
- 2) To explore different aspects of *Anuvasana Basti*.

Introduction

Relation of *Basti* and *vata*-

- *Vata* is said to be the lord in ayurveda because it not only governs the each & every action of the body but also responsible for creating various kinds of disturbances in the form of diseases ⁽¹⁾.
- It has supreme power to assimilate things at one hand and at the same time disintegrate them too. They may be *dhatu*s, *malas* or *poshanopkrama*, all are at the mercy of *vata Dosha* alone ⁽²⁾.
- As *vata* is responsible for various disease pathogenesis, we need to pacify it. In classics there is no other remedy on *vata Dosha* as like *Basti*, hence *Basti* remedy is considered to be a good remedial measure ⁽³⁾.
- Among all therapies *Basti* is predominant, because it is *Basti* alone which has the strength to bear the *vega* (speed) of *vayu* ⁽⁴⁾.

Literary study :-

Classification of *Basti* :-

- 1) Adhishtan bhedam – based on the site of application.
- 2) Dravya bhedam – based on the medicinal preparations used.
- 3) Sankhya bhedam – based on the number of *Basti* given.
- 4) Matra bhedam – based on dose or quantity of the medicine used.

1) **Adhishtan bhedam** – it again has two types-

- A) Internal
- B) External

A) Internal –

- i) Pakvashaya gat *Basti* – the administration of the *Basti* dravya through anorectal route to pakvashaya is called as pakvashaya gata *Basti*.
- ii) Mutrashaya gata *Basti* – It is used for the treatment of genitor-urinary diseases; medicines are administered through urethral route. It is called as mutrashaya gata *Basti*.
- iii) Yoni gata *Basti* –The *Basti* dravya applied through vaginal route to the garbhashaya is called as yoni gata *Basti*.

For both *mutrashaya gata Basti* and *yni gata Basti*, the term *Uttar Basti* is used.

- iv) Vrana gata *Basti* –*Sushruta* has described a special type of *Basti* in which the drugs are administered through the orifice of the wound. It is used for cleaning and healing wound & sinuses.

B) External –

- i) Shiro *Basti* –
- ii) Kati *Basti* –
- iii) Uro *Basti* –
- iv) Manya *Basti*/Greeva *Basti* –
- v) Janu *Basti* –

2) **Dravya bhedam** – Two types

- i) *Anuvasana Basti* – mainly snigdha dravya as like taila or ghruta is used.
- ii) *Asthapana Basti* – mainly combination of dravya used as madhu, saindhav, sneham, kalka and kwath dravya.

3) **Sankhya bhedam** –

- i) *Karma Basti* – total 30 *Basti*, 18 *sneha* & 12 niruh *Basti*.
- ii) *Kala Basti* – total 16 *Basti*, 10 *sneha* & 06 niruh *Basti*.
- iii) *Yoga Basti* – total 08 *Basti*, 05 *sneh* & 03 niruh *Basti*.

4) **Matra bhedam** –

- i) *Dvadash prsiruta Basti* – it is a full quantity of niruh *Basti*.

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- ii) *Prasrut yogik Basti* – in *Charaka* samhita various kinds of *Basti* has been mentioned depends on matra as 4,5,6,7,8,9 &10 prasruta
- iii) *Padhina Basti* – One fourth of total quantity is deducted that is 9 prasruta called *padhina Basti*.

Again according to matra *Anuvasana* is divided in three types as

- i) *Sneha Basti* – $\frac{1}{4}$ th of total quantity of *Niruha Basti*. i.e.3 prasruta or 6 pala.
- ii) *Anuvasana Basti* – half the quantity of *sneh Basti*. i.e. 3 pala.
- iii) *Matra Basti*- half the quantity of *Anuvasana Basti*. i.e. one & half pala.

Basti procedure – I) Anuvasana

1) Definition – Means which remains in the body for some time without causing any adverse effect.

2) Position- Proper position for giving *Basti* is left lateral, keeping left leg in straight & that of right leg in flexed status. Left hand should be used as pillow below the head.

- The patient should be in straight position (neither too high nor too low)⁽⁵⁾.
- According to ashtang sangraha position of the patient should be in slightly head low⁽⁶⁾.

3) Purvakarma - (Pre procedures)

- Before going for *Anuvasana* patient should consume food in $\frac{3}{4}$ th quantity (*Padhina*)⁽⁷⁾.
 - *Anuvasana* should be given soon after consuming the food. Otherwise on empty stomach, *sneha dravya* will move upper side of the body and vanishes the power of agni by its guna⁽⁸⁾.
 - According to *Sushruta*⁽⁹⁾
- i) If *Anuvasana* is given after some time of food then it may cause *jvara* and indigestion of food.
 - ii) If it is given after eating too much of oily food (*snigdha*) then it may cause *Mada* and *Murccha*, due to twice consuming of *sneha*.
 - iii) If it is given after consuming very dry food then it decreases the power and color of the body.
 - iv) Hence before *Anuvasana* one should consume Yush for kapha *Dosha*, Ksheer for Pitta and mamsa rasa for *vata Dosha*; in *padhina* quantity. (*paden padabhyam va hinam*).

4) Pascchat karma – (Post Procedures)

After completion of the *Basti*, buttocks are patted by hands for three times, to avoid the *sneha dravya* to come out early. Next the thumbs of both foot should be stretched slightly⁽¹⁰⁾.

5) Samyak lakshana of Anuvasana⁽¹¹⁾ –

- i) Return of the *Basti* with *mala* without obstruction.
- ii) Purity of *raktadi dhatu, indriya and buddhi*.

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- iii) Good and continuous sleep.
- iv) Lightness and strength of the body.
- v) Proper manifestation of natural urges without obstruction.

6) Facts regarding *Anuvasana* –

- i) It should be given at day time in *vasant, hemant and shishir rutu*. It means in remaining three rutu it should be administered at night⁽¹²⁾.
- ii) But according to *sangraha-kara* giving *sneha Basti* at night should be avoided as it causes, *snehotklesha* which causes *gaurav* and *adhmana*⁽¹³⁾.
- iii) But in increased condition of *vata Dosha* or in emergency condition one can go for *sneh Basti* at night also⁽¹⁴⁾.
- iv) The time period for the *sneha Basti* to come out is three *Yaam* (approx. 9 hours) but *acharya* mentioned to neglect the condition uptill 24 hours.
- v) If within 24 hours *Basti* doesn't come out and there are no complications in the patient, it should be neglected.
- vi) If *Basti* doesn't come out and there are complications then we have to treat them by means of *phalvarti* and *tikshna Basti*, to expel out the *sneha*⁽¹⁵⁾.
- vii) According to *sharangdhara*, after administration of *sneh Basti* patient should lie down in straight position for 100 matra⁽¹⁶⁾.
- viii) *Sneh Basti* or *niruh Basti* cannot be given continuously because giving continuous *sneh* may cause *agninasha* along with *snehotklesha* and giving continuous *niruh* creates *vata prakopa*.
Hence *sneh* and *Niruha* should be given alternatively⁽¹⁷⁾.
- ix) *Sneh Basti* should be given once or thrice in *Kapha dushti*, five or seven times in *Pitta dushti* and nine or eleven times in *Vata dushti*⁽¹⁸⁾.
- x) **Ashtadash sneh Basti**⁽¹⁹⁾-
 - a) First *sneh Basti* oleates over *Basti* & *vankshan* region.
 - b) Second *sneha Basti* defeats *murdhasth* (*urdhvajatrugat*) *vata Dosha*.
 - c) Third *sneha Basti* increases *bala* and *varna*.
 - d) Fourth *sneha Basti* oleates / nourishes *rasa dhatu*.
 - e) Fifth *sneh Basti* oleates / nourishes *rakta dhatu*.
 - f) Sixth *sneh Basti* oleates / nourishes *mamasa dhatu*.
 - g) Seventh *sneh Basti* oleates / nourishes *meda dhatu*.
 - h) Eighth & Ninth *sneh Basti* clears *Dosha dushti* from *Asthi* & *Majja dhatu* respectively.
 - i) If these nine *sneh Basti*'s has been given without any complication then it removes *dosh dushti* from *shukra dhatu* also.
 - j) The usefulness of these eighteen *Basti*'s has been mentioned by *Sushruta* as, it creates a good quality of *bala*, *varna*, *upachaya*, *sahasrayu* (thousand years of life), increases the capacity of *indriya* etc.
- xi) Daily administration of *sneh* or *Niruha Basti*, is also indicated by *Sushruta* for certain conditions as⁽²⁰⁾.

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- a) *Sneh Basti* in alpa matra (Alpa matra means half or one fourth of total, according to dalhana), can be given in patients with ruksha (dry) sharira for long period also.
- b) *Niruha Basti* in alpa matra can be given for long time in patients with snigdha sharira.
- xii) Persons having ajeerna are avoided for *sneh Basti*, but in the commentary of sharandhara (Dipika tika), it is mentioned that the word ajeerna should be taken as aama jeerna and vidagdha jeerna (kapha & Pitta respectively), and not as vishtabdhajeerna (*vata*).
- xiii) After *Anuvasana* in the next day, hot water or water processed with dhanyak and shunthi, should be given to avoid the complication.
- xiv) According to sharangdhara, niruh & *Anuvasana* given in low quantity (Alpa matra), doesn't give results as expected. As like, both given in high quantity (Ati matra) causes *Anaha, klama & atisara*.
- xv) If given *sneha* comes out too early then another *sneha Basti* in alpa matra should be administered, because in *sneha Basti*, *sneha* dravyas are expected to stay inside to act better⁽²¹⁾.
- xvi) - If *sneha Basti* doesn't come out and patient has not undergone previous Shuddhi pariksha (vaman & Virechana) then it causes Shithilya, Adhmana, Shulam, Shvasam & pakavashaya guruta.
- In this condition the treatment should be Tikshana *Niruha* & tikshna Falavrti.

Conclusion

In the light of above information we can say that *Anuvasan Basti* is a unique procedure which can be carried out in patients having different kinds of diseases. It has a peculiarity that we can change drugs, dose & quantity of *Basti* according to the condition of the patient, disease, the environmental condition etc. Different *Acharya's* have different kinds of views regarding *Anuvasana Basti*. With the help of these views we can treat the patient in any circumstances.

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Research Methodology In *Basti* Therapy – A Comparative Study Of *Basti* Therapy And Certain Pramehaghna Drugs In The Managemnt Of Madhumeha WSR to Diabetes Mellitus

Dr. Anand M. Pawar

MD(Panchakarma)IPGT &RA, GAU, Jamnagar
Associate Professor ,H.O.D. (Panchakarma Dept)
Late B.V.Kale Manjara Ayurved Medical College & Hospital,Latur

Dr.Sumol Bhosale

MD(SCH) Shairrachna Dept.
Late B.V.Kale Manjara Ayurved Medical
College & Hospital,Latur

Abstract :

Present study is based on clinical correlation of madhumeha with noninsulin dependent diabetes mellitus. Clinial study and comparative study of basti therapy and certain pramehaaghna drugs and their action have been studied on madhumeha w.s.r to diabetes mellitus. Introduction ,Aim and objectievs have been mentioned.A detail description of basti and its scientific basis also discussed,specific drugs for theapy and methodologies applied.Clinical obeservations,results shown and final conclusion have been mentioned in full paper.

Key words : madhumeha, basti ,pramehaghna drugs ,diabetes mellitus,prameha

Introduction:

Madhumeha is the disease of systemic consideration and deranged metabolism results due to vitiation of various body elements. In Avarnjanya *Madhumeha* vitiated *Kapha*, *Pitta* and *Meda* causes Avarana to *Vata* that leads its aggravation causing diminution of vital *dhatus*. Research studies were carried out in *Madhumeha* with the help various herbs, herbomineral drugs but very less number of works carried out regarding Sodhana therapy. *Susruta* mentioned the role of *Apana* and *Vyan Vaigunya* in the pathogenesis of *Prameha*. Taking these into consideration an exclusive research work was planned on the topic.

Conceptual Review:

Basti: *Basti* chikitsa is considered as one of the most effective therapy amongst all.

The therapeutic measures especially in the vitiation of *Vata Dosa* and *Apana Sthanashrita Vyadhi*.*Basti* is the only therapy having dual purpose *Shodhana* (purificative) as well as *Shamana* (Curative) *Basti* is not only effective in the *Vata* disorders but also in the diseases of whole body where *Vata* is one of the important factor in pathogenesis. *Basti* therapy is effective because of the following factors. It purifies all the systems and makes a clear passage up to micro channel level. It acts on various disorders because of the selection of the drug according to disease, its Curative, Uncomplicated and *Basti* can be given at any age and at any stage of disorder after proper examination. It also can be given in normal persons too

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Effect Or Action Of Basti :

Basti is the Karma in which the medicine is prepared according to classical references is administered through anal canal. It reaches upto the small intestine. Churns the accumulated *Dosha* and *Purisha* i.e. morbid humors and fecal matter, spreads the unctuousness (i.e. potency of the drug) all over the body and easily comes out along with the Churned *Purisha / Dosha* (impurity) Through *Basti* is introduces in the colon acts upon the hole body and on every system from (head up to feet) and draws out the impurities by its power. It evaporates the impurities quickly and easily. So there is no therapy equivalent to *basti*. In spite of doing proper elimination *Vamana / Virechana* may produce uneasiness, bleaching, nausea, abdominal pain, weakness. Due to use of or ingestion of Pungent and bitter drugs but *basti* is not going to produce such effects. So it can be used in children and in old patients too. *Basti* can be also given in normal person to improve the health and body strength.

Need and Research In Basti Therapy:

By above discussion, it is very necessary to find out the hidden truths behind the *Basti* therapy. Eminent scholars of *Ayurveda / Acharayas* mentioned the role of *basti* in various disorders. They mentioned lots of *Basti* yoga and said that Role of *Basti* alone is equivalent to the role of all other therapies. According to research point of view following are the points to be considered for the research.

1. Study about the combination and drugs utilized in each *basti*.
 2. Scientific ideology behind the retention time and course of the *basti* described in *Ayurveda*.
 4. Role of *Madhu* and *Saindhava* in *Basti* preparation, and their action.
 5. Study of the *Basti* therapy alone and its comparison with the oral medication.
 6. *Basti* therapy proforma made as described below :
 - Daily *basti* given and retention time
 - Temperature of the *basti* dravya.
 - General examination of the patients before and after the procedure daily.
 7. Role of local massage and steaming before the *basti* therapy.
 8. Standardization of the quantity of the *basti* dravya.
- We tried out some of the methods in our research work.
9. Find out the efficacy of *basti* given by *Basti putak* and by enema pot.

Role Of The Contents Used In Basti Preparation:

- (1)**ROLE OF MADHU** :*Madhu* is considered best amongst the vehicles contains various substances in it which emphasizes its drug carrying capacity owing to Suksma it reaches upto the microchannels inturns carries the drugs at molecular level through the microchannels.
- (2)**SAINDHAVA** :*Saindhava* with the properties like Visyandi, Tikshna, Sukshma and Usna promotes the evacuation of bladder and rectum / *Saindhava* mixed with *Madhu* and capable of liquefying the Viscid matter and breaking it into minute

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particles by virtue of its usna and tiksna properties respectively and make close union with *madhu* to form a homogenous mixture. The presence of Na⁺ (*Saindhava*) is *basti* dravya may play important role for the absorption of the drug as Na⁺ channel is the most commonly utilized channel for the absorption of the substance.

(3)SNEHA :It produces softness in the channels and tissues inturn helps for easy elimination of waste substances. *Sukshma* property helps the drug to reach into the microchannels.It protects the colonal mucous membrane from the untoward effect of imitating drug in the *basti*. Thus *madhu* / *saindhav* and *taila* makes the homogenous mixture and helps to reach. The drug to microchannels at the cellular and to eliminate the waste substances from the body.

(4)KALKA (PASTE / DRY POWDER) :It is the important thought that if we want to use the fresh drug, we can use them in the from of Kalka and if we want to use the volatile drugs then we can use them in the form of powder. So Kalka mainly performs / useful for the medicinal purpose. It also gives the thickness to the *Basti*.

(5)KWATH :The drugs used for the preparation *Kwath* are selected in the basis of *Dosa*, *Dusya* and *Strotus* involved in the pathogenous of the disease hence this is the main constituent of the *basti* dravya along with *kalka*.

Modern Aspect Of Enema / Rectal Administration Of The Drug :

Rectal Administration:

Substances may be introduced into the rectum for exciting evacuation or for medication, which latter may be intended for effect in three different locations.

- 1.For effects on the contents of the colon for which the term **encolonic** might be suggested to differentiated it from,
- 2.Effect to be exerted on the tissue of the colon for which the term **endcolonic** might be suitable designation and
- 3.For administration by way of the rectum of medicament intended for systemic action for which the term **diacolonc** might be employed.

Rules :

The following rules on colonic absorption are tentatively formulated to serve for general guidance.

- 1.Rectum distended with faecal matter should be cleaned out by a evacuant enema before, it is gives the task and receiving medication.
- 2.The retention of an irritative substances may be favoured by making its solution as nearly **isotonic** as possible and by using **colloidal fluid** such as starch water as diluent.
- 3.The fluid is introduced very slowly and steadily the rectum does not become readily aware of the distension and retains the quantity of fluid that would otherwise be expelled.
- 4.Giving the enema at body temp favours retention extremes of temp excite peristalsis.Water is absorbed and transported more readily from hypotonic than from isotonic solution.

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5. Having volatile substances are rapidly absorbed from **aqueous or oil solutions**. Non volatile lipophile bodies are absorbed providing they are sufficiently soluble in the colonic fluid.
6. Nonvolatile hydrophile bodies are not well absorbed from aqueous solution.
7. It has been suggested that oil enemas might inhibit absorption of toxic products. That the oil has the power of removing toxic substances. Soluble in it 'shown by the fact that it passes dark yellow or olive green of offensive odor. The oil must be pure and free from rancidity.

From above discussion we can find out the scientific ideology behind the *basti* therapy using *Madhu* (starch / carbohydrate) *Saindhava* (isotonic solution) and *Sneha* (oil) for the preparation.

The description about the eliminative and curative action of the *Basti* for providing systemic and local effects are most scientific. The modern science from the point of physiology; pathology, pharmacology and therapeutics strongly supports the views of *Ayurvedic* seers. The modern scientist accepts the elimination of systemic waste products from the colon. The absorption of usual and unusual substances from the mucosa of the colon under the effect of medication is accepted by the modern scientists.

Literary review : *Madhumeha*

Research Work On *Madhumeha* (D.M.) :

Why Basti Therapy in Madhuma ?

In *Ayurvedic* texts the disease *prameha* is described as one of the disease mainly caused by vitiation of tridosha. The syndrome diabetes mellitus has been largely covered under the broad healing of *prameha*. The vitiated tridosha by different ways vitiated *meda*, *mamsa* and *kleda* etc. and draws out them into the *basti* and vitiate the urine and generate. The disease *prameha*. Here in the pathophysiology of *prameha* mainly, *kapha*, *kleda* *meda* are the main vitiated body elements. And the *Sthansanshrya* and *Vayactisthana* occur at *basti*. Which is one of the seats of *vata* dosha.

In this study the main aim to evaluate the role of *vata* in the precipitation of all types of *prameha* in general and *vataja prameha* (*madhumeha*) particular. There is a classical reference which shows the predominance of *vata* particularly *Vyan* and *Apana* *vayu* in the formation of *prameha*. (su. su) So by means of above reference *Basti* prepared with *pramehaghna* drugs may be a better remedy for the *prameha* / *madhumeha*. The probable mode of action of this *basti* therapy might be correcting the vitiation of *vata* to stabilize its normal functions and also counteracting the vitiated *kapha*, *kleda*, *meda* by the action of specific drugs used. It might affect on the intestinal absorption of carbohydrate. It may promote general health of the body and be helpful in avoidance of complications of this disease. Though according to the classical reference *Basti* is contraindicated in *prameha*. But according to stage (*Avastha*) the *Basti* can be administered to the patient of *prameha* (*madhumeha*)

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Aims and Objectives:

- (1) To study the etiopathology in the patient of *prameha* in particular diabetes mellitus.
- (2) To study the effect of *Basti* prepared with certain *pramehaghna* drugs in the management *madhumeha* (DM).
- (3) To study the effect of same drugs when administered orally.
- (4) To compare the effect of *pramehaghna* drugs in *madhumeha* (DM) when administered orally and through *Basti*.

Material and Methods:

Clinical Study:

- (1) The patient having signs and symptoms of *madhumeha* (DM) are selected according to inclusive and exclusive criteria
- (2) The study of biochemical parameters, routine haematological, urine and stool examination is done before and after the treatment.
- (3) Drug selected for the therapy from the *Salsaradi gana* (compound) and from the yoga described in *Charaka* and *Sushruta*.

Eligibility Criteria: Presenting sign and symptoms of *Prameha* (*Madhumeha*) particular with associated conditions. Presenting sign related to *mutra* and *Mutravaha strotas Dusti*. Fulfilling the subjective and objective parameters decided by world Diabetic association.

Management Of The Patient:

- (1) **Control group** :Control diet and suitable placebo is given.
- (2) **Oral group** :Pramehaghna Ghanavati with the same drug used for *Basti* is administered in the dose of 2 gm thrice a day for 45 days before each meal.
- (3) **Basti group** :One course of *Kalabasti* of same pramehaghna drugs for 16 days duration is given.

This article mainly dealt with the *Basti* therapy. I am going to show the effect of *Basti* on signs and symptoms and on biochemical parameters. Observation, Summary and Conclusion.

Drug Selected For Therapy:

1. Amalki – (*Embllica officinalis*)
2. Arjuna – (*Terminalia arjuna*)
3. Methi – (*Trigonella foenum graecum*)
4. Vijaysar – (*Pterocarpus marsupium*)
5. Jambu – (*Eugenia jambolina*)
6. Tejpatra – (*Cinnamomum tama*)
7. Vitakhadir – (*acacia catechu*)

Basti Preparation -

Niruhabasti

1. Madhu
2. Sandhava
3. Kalka (a) Amalaki (b) Tejapatra (c) Methibeeja
4. Kwath (a) Vijaysar (b) Arjuna (c) Vitkhadir (d) Jambubeej

Anuvasana basti : *Sneha* prepared by the use of same drug.

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Methodology:

Criteria For The Assessment: After the completion of the treatment the obtained results were assessed by evaluating the following criteria.

- (I)Improvement in the signs and symptoms of the disease on he basis of the score decided
- (II)Results obtained in the biochemical parameters.
 - (1) FBS & PPBS.
 - (2) Serum Cholesterol.
 - (3) Serum triglycerides.
 - (4) Blood Urea.
 - (5) Serum Creatinine
 - (6) Urine Sugar.

Following symptom score was adopted for the assessment.

- 0 -Completely relieved.
- 1 -Mild symptoms present.
- 2 -Moderate symptoms present.
- 3 -Sever symptoms present.

Observation And Results:

29 patients having classical presentation of *madhumeha* and diabetes mellitus had been selected and divided in three groups as per below OG(Oral group)/ BG(*Basti* group)/CG(Control group)

Observation:

Table 1
Age Distribution Noted In The 29 Patiens

Sr. No.	Age(years)	No. of Patients			Total	(%)
		OG	BG	CG		
1	21-30	00	01	00	01	3.4
2	31-40	02	01	00	03	10.3
3	41-50	08	02	00	10	34.5
4	51-60	03	02	06	11	37.9
5	61 and above	02	02	00	04	13.8

Table -2
Main Signs And Symptoms Of Madhumeha Observed In 29 Patients

Sr. No.	Main Sing and Symptoms	No. of Patients			Total	(%)
		OG	BG	CG		
1	<i>Prabhutamutrata</i>	13	07	05	25	86.2
2	<i>Avilamutrata</i>	10	06	03	19	65.5
3	<i>Mutramadhurya</i>	13	07	04	24	82.8
4	<i>Ksudhadhikya</i>	12	06	04	22	75.9
5	<i>Kara Pada Sarira Daha</i>	08	06	04	18	62.1
6	<i>Pipasadhikya</i>	12	06	04	22	75.9

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Table -3
Mean Biochemical Values In 29 Patients

<i>Sr. No.</i>	<i>Parameters</i>	<i>Mean mg/dl %</i>
1	Blood sugar- Fasting	196.5
2	Postprandial	268.3
3	Cholesterol	202.4
4	S. Triglycerides.	220.1
5	S. Creatinine.	1.0
6	Blood Urea.	28.5
7	Total Protein.	7.3

Results:

Table -4
Total Effect Of Therapies:

Result	OG (n=15)	%	BG (n=8)	%	CG (n=6)	%	Total	%
Complete remission	0	0	0	0	0	0	0	0
Marked improvement	11	73.3	6	75	1	16.7	18	62.5
Moderate improvement	2	13.3	1	12.5	2	33.3	5	17.2
Mild improvement	1	6.7	1	12.5	1	16.7	3	10.3
Unchanged	1	6.7	0	0	2	33.3	3	10.3

Table -5
Effect of Therapies on Blood Sugar Level of 29 Patients

<i>Sr. No.</i>	<i>Blood Sugar Level mg/dL</i>	<i>Mean Score</i>		<i>(%)</i>	<i>S.D.</i>	<i>S.E.</i>	<i>"t"</i>	<i>P</i>
		<i>BT</i>	<i>AT</i>					
1.	<i>Fasting</i>							
	1.OG (n=15)	219	172.2	21.4	30.4	7.8	4.9	<0.001
	2.BG (n=8)	215.6	168.9	21.7	33	11.8	3.7	<0.01
	3.CG (n=6)	113.8	117.0	3.5*	19.7	8.2	-	>0.1
2.	<i>Postprandial</i>							
	1.OG (n=15)	293.5	227.5	22.2	31.8	8.2	8.4	<0.001
	2.BG (n=8)	306.9	214.4	30.1	29.9	10.7	8.7	<0.001
	3.CG (n=6)	155.3	169.8	9.3*	58.2	24.3	0.6	>0.1

Table - 6
Effect Of Therapies On Other Biochemical
Parameters Of 29 Patients

Sr. No.	Biochemical Parameters	Mean Score		(%)	S.D.	S.E.	"t'	P
		BT	AT					
1.	<i>S. Cholesterol</i>							
	1.OG (n=15)	203.9	191.3	6.2	30.7	7.9	1.6	>0.05
	2.BG (n=8)	207.6	189.8	8.3	19.8	7.1	2.5	<0.05
	3.CG (n=6)	190.6	202.8	6.4*	25.6	10.7	-	
2.	<i>S. Tryglyceride</i>							
	1.OG (n=15)	267.9	135.3	49.5	273.2	70.1	2	>0.05
	2.BG (n=8)	244.4	177	27.6	64.8	23.1	2.8	<0.05
	3.CG (n=6)	117	110	5.5	32.4	13.5	0.4	>0.1
3.	<i>S. Creatinine</i>							
	1.OG (n=15)	1	1.0	10.0	0.2	0.1	1	>0.05
	2.BG (n=8)	1.1	1	0.1	0.4	0.1	2	>0.05
	3.CG (n=6)	1	1	0	1.4	0.8	0.3	>0.1
4.	<i>Blood Urea</i>							
	1.OG (n=15)	27.7	23.1	16.6	3.5	0.9	4.7	<0.001
	2.BG (n=8)	30.4	25.3	17	2.9	1	4	<0.01
	3.CG (n=6)	-	-	-	-	-	-	-
5.	<i>Total Protein</i>							
	1.OG (n=15)	7.5	7.5	0	1.9	0.9	1.2	>0.05
	2.BG (n=8)	7.2	7.2	0	1.5	0.5	0.2	>0.1
	3.CG (n=6)	7.2	6.9	4.2*	-	-	-	-

Discussion :

Sedentary life, lack of exercise, faulty food habits, suggestive of higher prevalence of the disease *Madhumeha* i.e. diabetes mellitus. Higher prevalence in urban area suggests same. Obesity is mostly associated with the disease. *Purishabadhata* shows the *Apanvaigunya*. *Rasadushti* along with *Medodushti* suggestive of their close relation as *Sushruta* already mentioned *Rasadushti* is the cause for *Sthaulya* and *Karsya*. Chronicity suggests that patient came very late to take *Ayurved* treatment. Genetical predisposition is one of the etiological factor. Premonitory and main sign symptoms suggestive of clear cut presentation of the disease *Madhumeha* i.e. diabetes mellitus. *Basti* alone provided significant result on various parameters i.e. subjective and objective. Suggest that *Basti* because of its absorption disrupts the pathogenesis and because of causing elimination of morbid matter from all over the body it normalizes the functions of *Vyan* and *Apana*. It also increases digestive power qualitatively. Placebo group provided insignificant relief at both subjective and objective parameter. This shows that patient may be not strict for their diet pattern. May be not doing exercise properly.

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Reduction in blood sugar level by *Basti* suggestive of absorption of the Pramehaghna drugs but further research is important to putforth the conclusion. Mean retention time of *Niruha* was 20.5 min suggests that patient can't retain *Basti* for more time. Mean retention time of *Anuvasan* is also less i.e. 5 hrs. This suggest that now-days because of faulty bowel habit patient can't hold *Basti* upto proper time for its function. Temperature of the *Basti dravya* should be at body temperature. Homogenous mixture may help for the retention. A mild purgation one day before the *basti* procedure can give good results. Quantity 500 ml *Basti* can be retained in the body for 30-40 minutes. This may give good effect.

Summary :

Madhumeha is the disease of systemic consideration and deranged metabolism results due to vitiation of various body elements. In *Avaranjanya Madhumeha* vitiated *Kapha*, *Pitta* and *Meda* causes *Avarana* to *Vata* that leads its aggravation causing diminution of vital *dhatu*s. Research studies were carried out in *Madhumeha* with the help various herbs, herbomineral drugs but very less number of works carried out regarding *Sodhana* therapy. *Susruta* mentioned the role of *Apana* and *Vyan Vaigunya* in the pathogenesis of *Prameha*. Taking these into consideration an exclusive research work was planned on the topic aims and objectives defined for the study, detailed study *madhumeha* and diabetes mellitus had been explained. A clinical study on 29 patients had been done with specific criteria and methodology by creating three groups, detailed observations and results shown in tables and a clinical conclusion made at the end of the study. It proved that *basti* therapy is useful in *madhumeha*.

Conclusion :

- *Avaranjanya Madhumeha* can be correlated with diabetes mellitus type-II.
- *Vata* is vitiated in the pathogenesis but mainly *Apana* and *Vyana*.
- Etiological factors vitiate mainly *Kapha*, *Pitta* and *Meda* causes obstruction to the path of *Vata*.
- Treatment modalities based upon the consideration of vitiated *Kapha*, *Meda* and *Vata* having properties like *Shlesamamedohara*, *Pramehaghna* and *Kaphavatahara*.
- Sedentary like lack of exercise, faulty food habits and improper medication precipitates the disease. Urbanization also plays the role in the enhancement of the disease.
- *Basti* and PGV provided better results but percentage relief was observed more in *Basti* group. So may be *Basti* can prove better treatment modality for *Avaranjanya Madhumeha* because the drugs used in it acts against the *Kapha*, *Meda* and *Kled* and *Sneha* helpful to normalize *Vata*.
- Placebo shown insignificant relief that means patients are not much aware about their diet control and exercise.

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- Though in classics *Basti* is contraindicated in *Madhumeha* but here not a single complication was observed in the patients. Thus we can say that by observing patients carefully in regard to *Bala*, *Dusya* involvement and stage of the disease if *Basti* prepare can be prove better treatment modality for diabetics.
- Changes in biochemical parameters are encouraging especially in blood sugar, blood urea and serum cholesterol.
- Effect on the sign and symptoms like Atikshudha, Atitrushna, Karapadadaha, Prabhutamura, Avilmutrata, Karapadasuptata are encouraging. Significant reduction in weight is observed in *Basti* group.
- *Basti* can prove to be a good remedy in diabetic mellitus when administered according to stage of the disease and strength of the patient.

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To Evaluate the Effect of Shatavari Siddhatail Pichu in Sukhprasava

Vd.Nileema K. Nandanwankar

M.S. Streeroga & Prasutitantra
Associate Professor,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Dr.Shubhangi Milind Shastri

Rognidan & Vikruti Vidnyana
Assistant Professor,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Abstract

In today's life style many of the factors causing 'Apana Praakopa' Like 'Guru Anna' 'Rooksha Anna' 'Ati vahanam' 'Ati chankramanam' 'Vegadharana' are unknowingly practiced. If Apana is Prakrut then only 'Prakrut Prasava is possible. Ayurveda describes specific treatment in 9th month. It includes snehabasti and pichu.

Pichu plays an important role in sthanika shehana and anulomana. As pichu helps in creating mardavta in apatyapatha and Garbhashayamukha and helps for anuloman of vatadosha. It enhances normal delivery. Pichu is easy to prepare, easy for insertion and removal. This

Key Words: Sukhprasava, Primiparous,Pichu,

Introduction

The woman is the far most essential Factor responsible for producing off springs and for proper growth and development of the Fetus. The physiological transition from pregnancy to motherhood heralds enormous changes in each woman physically and mentally.

Ayurved gives more attention towards improving the health of person and hence Acharyas has given different types of paricharya (Regimen) like Rutucharya, Dincharya, Likewise Acharyas also have given a good regimen for garbhini called Garbhiniparicharya and mentioned the goals this paricharya as

- 1) To avoid the complications of mother and fetus.
- 2) Growth of the foetus upto Full maturity.
- 3) Easy and Uneventful labour.

Labour is a natural phenomenon. The stnic of social living is changing day-by-day, late marriages and financial instability results into increased in rate of caesarial section, instrumental delivery.

Garbhavastha and prasav are controlled by tridosha. So the aim of Garbhini paricharya is to keep these dosha in normal state. The process of 'Prasuti' is controlled by 'Apana Vayu' As the age advances the Vayu shows it's specific characteristics in growing age groups viz. Rookshana, 'Kathinya' in muscles 'Sankocha' stiffness of joints.

Procedure can be done on O.P.D. or home basis. Patient can do her routine work and it is economically beneficial. Shatavari is selected, as it is easily available well known, and described in Granthas as 'Shamak' 'Balya'.

Aims and Objectives

- To minimise the incidence of prasavayapad.
- To reduce the incidence of assisted instrumental delivery.

- To carry out a Sukhaprasava without any hazardous effect to mother and fetus.
- To study the efficacy of shatavaritai Pichu on prasava process.
- To study the side effects of shatavari tail pichu if any.

Material and Methods

The present research work included “To Evaluate the effect of shatavari tail pichu in Sukhaprasava”

Selection of Patient:

In this study the patients were selected from outdoor department of streeroga and Prasutitantra of Dharmarth Ashtang Ayurved Rugnalaya and attached Dr. Tarabai Limaye Hospital, Pune.

The cases were collected from Feb. 2005 to May 2006 over 16 months. The cases were not selected but were accepted as they came Only those patients were accepted which were fulfilling the inclusion criteria. As far as possible primipara cases were given more preference and parity was restricted to 2. The cases were from all walks of the life and no restriction were put on the cast, creed, income and education when the case was accepted a specially made case paper was filled.

Inclusion criteria :

All the patient of any age and parity preferably primiparous of 9 months pregnancy was selected.

Exclusion criteria :

- Frank Cephalopelvic disproportion
- Central placenta previa
- All types of vaginal infection.
- Per vaginal bleeding.
- All medical disorders which causes harm to pregnant woman like cardiac disease, hypertension, diabetes etc.

All 32 patients selected randomly were treated with Shatavisiddhataila pichu called as experimental group another 32 patients bearing similar condition as that of experimental group were observed for the same parameters and not given any medicine for Sukhaprasava.

Preparation of Shatavarisiddhatail Pichu :

Shatavarisiddhatail was prepared as described in Sharangdhar samhita. All the tests for snehasiddhikshana was taken. Pichu is prepared as small tempoon of cotton covered with gauze piece and tampoon is tied with cotton thread.

Time of giving pichu :

Pichuchikitsa was given daily 15 days for 3-6 hrs prior to the expected date of delivery.

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Before starting the Pichuchikitsa a detail history and examination of patient was taken as per the points written in case paper attached here.

During the course of labour following parameters was observed -

- Cervical dilatation and effecement.
- Descent and rotation of the head.
- Perineal tear and episiotomy.
- Duration of labour.
- Observation of Second stage of labour.
- General condition of mother.

During the treatment of pichu chikitsa any Upadrava of Shatavarisiddhatail pichu was observed.

Progress of labour was presented on cervical dilatation graph i.e. Partogram.

The data of results was analysed on stastical parameters without any preejudice or bias. Conclusion is throughly baised on them.

Table No. 1
Distribution of Patients according to age group

Sr. No.	Age Group	Experiment group		Control Group		Total
		No. of Pt.	%	No. of Pt.	%	
1.	18-20 yrs.	4	12.5	9	28.5	13
2.	21-25 yrs.	20	62.5	18	56.25	38
3.	26-30 yrs.	5	15.6	3	9.3	8
4.	> 30 yrs.	3	9.3	2	6.25	5
Total		32	100	32	100	64

Table No. 2
Distribution of Patients according to Prakruti

Sr.No.	Prakruti	Experimental		Control	
		Number	Percentage	Number	Percentage
1.	Vatakapha	6	18.7	10	31.2
2.	Kapha Vata	3	9.4	1	3.2
3.	Vatapitta	8	25	9	28.2
4.	Pitta Vata	4	12.5	10	31.2
5.	Kapha Pitta	3	9.4	0	0
6.	Pitta Kapha	8	25	2	6.2
Total		32	100	32	100

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Table No. 3

Distribution of Patients according to Parity in Normal Delevered

Sr.No.	Parity	Experimental		Control	
		Number	Percentage	Number	Percentage
1.	Primiparous	18	60	20	66.6
2.	Secondpara	12	40	10	33.4
Total		30	100	30	100

Table No. 4

Distribution of Patients according to Perineal Condition after Vaginal delivery

Sr. No.	Perineum	Exp. Group		Control Group		Total (Out of 60)	
		No. of Pt.	%	No. of Pt.	%	No. of Pt.	%
1.	Tear	1	3.3	4	-13.3	5	-18.4
2.	Episiotomy	4	13.3	18	60	22	36.6
3.	None	25	83.4	8	26.7	33	55
Total		30	100	30	100	60	100

Table No. 5

Distribution of Patients according to Status of Perineum as per parity

Parity	Status of Perineum								Total
	Tear / Episiotomy No. (%)				None No. (%)				
	Exp.		Cont.		Exp.		Cont.		
Primi	4	22.1	19	90.5	14	77.9	2	9.5	39
Second	1	8.3	3	33	11	91.7	6	67	21
Total	5		22		25		8		60

Table No. 6

Distribution of Patients according to Duration of 1st Stage of labour of Primiparous women

Group	No of Patients	Duration of 1 st stage in Hours					
		5 to 8		9 to 12		13 to 16	
		No. of Pt.	%	No. of Pt.	%	No. of Pt.	%
Exp.	18	1	5.5	12	66.7	5	27.8
Control	20	0	0	10	50	10	50
Total	38	1		13		15	

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Table No. 7

Distribution of Patients according to Duration of 1st Stage of labour in second

Group	No. of Patients	Duration of 1 st stage in Hours					
		5 to 8		9 to 12		13 to 16	
		No. of pt.	%	No. of pt.	%	No. of pt.	%
Exp.	12	10	83.3	2	16.7	0	
Control	10	10	100	0		0	
Total	22	20		2		0	

Table No. 8

Distribution of Patients according to Duration of Second stage in Primipara

Group	No	Period of labour in second stage (minutes)							
		<15-25		30-59		60-89		90-119	
		No. of Pt.	%	No. of Pt.	%	No. of Pt.	%	No. of Pt.	%
Exp.	18	3	16.6	3	16.6	6	33.4	6	33.4
Control	20	0		1	5	9	45	10	50
Total	38	3		4		15		15	

Table No. 9

Patients according to Duration of Second stage of labour in second P

Group	No	Period of labour in second stage (minutes)							
		<15-29		30-59		60-89		90-119	
		No. of Pt.	%	No. of Pt.	%	No. of Pt.	%	No. of Pt.	%
Exp.	12	8	66.6	2	16.8	1	8.3	1	8.3
Control	10	5	50	5	50	0		0	
Total	22	13		7		1		1	

Observations & Results

Both the groups covered patients from all age group which made the selection of patients random and independent.

- All type of prakruti are having nearly equal distribution it is not attributed to any specific factor it may be coincidental.
- There is no major difference in percentage of patient of parity.
- Incidence of perineal injury is reduced. The perineum of second paraous women from control group injured more than experimental group. pichu protected perineum of 22% of primiparous woman and 25% of second parous woman from tear and episotomy.
- In experimental group the process of dilatation of cx is fast than. Control group. Timing of second of stage of labour in primi also reduced in experimental Cp. There was no much difference in second stage of labour in second parous woman.

Discussion

The present study was conducted in 64 co-operative pregnant women in their third trimester.

Out of these pichu chikitsa was given to 32 patients in last month of third trimester for 15 days prior to E.D.D. most of the patient were attending the out patient Department regularly.

In the present study since the patients were attending quite early for the consultation and check up at out patient department, pichu chikitsa was arranged 15 days before E.D.D. in most of the cases of experimental group, the delivery was described as “sukhaprasava” both by attending prasutitantra Tajdnya and by the patient. In all these cases there was very less need for any interference like forceps application only two patients required planed L.S.C.S. due to less amount liquor and cord around the neck seen in U.S.G. findings.

In shatawari siddha tail shatavary acts as shamak and balya due do its madhur and tikt rasa.

Also acts as local vatasham due to snigabtha gun, madhar ras Ushna veerya madhur vipaka of til tail. Which helps in dialatation of cervix and perineum?

Conclusion

Conclusion derived at the end of discussion is as follows :

- During the study it was noted that the patients who were given shatavarisiddhatail pichu chikitsa the duration of second stage of labour was reduced.
- The incidence of perineal injury is reduced.
- The exact local action of drug is not known therefore precise line of action of drug is not claimed. But the drug dose not have any untoward effect.
- In the present study the size of sample was not very big so mass study is needed.
- The drug is effective and its role in complicated cases should also be examined through further research work.

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बुद्धिमत्ता व परीक्षेतील ताणतणाव : आयुर्वेदिक उपाय**डॉ.अभिजीत बा.पाटील**

सहयोगी प्राध्यापक

रचना शारीर विभाग,

कै.बी.व्ही.काळे आयुर्वेद वैद्यकीय

महाविद्यालय व रुग्णालय,लातूर

सारांश :-

परीक्षा ! शाळेतील व महाविद्यालयातील विद्यार्थ्यांच्या हृदयाची धडधड वाढवणारा शब्द, आजकालच्या स्पर्धेच्या युगामध्ये विद्यार्थ्याला जीवनाच्या प्रत्येक वळणावर वेगवेगळ्या परीक्षांना सामोरे जावे लागते.

खरेतर परीक्षा हा शालेय व महाविद्यालयीन जीवनाचा अविभाज्य अंग. मुलांना शिक्षण घेताना त्याने ते शिवधनुष्य कितपत पेलले आहे, ते तपासण्याचा कसोटीचा दगड म्हणजे परीक्षा, या दगडावर जो चमकला तोच खरा परीक्षार्थी, विद्यार्थी व धनाचा लाभार्थी, बाकी सारे भोपळे !

परीक्षेतील अपयश हे मुख्यतः दोन गोष्टीवर अवलंबून असते. एक म्हणजे विद्यार्थ्याची बुद्धिमत्ता व दुसरी गोष्ट विद्यार्थ्याची परीक्षेच्या वेळी असलेली मानसिकता. आजच्या संगणक युगात करिअरच्या अनेक संधी मुलांना उपलब्ध आहेत. दरवर्षी नवीन नवीन करिअरची भर पडत आहे. प्रत्येकाने कुठले करिअर निवडावे, हा ज्याच्या त्याच्या आवडीचा प्रश्न आहे.

प्रस्तावना :-

करिअर कुठलेही असो, एक गोष्ट अटळ आहे. ती म्हणजे स्पर्धा व त्यात जिंकण्यासाठी त्या परीक्षेत पास होणे. चांगले करिअर म्हटले कि अवघड परीक्षा आलीच आणि अवघड परीक्षा असली की, बुद्धिमत्ता हवीच. या दोन गोष्टी यशासाठी टाळता न येण्यासारख्या आहेत.

वाढत्या स्पर्धेमुळे पालकांचा आपल्या पाल्यावर अभ्यासाचा व परीक्षेत अव्वल स्थान मिळवण्याचा दबाव असणे तर साहजिकच आहे आणि नेमकी हीच परिस्थिती मुलांचे करिअर बिघडवण्यास कारणीभूत ठरते. आजकालची पिढी ही मागच्या पिढीपेक्षाही एक पाऊल पुढे आहे. मागच्या पिढीमध्ये एखादे करिअर निवडून घाडसाने आपला निर्णय योग्य होता, हे सिद्ध करणाऱ्यांची संख्या बोटावर मोजण्याइतकी होती. तसेच स्वतःच्या करिअर संबंधी त्यांना आईवडील किंवा इतर वडिलधाऱ्या लोकांवर अवलंबून रहावे लागे.

उद्दिष्ट :-

आजचा विद्यार्थी तसा नाही. वयाच्या सुरुवातीच्या काळातच आपल्याला पुढील आयुष्यात काय करायचे आहे. याचा विचार करून त्या अनुषंगाने यथोचित प्रयत्न करणारे कित्येक विद्यार्थी आपल्याला दिसतात व ते त्यात यशस्वी देखील होतात. त्यांच्या यशाचे कारण काय याचा विचार केला तर कुशाग्र बुद्धिमत्ता, उत्तम स्मरणशक्ती व मानसिक संतुलन ही कारणे सांगता येतील. या तीन गोष्टीमुळे अशी मुले शाळा महाविद्यालयाच्याच नव्हे तर जीवनाच्या परीक्षेतसुद्धा पास होताना दिसतात. परंतु अयशस्वी होणाऱ्या विद्यार्थ्यांची संख्या लक्षणीय आहे. म्हणूनच आजच्या विद्यार्थ्यांच्या समस्या जाणून घेऊन त्यांचे निराकरण करणे, हे मुख्य उद्दिष्ट प्रत्येक पालकाचे असले पाहिजे.

समस्या विधान :- स्पर्धेत टिकण्यासाठी आवश्यक असलेले वरील गुण इतर विद्यार्थ्यांमध्ये नसल्याने ते परीक्षेत अपयशी होतात¹ त्यातल्या त्यात दहावी-बारावीची वर्षे ही जीवनाला कलाटणी देणारी वर्षे असतात. या दोन वर्षात जास्तीत जास्त अभ्यास करून परीक्षेत उत्तुंग यश मिळवण्यासाठी प्रत्येक विद्यार्थी प्रयत्नशील असतो.

यापैकी जे विद्यार्थी बुद्धिमत्तेने सरासरी पातळीचे असतात. ते परीक्षेत अपयशी ठरतात. त्यामुळे लहान वयातच आपल्या पात्याची बौद्धिक पातळी कमी असेल व अभ्यासातील गती कमी असेल तर पालकांनी वेळीच त्यासाठी प्रयत्न केले पाहिजेत. अशा विद्यार्थ्यांच्या बुद्धिमत्तेमध्ये आहारातील वेगवेगळे बदल कांही शारीरिक क्रिया व औषधी चिकित्सा यांच्याद्वारे बुद्धिवर्धन करता येते. तसेच आयुर्वेदामध्ये पंचकर्म चिकित्सा आहेत. ज्यांच्याद्वारे विद्यार्थ्यांची स्मरणशक्ती व परीक्षेतील मानसिक संतुलन वाढवता येते.

पध्दती :-

पालकांनी विद्यार्थ्यांना परीक्षेत अपयश देणाऱ्या तीन गोष्टीकडे लक्ष देणे गरजेचे आहे. यौवनावस्थेची सुरुवात, पालकांचा विद्यार्थ्यावर अभ्यासासाठी अवाजवी दबाव व परीक्षेच्या काळात बिघडलेले मानसिक संतुलन या तीन गोष्टी विद्यार्थ्यांच्या प्रगतीच्या मार्गातील ठेच लागणारा दगड बनतात.

साधारणतः १६ ते २० वर्ष हे मुलांचे शारीरिक व मानसिक बदल होण्याचे वय असते. त्यामुळे या वयात मुलांना वाईट सवयी लागण्याची शक्यता जास्त आहे. म्हणून शक्यतो या वयात मुलांना शिक्षणासाठी परगावी एकटे ठेवण्याचे टाळावे. हे टाळणे शक्य नसेल तर आईवडीलांपैकी एकाने सोबत राहणे कधीही उत्तम. आपल्या मुलांची बौद्धिक पातळी व करिअरची आवड ओळखून त्याला झेपेल तेवढा अभ्यास व झेपेल ते करिअर करण्याची संधी द्यावी. अभ्यासाच्या अतिरिक्त ताणतणावामुळे^३ व नंतर परीक्षेत अपयश आल्यामुळे विद्यार्थ्यांच्या आत्महत्येचा प्रश्न तर सर्वश्रुतच आहे. त्यामुळे पालकांनी या गोष्टीकडे गंभीर लक्ष देणे गरजेचे आहे.

यामधील तिसरी व अतिशय महत्वाची गोष्ट म्हणजे परीक्षेच्या वेळची मानसिक स्थिती^२. एखादा विद्यार्थी कितीही बुद्धिमान असला व त्याने कितीही चांगला अभ्यास केला असला तरी परीक्षा या शब्दांचा प्रभावच एवढा जबरदस्त असतो की, त्यामुळे त्याची मानसिक स्थिती तणावामुळे बिघडते. हेच कारण आहे कि बऱ्याच वेळा बरेचसे हुशार विद्यार्थी सुद्धा परिक्षेमध्ये कमी पडतात व इतर विद्यार्थी बुद्धिमत्ता कमी असल्याने अपयशी ठरतात. अशा विद्यार्थ्यांसाठी आयुर्वेदिक चिकित्सा अतिशय फलदायी ठरते.

संशोधन साधने व उपाय :-

यामध्ये बौद्धिक क्षमता वाढविण्यासाठी निरनिराळे औषधी योग, काढे व चूर्ण उपलब्ध आहेत. तसेच मनाची एकाग्रता वाढवण्यासाठी व मानसिक संतुलन टिकवून ठेवण्यासाठी शिरोधारा, शिरोबस्ती, अभ्यंग, त्राटक, योग व प्राणायाम तसेच तणाव व्यवस्थापन कार्यशाळा या गोष्टी अतिशय उपयुक्त ठरतात.

दहावी-बारावीच्या व इतर व्यावसायिक अभ्यासक्रमांच्या परीक्षांचा तणाव विद्यार्थ्यांवर असणे सहाजिकच आहे. हा तणाव घालवण्यासाठी व विद्यार्थ्यांच्या परीक्षेतील अतुलनीय यशासाठी प्रत्येक विद्यार्थ्याने अशा पध्दतीचा अवलंब करणे आवश्यक आहे.

परीक्षेमध्ये यश मिळवण्यासाठी आवश्यक असलेली पंचसुत्री म्हणजे तल्लख बुद्धिमत्ता, दुर्दम्य इच्छाशक्ती, प्रचंड आत्मविश्वास, प्रयत्नांची पराकाष्ठा व यशस्वी होण्याची जिद्द. परंतु ज्या विद्यार्थ्यांमध्ये वरील गोष्टींचा अभाव असतो किंवा योग्य थोड्या-फार कमी प्रमाणात असतात व त्यांच्या पालकांच्या पात्याकडून जास्त अपेक्षा असतील तर अशा प्रकारच्या आयुर्वेदिक चिकित्सेने मुलांना निश्चितपणे लाभ होताना दिसतो.

चर्चा :-

शेवटी आपल्या मुलाची बौद्धिक पातळी ओळखून व आवड लक्षात घेऊन जास्त अपेक्षांचे ओझे न लादणे हे तर केव्हाही हितकर असतेच. परंतु अशा प्रकारच्या चिकित्सेने जर खरोखरच बौद्धिक पातळीत वाढत होत असेल व परीक्षेच्या वेळी मानसिक संतुलन कायम राहत असेल तर कुठल्याही प्रकारच्या परीक्षेची भीती व दडपण विद्यार्थ्यांच्या मनावर राहणार नाही.

निष्कर्ष :-

दहावी -बारावी व व्यावसायिक अभ्यासक्रमांच्या प्रत्येक विद्यार्थ्याने त्यांच्या बिझी शेड्युलमधून रोजचा फक्त एक तास तणावमुक्त करणाऱ्या अशा चिकित्सेला दिला तर शाळेतील, महाविद्यालयातील व भावी जीवनातील कुठलीही परीक्षा परीक्षा राहणार नाही व त्या परीक्षेत हमखास व उज्वल यश मिळवता येईल आणि मग प्रत्येक विद्यार्थी आता परीक्षेची भीती कशाला असे म्हणताना दिसेल.

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Datura Metel – Chemical Constituents & Therapeutic Use

Dr.Sangeeta S.Deshmukh

M.D. (Agadtantra)

HOD & Associate professor

Agadtantra – Vyavahar Ayurved Dept.

Late B.V.Kale Manjara Ayurved Medical College & Hospital, Latur

Abstract

Dhatura is known as medicinal plant and plant hallucinogen all over the world.dhatura has avery special place in ayurveda since all parts of the plant leaves, flowers,seeds, roots have been used for a wide range of medication such as treatment of leprosy,rabies etc

This plant has contributed various pharmacological actions in the scientific field of Indian system of medicine like analgesic and anti-asthmatic activities. This comprehensive review of dhatura metal includes information on chemical constituents and therapeutic use.

Key Words : Dhatura, rabies, Atropin.

Introduction

There are marked variations in alkaloidal content of dhatura grown in different localities. These vary from 0.47 to 0.65 %.the mixed Indian seeds give the total alkaloidal content of 0.23% consisting chiefly of hyoscyamine and hyoscyne in the proportion of 2 to 1 together with a little atropine. The capsule contains 0.1% ofttotal alkaloids consisting chiefly of hyoscyne only. The seeds contain 0.216 % of hyoscyne,0.034%of hyoscyamine and traces of atropine.

Aims & Objectives

- To over view the Datura Metel

Review Of Literature

Vernaculars

Sanskrit-kanaka, Unmatta, Shivpriya

English – Thorn apple

Botanical name-Datura Metal

Family- Solanaceae

Chemical Constituents

Leaves contain a poisonous alkaloid –daturin, mucilage, albumin and ash 17 p.c. which contains potassium nitrate 25 p.c., seeds contain the active principles daturina, resin, mucilage, proteids, malic acids, scopolamine and ash 3 p.c.

Daturina – Daturin, an alkaloid identical with atropine combined with malic or daturic acid and consisting of alkaloids hyoscyamine, atropine and hyoscyne. It is a tropate of tropin and occurs in light feathery crystals, dose 1/120 to 1/140 grain in solution generally given with dilute sulphuric acid

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The principle alkaloid of dhatura is scopolamine. The concentration of hyoscyamine, atropine and norhyoscyamine are usually small. For the extraction of alkaloids the leaves should be gathered early in the morning when the alkaloid concentration is high. The seed of dhatura contains a fixed oil 12% with a disagreeable odour and test with following constants:

$d^{28}_D - 0.9255$, $n^{28}_D - 1.473$, acid value 46.3, sapon val. 189, iodine val. 84.65 and acetate val. 42.28

Components of fatty acids of oil are:

Solid fatty acids - 6.18, oleic acid - 60.8, α -linolenic acid - 23.55, β -linolenic acid 2.92, caproic acid - 1.0 and unsapon matter 2.9%.

The seeds are reported to contain allantoin. The leaves contain vitamin C (222mg/100 gm)

Scopolamine

Scopolamine ($C_{17}H_{21}O_4N$, $[\alpha]^{20}_D - 18.75^\circ$)

Used as a pre-anaesthetic in surgery and child birth, in ophthalmology and prevention of motion sickness. Scopolamine appears to be the only alkaloid present in all parts of plants. It is readily extracted from powdered material by percolation with acidulated water after soaking in menstruum of 48%, isopropyl alcohol, 48% water and 4% of glacial acetic acid. The percolate is concentrated to syrup under vacuum, rendered alkaline with ammonia and refluxed with isopropyl alcohol. The alkaloid is taken up with ether and converted into its hydrobromide.

Scopolamine is the syrupy liquid soluble in most organic solvents but sparingly soluble in petroleum and benzene. The hydrobromide is readily soluble in water and used in medicine as a sedative. It is a cerebral depressant useful in agitated or maniacal conditions. It is used to produce amnesia and partial analgesia in labour. It is the best among all the drugs tested for preventing motion sickness either on rough sea or in air travel.

Atropine

Atropine ($C_{17}H_{23}O_3N$, m.p. 118°)

On a commercial scale this alkaloid is prepared by the racemisation of l-hyoscyamine with dilute alkali by heating in chloroform solution. Atropine is optically inactive, but commercial preparations may be slightly levorotatory due to presence of hyoscyamine, atropine sulphate, methobromide and methonitrate are preparations used in the medicine. Atropine is the stimulant for the central nervous system, acting especially on the motor areas affecting coordinate movements and causing in large doses restlessness, talkativeness, and delirium. It prevents also the effect of acetylcholine at the terminations of parasympathetic nerves which supply gland, plane muscles and the heart. When given orally or parenterally, it diminishes certain body secretions. It is of considerable value for relaxing spasmodic contraction of involuntary muscles and is used for this purpose in renal and biliary colic and in asthma. In ophthalmology, atropine is the

form of sulphate is extensively used for dilating the pupils and increasing intraocular pressure.

Hyoscyamine

Hyoscyamine($C_{17}H_{23}O_3N$, m.p.108.50(α)D-220(50%alcohol)) is intermediate in its central action between atropine and hyoscine. It causes less stimulation of the sedative and hypnotic than hyoscine, but it is more powerful than atropine in its peripheral action. It is used to relieve tremor, rigidity, and excessive salivation in paralysis; it is less reliable as a rapid sedative than hyoscine hydrobromide.

The upper leaves and branches of dhatura plants are richer in alkaloid than those near the base. The total alkaloid content is considerably less after a rainy period than after clear weather.

Indeed the difference is so marked, that the drug to be rich in alkaloids needs to be collected after a period of clear days. Leaves collected in the early morning contain more alkaloids than those picked in the evening and leaves dried in the shade contain more alkaloids than those dried in the sun. Leaves which are allowed to dry on the plant which contain more alkaloids than those dried after clipping, the increase is accompanied by decrease in the alkaloid content of the root and stem, suggesting relocation. The alkaloid content of picked leaves exposed to temperature at 100° for 15 min. To destroy the enzymes as preliminary to drying is higher than that of leaves not so treated. The removal of flower leaves increases the yield of leaves.

Dhatura is useful internally as well as externally. The leaves, flowers, seeds and roots have great medicinal value. The paste of its roots mashed in cows urine or the juice of leaves applied externally to alleviate oedema and pain in sciatica, mumps, lumbago, neuralgia etc.

- The mustard oil medicated with the pulp of dhatura seed is used with great benefit for dressing the cracked feet.
- In alopecia, the juice of leaves is rubbed on the affected area of the skin.
- The oil of the seed is effective in the treatment of scabies.
- The inflammation of the breast in post natal period are treated by fomentation of its leaves.
- The pessary of the pulp of the dhatura effectively reduced the pain in haemorrhoids.
- Seeds are used to treat dandruff and lice.
- Dhatura dries up the mucus secretions in the respiratory tract and is a bronchodilator as well. Hence it is beneficial in bronchial asthma and cough.
- Dhatura is acrid, narcotic, anodyne, antispasmodic and emetic and is useful in fever, ulcer and skin diseases.
- The roots are used to treat the bites from rabid dogs and are also used to cure the insanity, in rabid dog bites, the mixture of roots of *Boreavia diffusa* and dhatura in 12:1 proportion is given along with milk.
- Dhatura is beneficial in fever to relieve the sensation of cold and chills.

- Dhatura is useful in diarrhoea and dysentery
- As it curbs, peristaltic movement of the intestine and alleviates the pitta dosha, it is used in the abdominal pain associated with hyper acidity
- The leaves made in to cigarettes are smoked to relieve the asthmatic attacks.
- Leaves are also used in treatment of parkinsonism
- Dhatura is administered in the forms of pills, tablets, tinctures, and extracts
- Dhatura in ointment form containing lanolin, yellow wax and petroleum is employed in the treatment of haemorrhoids
- The leaves are applied boils, sores and fish bite and the juice of flower is used for ear ache
- The juice expressed from fruit is applied to the scalp for curing dandruff and falling hair

Use in Hydrophobia

Dhatura is popular internal remedy for the prevention of hydrophobia. The treatment consists in giving the medicine previous to the time of development of hydrophobia. The treatment is to give the following medicine two weeks after the patient has been bitten that is between the 15th and 25th days- in the morning after 15th day a desert spoonful of wood charcoal powder is given, half an hour after, an ounce of the juice of the dhatura leaves is given which is soon after followed with palmya jaggery or something else check vomiting. Then the patient is bound rest he does mischiefs to others and is kept in sun 4 to 5 hrs until noon, then the patient gradually becomes mad and does many things like the mad dog (evidence of patient having been bitten and of his total recovery) in the afternoon many pots of cold water are poured over his head although this causes great annoyance to the patient and he resents to the almost. Food is now given such as salt fish brinjal, hoarse gram, Bengal gram etc. the patient is then considered out of danger and is given a simple light diet. In case of treating a person already with a lancet so as to make it bleed a little and ground leaves of dhatura are rubbed and juice given internally. The above treatment is one of the several modes.

Useful domestic preparation:

1. Dried dhatura leaves, 15 grains are smoked in a pipe for relief of asthma and paroxysmal cough
2. Take dhatura leaves 1 oz. and boiling water one pint, for use as hot fomentation in case dysmenorrhoea and lumbago
- 3 Take seeds of dhatura 2, mercury sulphide 1, trikatu 1, and aconite 1 part. mix rub the whole together with lemon juice, make a pill mass, dose of 5 to 8 grains useful in fever, catarrhal bronchitis and cough

Summary

Medicinal plants are source of great economic value all over the world. though dhatura is poisonous plant but according to charak all poisonous plant after shodhan

sanskar when used in medicine shows excellent result in various formulation like as amrut .Various medicinal plants have been used for years in daily life to treat the diseases.

Conclusion

Dhatura contains variety of toxic tropane alkaloid such as atropine, hyoscyne, hyoscyamine and scopolamine.

Dhatura is acrid, narcotic, anodyne, antispasmodic and emetic and is useful in fever, ulcer and skin diseases.

The roots are used to treat the bites from rabid dogs and are also used to cure the insanity, in rabid dog bites, the mixture of roots of borehavia diffusa and dhatura in 12:1 proportion is given along with milk

In eastern medicine especially in ayurvedic medicine dhatura has been used for curing various ulcers, wounds, inflammation, rheumatism, gout, sciatica, hydrophobia, fever, asthma, bronchitis etc.

It is important for individual to be aware of its toxic nature with therapeutic use of this plant.

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Assisment of Hemiplegia Patient

Dr.Naresh K. Kore

M. D. (Kayachikitsa)

Associate Professor,

Dept. of Kayachikitsa,

Late B. V. Kale Manjara Ayurved Medical College &

Hospital,Latur.

Abstract

Hemiplegia is a disease which requires dual management plan, one for acute management and another for rehabilitation. For achieving this goal variety of standardized assessment scales are available. Present article deals with elaboration of assessment scale, NIH Hemiplegia scale and Brunnstrom stages of recovery. The use of standardized assessment scales may helps us during the course of their treatment plant to prioritize treatment interventions eg. Shaman or shodana based on specific identifiable motor and sensory deficits. It will also helpful for us to create appropriate short- and long-term goals for treatment based on the outcome of the scales.

Key Words : Hemiplegia, Stroke, Assessment, Rehabilitation.

Introduction

Hemiplegia is defined as paralysis of one side of the body due to brain damage. Most common cause of Hemiplegia is stroke. There are more than 600000 people with disabilities worldwide and Hemiplegia is one of the more common condition. This article focuses on assessment of the patient of Hemiplegia both in acute as well as recovery stage.

Aims and Objectives

- 1.To define assessment criteria of Hemiplegia patients.
- 2.Implementation of assessment criteria of Hemiplegia patients, who are under *Ayurveda* line of management.

Literary Study

For the assessment of acute management plan, National Institute of Health Hemiplegia scale is quite useful.

Nih Scale For Assisment Of Hemiplegia

1. A Level of consciousness— 0—Alert
 - 1- Not alert but arousable with minimal stimulation.
 - 2- Not alert , require more stimulation to attend.
 - 3- Coma.
- 1 B Questions (ask the patient the month and their age)
 - 0 – Answer both correctly
 - 1—Answer one correctly.
 - 2—Both incorrect.

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- 1 C commands (ask the patient to open/ close eyes and form/release fist
 - 0—Obeys both correctly
 - 1—Obeys one correctly.
 - 2—both incorrect.
- 2 Best gaze (only horizontal eye movement)
 - 0—Normal
 - 1—Partial gaze palsy.
 - 2—Forced gaze palsy
3. Visual field testing
 - 0—no visual field loss.
 - 1 – Partial hemianopia.
 - 2—Complete hemianopia.
 - 3—Bilateral hemianopia.
4. Facial palsy (ask the patient to show teeth or raise eyebrows and close eyes tightly)
 - 0— Normal symmetrical movements.
 - 1—Minor paralysis
 - 2— Partial paralysis.
 - 3- Complete paralysis one or both sides.
- 5.Motor function arm
 - 0-Normal extends arm 90° or 45° for 10 sec without drift.
 - 1 -Drift.
 - 2 -some efforts against gravity.
 - 3-no efforts against gravity
 - 4 -no movements
 - 9- unstable.
6. Motor function leg
 - 0 normal (holds leg in 30° position for 5 sec without drift)
 - 1 drift
 - 2 some efforts against gravity.
 - 3 no efforts against gravity
 - 4 no movements
 - 9 unstable.
7. Limb ataxia
 - 0—no ataxia, 1 present in one limb, 2 present in two limbs.
- 8 Sensory—Use pinprick to test arms, legs, trunk and face, compare side to side.
 - 0—normal, 1 mild to moderate decrease in sensation, 3 severe to total sensory loss.
- 9 Best language—Ask the patient to describe picture, name items.
 - 0—no aphasia, 1—mild to moderate aphasia, 2—severe aphasia, 3—mute.
- 10.Dysarthria – Ask the patient to read several words
 - 0 – normal articulation, 1--- mild to moderate slurring of words,
 - 2- near un intelligible or unable to speak. 3 – intubated or other physical barrier.
- 11.Extinction and inattention – Use visual double stimulation or sensory double stimulation
 - 0—normal, 1 – inattention or extinction to bilateral simultaneous stimulation in one of the sensory modalities. 2 – Hemi- attention, severe or to more than one modality.

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12. Distal motor function – Ask patient to extend his/her fingers as much as possible.
0—normal 1 – at least some extension after 5 sec. but not fully extended.
2—no voluntary extension after 5 sec.

By taking help of above assessment chart initially on admission, after 2 hrs. 24 hrs. and 7 day score should be calculated.

For the assessment of stages of recovery to make a plan of rehabilitation Brunnstrom stages of recovery is helpful.

Brunnstrom stages of recovery

The Brunnstrom Approach follows six proposed stages of sequential motor recovery after stroke. A patient can plateau at any of these stages, but will generally follow this sequence if he or she makes a full recovery. The variability found between patients depends on the location and severity of the lesion and the potential for adaptation. Brunnstrom and Sawner also described the process of recovery following stroke-induced Hemiplegia. The process was divided into a number of stages immediately after the onset.

1. Flaccidity. No "voluntary" movements on the affected side can be initiated.
2. Spasticity.
3. Basic synergy patterns appear
4. Minimal voluntary movements may be present
5. Patient gains voluntary control over synergies
6. Increase in spasticity
7. Some movement patterns out of synergy are mastered (synergy patterns still predominate)
8. Decrease in spasticity
9. If progress continues, more complex movement combinations are learned as the basic synergies lose their dominance over motor acts
10. Further decrease in spasticity
11. Disappearance of spasticity
12. Individual joint movements become possible and coordination approaches normal
13. Normal function is restored

The 6 stages are as follows:

Stage Description

1. Immediately following a stroke there is a period of flaccidity whereby no movement of the limbs on the affected side occurs.
2. Recovery begins with developing spasticity, increased reflexes and synergic movement patterns termed obligatory synergies. These obligatory synergies may manifest with the inclusion of all or only part of the synergic movement pattern and they occur as a result of reactions to stimuli or minimal movement responses.

- 3 Spasticity becomes more pronounced and obligatory synergies become strong. The patient gains voluntary control through the synergy pattern, but may have a limited range within it.
- 4 Spasticity and the influence of synergy begins to decline and the patient is able to move with less restrictions. The ease of these movements progresses from difficult to easy within this stage.
- 5 Spasticity continues to decline, and there is a greater ability for the patient to move freely from the synergy pattern. Here the patient is also able to demonstrate isolated joint movements, and more complex movement combinations.
- 6 Spasticity is no longer apparent, allowing near-normal to normal movement and coordination.

Conclusion

1. Above scales will provide us quantative data of the patient which is important for statistical analysis.
- 2 . It also gives us an idea about outcome of treatment plans and their priorities.
3. Above assessment criteria will help us to evaluate the potential burden of care and monitor any changes based on either improving or declining scores.

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Role of Ayurvedic Plants in Herbal Cosmetics: A Review

Dr. Varsha V.Khanapurkar,

MD (Dravaguna)

Associate Professor, Dept of Dravaguna

Late B.V. Kale Manjara Ayurved Medical College, Latur

Abstract:

Natural beauty is blessing of god and cosmetics will add enhancing beauty and personality of human beings. This can achieved with natural food, herbal remedies and some Ayurvedic plants. It has been said that 'there is plant for every need on every continent' so one or more herbal ingredients are used to provide defined cosmetic benefits only shall be called as herbal cosmetics. It have growing demand in world market, as they are more effective with nil or less side effects and easily available ingredients. Cosmetics are the utility products used extensively by both woman and men as they are obsessed with looking beautiful. Herbal cosmetics are used throughout the world for improving general appearance of face, hair and other body parts. It requires association of active principal that will help in controlling damage and ageing, in this way cosmoceuticals gives birth to such a beauty products containing bioactive ingredients.

Keywords: Beauty, Cosmetics, Skin care, Hair care, Herbal drugs, Bioactive ingredients

Introduction

The word cosmetic was derived from the Greek word "kosmtikos" meaning having the power, arrange, skill in decorating. The concept of beauty and cosmetics dates back to ancient mankind and civilization. Generally herbal cosmetics are also referred to as 'natural cosmetics'. Herbal cosmetics are formulated, using different cosmetic ingredients to form the base in which one or more herbs are used in crude or extract form. The demand of herbal medicines is increasing rapidly due to their skin friendliness and lack of side effects. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs and thus it is free of side effects.¹

Now a days the whole world return towards the use of herbal products. The usage of herbal cosmetics has been increased to many folds in personal care system and all these happen due to the excessive use of synthetic base products, synthetic chemicals, dyes and their derived products causes human health hazard with several side effects leads to numerous diseases. The beauty of skin and hair basically depends on individual's health diet, habits, job routine, climatic conditions. Herb often contain additional active principals that may be closely related both chemically and therapeutically to the constituent primarily responsible for its effect. Herbal total extract as well as selected extracts are used in cosmetics. Total extracts are applied mainly according to the historical tradition of their use. Some selective extracts are introduced for different areas of uses as I. Licorice (Glycyrrhizaglabra) for skin irritation, II. Walnut (juglans regia) for skin tanning.² The increased demand for the natural products has created new avenues in cosmoceutical market. The drug and cosmetic act specify that herbs and essential oils used in cosmetics must not claim to penetrate beyond the surface layer of the skin, nor should have any therapeutic effect.

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Role of herbal drugs in cosmetology

Herbal cosmetics:

The name itself suggests that herbal cosmetics are natural and free from all the harmful synthetic chemicals which otherwise may prove to be toxic to the skin. Instead of traditional synthetic products different plant parts and plant extracts are used in these products. Herbal cosmetics are referred as products that are formulated using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetics benefits only. Herbal cosmetics are defined as the beauty products which possess desirable physiological activity such as healing, smoothing appearance, enhancing and conditioning properties because of herbal ingredient.

Herbal cosmetics are the modern trend in the field of beauty and fashion. These agents are gaining popularity as nowadays most women prefer natural products over chemicals for their personal care to enhance their beauty as these products supply the body with nutrients and enhance health and provide satisfaction as these are free from synthetic chemicals and have relatively less side-effects compared to the synthetic cosmetics.¹

Herbal Extracts for Cosmetics:

Herbal extracts as the name suggests, is the extract of herbs. Herbal extracts are an ancient methodology as its references have been discovered in holy *Vedas* and in *Unani*.

Herbal extracts are processed for curing several remedies and serve other health prospective. In the extraction process, the herbs are smashed in a bowl to squeeze out the juice. Later the liquefied juice is mixed with essential substances to prepare the herbal extracts. There exist a gigantic variety of herbal extracts, to name a few *Andrographis Paniculata (Kalmegh)*, *Asparagus Racemosus (Shatawari)*, *Boswellia Serrata (Salai Guggal)*, *Asphalt (Shilajit)* etc. Some other frequently used herbal extracts are *Azadirachta Indica (Neem)*, *Bacopa Monnieri (Brahmi)*, *Camellia Sinensis (Green tea)* etc. In addition to this *Centella Asiatica (Mandukparni)*, *Cassia Angustifolia (Sena)*, *Chlorophytum Borivilianum (Safed Musli)* and *Pudina* are some of the prime herbal extracts used in our daily lives.

Herbal extracts have very less chances of side effects than any other medicines. That's why herbal extracts are said to be common man's medicine and drugs. Herbal extracts are cultivated all over the world and is prime name in horticulture sector. Cosmetics made up of herbal extracts for anti-marks, fairness, cleansing and hair-care are very popular for their reliability. Fresh herbals and medicinal plants can be acquired by gathering them in wild conditions, growing them in your own personal garden, or buying them from other gardeners and health food stores from the germ theory of disease and the advent of antibiotics to combat various infections. With the realization that chemical medicines are not always "magic bullets" and may carry serious side effects, herbalism and ancient medicines are making a comeback. Our challenge now is to ensure that valued botanicals should remain abundant for future generations, prepared by steeping in boiling

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water to be drunk as a tea, they are known as an infusion. If these dried herbs get simmered in hot water, they are called as decoction. If gets incorporated in with other ingredients and made into cream, they are viewed as an herbal ointment. Sometimes used an Herbal compress where piece of cloth is soaked in an infusion or decoction and is wrapped and applied externally. If herbs are used to cleanse and heal externally, they are called herbal wash. Herbal infusions and decoctions can also be used as herbal bath for relaxation and healing. Always follow the recommended dosages on your preparations and recipes because over-use of herbs can defeat the purpose for which you are using them. Some of the most beneficial herbs can prove to be toxic if over used.³

Whole herbal extract in use:

Whole herbal extracts consist of numerous compounds that together provide better effects on the skin. Herbal extract may show antioxidant anti-inflammatory emollient, melanin inhibiting antimutagenic antiaging properties.⁴

Concept of Beauty in Ayurveda:

Ayurveda determined beauty by *prakriti* (Body constitution), *Sara* (structural predominance), *sanhanan* (compactness of body), *twak* (skin completion), *Praman* (Measurement) and *dirghayulakshyana* (symptom of long life). Beauty is not only a source of joy but gives confidence and pride in some extent. Ayurvedic cosmetology started from mother wombs, *dinacharya*, *ratricharya*, *ritucharya* with the practice of medicinal herbs and minerals. There was a provision for appointing a beautiful woman (*Kalinee*) in the *Rasasala* (pharmacy) for *rasabandha* and the characteristic of *Kalinee* is well described in *Rasaratnasamuchchaya* and *Anandakanda*. If the *Kalinee* is not available then the specific way to convert ordinary woman to *Kalinee* is also possible by the administration of one karsa (3 gm) of purified sulphur along with ghee for twenty one days.

According to Ayurveda Human body functions through various channel systems called "*Srotamsi*", containing both microscopic and macroscopic structures such as the respiratory system, lymphatic/ circulatory system, reproductive system and nervous systems, among others. These channels function as innumerable psycho-biological processes such as enzyme production, neuro-transmitter secretion, hormonal intelligence, respiratory capacity and digestive assimilation/ elimination, immune power etc and responsible for wellness and beauty.⁵

Different *lepas* (masks or applications) were recommended for different seasons for body beautification. The ingredients used during cold season were quite different from those used in warm season. In fact *Ashtanga*, *Hridaya*, offers six different formulations to be used for six seasons of the year.⁶

Ayurveda Medicine as Cosmetics:

Charaksamhita classified cosmetics drugs as *Varnya*, *Kustagna*, *Kandugna*, *Bayasthapak*, *Udardaprasamana*, etc. Many *alepam* (poultice) *Pradeha*, *Upnaahanjana* oil are described in *Susruta Samhita* and *Astanga Hridaya* in the context of *Twak Roga*. The very common medicines are- *Kungkumadilepam*, *Dasnagalepam*, *Chandanadilepam*, *Dasanasamskarchurna*, *Kukummaditaila*, *Nilibringarajtaila*, *Himasagartaila*, etc are very

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well established medicine in Ayurveda. Sesame Oil is used as a base in many oil in Ayurveda. It contains Lignan compounds called Sesamin and Sesamolin, which are biologically active. These compounds enhance oxidative stability of the oil. They have potential to be used as anti oxidant compounds as well as having a moisturising effect. Buttermilk and goat's milk powders traditionally used in Indian face mask preparations have soothing and emollient properties. They also contain vitamin A, B6, B12 and E. They would make beneficial alternatives to chemical bases and emollients. Shikakai is a traditional herb used in hair shampoos. The material is extracted from the Shikakai pods and Shikakai nuts of the *Acacia Concinna* shrub. The pods are rich in *Saponins* and make a mild detergent, which has a neutral pH. *Aritha* powder; extracted from *Soapnuts* (*Sapindus Pericarp*) also contains *Saponins*, which acts as a foaming agent. It was used as soap in Ayurvedic tradition. The oils also maintain integrity of cosmetic products and could be used as a base instead of petroleum and plastic derivatives. There are significant evidences already generated for Ayurveda skin care in vitiligo, psoriasis, eczema and acne vulgaris. Many companies have entered the segment with branded products in categories such as skin care, hair care, soaps and essential oils. Concern about harmful chemicals in beauty products has increased consumer interest in natural cosmetics. More and more products now include herbal and botanical ingredients.⁵

Herbal cosmetics in skin care

The knowledge about the structure and basic function of the skin and its appendages and knowledge of natural or herbal care or remedies for its problems will help to widen the importance of herbal cosmetics. The skin has the natural ability in continuously repairing to maintain its normal function. In young age the common skin problem are greasy skin and acne and during old age the skin becomes dry. To have a better skin, it is important to understand how our skin functions and to take proper precautions to maintain it. Water is a major component for keeping skin in good condition. Water originates in the deeper epidermal layers and moves upward to hydrate cells in the stratum corneum in the skin, eventually being lost to evaporation. Snehana and Swedana bring moisture to our skin. It gives our skin greater elasticity and rejuvenates skin tissues. As cells in our face make their way to the surface over their lifecycle, they die and become saturated with keratin, or skin debris. Keratin is important because it protects your skin from the elements but the shedding of that outer layer can unclog pores. Snehana and Swedan are believed to be inhibiting trans-epidermal water loss, restoring the lipid barrier and restore the amino-lipid of the skin. Ayurveda always advocated vegetarian diet in appropriate quantity and advice for plenty of water intakes for restore the beauty and youthfulness.

The skin are classified into 4 groups and for each class appropriate ingredients should be used to maintain its natural functionality.^{5,7}

The requirements for the basic skin care a) Cleansing agent: Which remove the dust, dead cells and dirt that choke the pores on the skin. Some of the common cleansers include vegetable oils like coconut, sesame and palm oil.

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b) Use of Toners: The toners help to tighten the skin and keep it from being exposed to many of the toxins that are floating in the air or other environmental pollutants. Some of the herbs used as toners are witch hazel, geranium, sage, lemon, ivy burdock and essential oils.

c) Moisturizing: The moisturizing helps the skin to become soft and supple. Moisturizing shows a healthy glow and are less prone to aging. Some of the herbal moisturizers include vegetable glycerin, sorbitol, rose water, jojoba oil, aloe vera and iris.⁷

Herbs used as cosmetics in skin care and hair care^{8,9,10,11,12,13}

Table 1
Categorization of herbal drugs with ayurvedic reference

Common name	Botanical name	Part used	Ayurvedi proprieties	Chemical constituents	Title case	Book ref available in classical schedule first book under drug and cosmetic act 1940
Amla	<i>Embllica officinalis</i>	Fruit	Sheetal rasayan	Vit C, tannin , amino acid	Conditioning promote hair growth and reduce hair fall	Bhavprakash nighantu pg no 11
Anant mool	<i>Hemides mus indicus</i>	Root	Twak dosh har, varnya	Coumarin, hemidesmol	Promote skin care	Bhavprakash nighantu pg no 427
Ashoka	<i>Saraco asoca</i>	bark	Rakt sangrahak ,	Flavonoids , tannins, catechol	Dermatitis , psoriasis	Bhavprakash nighantu pg no 500
Bhringraj	<i>Eclipta alba</i>	panc hang	Keshya	Thiophene derivetives sigma sterol nd B-sitosterol	Promotes hair growth removes graying	Bhavprakash nighantu pg no 429
Chandan	<i>Seantalu m album</i>	Woo d, oil	Dah shamak varnya	Alfa beta sentalol aldehydes	Promotes skin complexion	Bhavprakash nighantu pg no 187
Daruharidra	<i>Berberis aristcata</i>	bark	Twak dosh har, varnya	Berbamine , palmatine	Fair complexion	Bhavprakash nighantu pg no 119
Ghritaku mari	<i>Aloeindica</i>	leaf	Charm rog nashak	Aloin barbaloin amino acid	Moisturizing protecting and soothing	Bhavprakash nighantu pg no 419
Gulab	<i>Rosa centifolia</i>	Floor	Dah shamak varnya	Essentional oil, geraniol	Softing, toning soothing	Bhavprakash nighantu pg no 488
Haldi	<i>Curcuma longa</i>	Rhizo me	Twak dosh har, varnya	Curcumin,ca mphor, alpha phellandrenr	Antiseptic antiacune coloring agent	Bhavprakash nighantu pg no 114

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Kachnar	<i>Bauhinia variagata</i>	Bark, pods	Vrana shodhak	Tannin	Skin ulcers	Bhavprakash nighantu pg no 337
Keshar	<i>Crocus sativus</i>	stigma	Varnya	Crocetion , picrocrocin	Smoothing, fragrance	Bhavprakash nighantu pg no 233
Kheera	<i>Kukumis sativus</i>	Fruit	Sothhar shhetal	Cucurbitin minerals carbhydroates	Cleansing protecting and smoothing	Bhavprakash nighantu pg no 562
Lemon grass	<i>Cymbopogon citratus</i>	Leaf	Twak dosh har	Citral limonine	antibacterial and antifebril	Bhavprakash nighantu pg no 384
Mangishtha	<i>Rubia cordifolia</i>	Stem	Twak dosh har	Manjistin , garacin	Skin care	Bhavprakash nighantu pg no 110
Meheandi	<i>Lawsonia Innermis</i>	leaf	Keshya	Hanno tannin acid	Coloring, dying	Indian material medica vol 1 page 730
Neem	<i>Azadirachita indica</i>	Leaf stem fruit	Twak dosh har	Mimbin, sigma sterol and B-sitosterol	Antiseptic antibacterial antifungal	Bhavprakash nighantu pg no 329
Nagarmotha	<i>Cyperus rotundus</i>	Root	Keshwardhak	Albumin , volatile oil	Hair care	Bhavprakash nighantu pg no 243

Profile of herbal cosmetics brands

Himalaya Herbals

Himalaya Herbals is a range of 100% natural and safe products with rare herbs collected from the foothills of the Himalayas.

Vaadi Herbals

Vaadi herbals pvt ltd has combined Ayurvedic science with modern technology to develop a whole new range of personal care products.

Just Herbs

Just Herbs is a company which is the embodiment of the old or traditional and the new or modern.

Biotique

Biotique products have been made by incorporating the ancient Ayurvedic therapies and fusing them with the latest bio-technological innovations to be able to bring to consumers cosmetics and skin care product that are chemical free and completely safe for the skin and hair.

Jovees Herbal

Jovees, a line of Herbal and Ayurvedic products is result of an extensive research aligning the Power of Herbs and Power of science.¹⁴

Adverse reaction of cosmetics

Skin cleansing agents remain on the body for Avery short period of time rarely because significant adverse reactions however perfume and other constituent may cause skin irritation and allergic reactions moisturizers increase the hygroscopic properties of the skin however high concentration of these substances may cause irritation or exfoliation. Black Heenatattoo is chemical stain due to p-phenylenediamine (PPD) in the form of commercial hair dye mixed into the Heenapaste. Adverse reaction to PPD can include erythematous rash swelling blisters and surface oozing.

Deodorants fragrance can cause headache irritation to nose dizziness fatigue by entering fragrance into lungs airways and via pathways of NSE directly to brain. Shampoos and conditioners cause tingling of scalp. Adverse effect of shaving cream includes skin irritation. Disadvantages of bleaching include temporary discoloration of skin. Kajal mascara are contain carbon compounds causes irritation in eyes and redness in eyes.¹⁵

Conclusion:

In today's day today life every wants to be look beautiful and fresh, to maintain this herbal cosmetics play a important role. Herbal cosmetics are the oldest products which is used by all of us. Some common herbal cosmetics include creams, face packs, scrubs, hair oils, hair color's, shampoos, hair conditioners, perfumes and fragrance, soaps, etc. A cosmetic formulation including active principals of natural origin can protect the skin against the exogenous or endogenous harmful agents, and help to remedy many skin conditions. The formulation of all these cosmetic products includes addition of various natural bioactive additives like oils, waxes, natural color, natural fragrances and parts of Ayurvedic plants like leaves, flowers etc, by specific formulation methods. In the developing countries of Asia including India, Africa & Latin America more than 80% of the population relies on traditional Herbal products, mostly plant originated. The global demand for these products is in increasing demand as they are natural products, considered safer & more cost-effective and less damaging to skin as they are synthetic one. Herbal cosmetics are now emerged as the appropriate solution to the current problem. The usage of Herbal cosmetics has been increased to many folds in personal care. In the future, it is possible that many new plants extracts and oils of commercial significance will be identified, but this requires multidisciplinary approach, chemists, botanists, analytical chemist, biologists to assess the herbal cosmetic value.

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Management of Dushta Vrana by Shodanakesari lepa

Dr.Santoshkumar D.Swami

Associate Professor & HOD, Dept. of Shalya Tantra
Late.B.V. Kale Manjara Ayurved College
& Hospital, Latur

Dr.Dipti J.Chewale

Assistant Professor, Dept. of Shalakya Tantra
Late.B.V. Kale Manjara Ayurved College
& Hospital, Latur

Abstract

Acharya Sushruta considered Vrana as prime disease in the domain of Surgery and that is why he has explained 60 measures for wound management and Vrana Shodhana is one of them. Acharya Charaka even though was a physician has contributed a chapter in Chikitsa Sthana about Vrana Shodanakesari lepa as Krimighna due to its Tikta Kashaya ras, Katu vipak, Laghu, Ruksha guna and Tridoshaghna property. as it contains nimbi patra, til, danti, trivart, saindhav lavana and madhu.. Due to these ingredients it inhibits the growth of Krimi ie: antibacterial effect.

Key Words: Shodana Kesari Lepa, Dushta Vrana

Introduction

Healing of Vrana is a natural process but due to affliction with vitiated Doshas, Vrana becomes Dushta and normal healing process gets delayed.

Various modes of treatments such as oral analgesics, stool softeners, topical anaesthetics, etc, which has many untoward effects most of the methods of treatment are expensive and requires long stay in the hospital.

So, there is need to have a simple method which is having better patient compliance.

Various treatments are suggested by acharyas, like pichu, lepa, picchabasti, application of malahara etc for management of dushtavrana. Shodana Kesari Lepa having the properties like Vedana Shamaka, Shodhana Karma, Vrana Pachana Karma and provides hypothetical support. Shodana Kesari Lepa can be prepared in low cost and its contents are easily available in our region as well.

In Dushta Vrana, underlying inflammation and edema may compromise the circulation and reduces oxygen carrying capacity of blood at intra cellular level.

Management with Shodhana Kesari Lepa will be more beneficial for wound healing process.

Aims & Objectives

1. To evaluate the efficacy of Shodhana Kesari Lepa (Ref:B.R) in the management of Dushta Vrana.
2. To highlight the pharmacological significance OF Shodana Kesari Lepa
3. To promote and update it in current medical stream.

Review of Literature

1. Description of Dushta Vrana, Nidana, Samprapti, Laxana, Sadhya-Asadhyata & Chikitsa from various Ayurvedic classics.

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2. Description of Non-healing wounds referred from Modern Literatures
3. Description of Shodhana Kesari Lepa (Ref: bhaishjya ratnawali 47/32)

Materials and Methods

The details of literature of Dushta Vrana were incorporated in great detail from Samhitas, Modern Surgical texts and related websites are also incorporated and documented in the study. 30 diagnosed Patients of dushta vrana attending the OPD and IPD of It.b.v.kale Ayurved College and hospital, latur will be the materials of study. Shodhana Kesari Lepa is prepared in rasashala It.b.v.kale Ayurved college and hospital, latur as per guidelines given by the Samhita reference.

Method of collection of data

The signs and symptoms will be recorded as the Performa designed for study.

Selection criteria

A) Inclusive criteria

- Irrespective of age & sex will be included.
- Dushta Vrana as a result of post operative wounds like Fistulectomy, Fistulotomy, Fissurectomy etc.
- Varicose Ulcers, Tuberculous Ulcers, Traumatic Ulcers.
- Dushta Vrana as a result of CLW and all other Dushta Vranas will be included.

B) Exclusive criteria

- Gangrenous wounds, Neurogenic Ulcers, Malignant ulcers, Ischemic Ulcers, Dagda Vrana.
- Wounds due to systemic pathologies like uncontrolled DM, etc.
- HIV & HbsAg, immunological disorders are excluded.

Study design:-

The screened patients of Dushta Vrana were randomly classified into two groups

Group a = Shodhana Kesari Lepa Group:-

15 Screened patients of Dushta Vrana were treated with application of Shodhana Kesari Lepa locally on daily basis for dressing and bandaging of wound for one month with weekly assessment.

Group b= control group

15 screened patients of Dushta Vrana were treated h₂O₂, betadine and normal saline on affected part for One month on weekly basis such four sittings will be given.

follow up:-

After the completion of treatment schedule all the patients of Dushta Vrana were followed up monthly for three months.

Assessment criteria:-

Assessment were done on objective and subjective criteria before and after the treatment. The collected data will be statistically analyzed and documented.

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Subjective parameters:-

- Pain -no pain/ mild /moderate/severe

Objective parameters:-

- Size
- Discharge
- Varna - colour
- Granulation tissue
- Investigations like CBC,Urine analysis for Microscopic and Routine.RBS, PPBS & FBS (As per the need)were done.

Observation And Result

Result were assed with the help of assessment criteria. Following results wrer obtained.

Effect on varna -83 % , srava 86%, vedana % , gandha 84%, granulation 85% and size of wound 85%.

Result of shodana kesari lepa was found to be stastically significant in the process of wound healing.

Table 1.showing result of granulation

Bt Mean Se	Follow Up	At Se	Df	T Value	P Value	Remark
2.33+_0.12	1	2+_0.19	14	2.64	≤0.05	S
	2	1.6+_0.16	14	6.20	≤0.01	HS
	3	1.6+_0.18	14	10.71	≤0.01	HS
	4	0.33+_0.12	14	20.49	≤0.01	HS

Table 2 .showing result of size of wound

Bt Mean Se	Follow Up	At Se	Df	T Value	P Value	Remark
2.263+_0.11	1	2+_0.13	14	2.24	≤0.05	S
	2	1.73+_0.11	14	4	≤0.01	HS
	3	1+_0.13	14	10.71	≤0.01	HS
	4	0.33+_0.12	14	12.61	≤0.01	HS

Discussion

- The main pathology of vrana is Kledotpatti and Rasadidushti which is main medium of growth of bacteria/ krimi in wound.

- Upshoshan property of Shodankesari lepa breaks this pathology by decreasing elevated Kapha, Pitta Dosha and Rakta.
- Shodankesari lepa improves Doshasamanata and correct Rasadidushti by Tridoshaghna, Deepan, Pachan karma.
- Shodankesari lepa as Krimighna due to its Tikta Kashay ras, Katu vipak, Laghu, Rukshaguna and Tridoshaghna property.as it contents nimbi patra, til, danti, trivart, saindhav lavana and madhu.. Due to these ingredients it inhibits the growth of Krimi ie: antibacterial effect.

Conclusion

- 1.Shodankesari lepa has shown Vranashodhaka, Vranalekhana, Putihara, Vedanasthapaka, Vranaropaka, and Jantughna properties in management of DUSHTA VRANA.
- 2.Shodankesari lepa is easily available, easy technique to use in dushta vrana, can be used in tribal areas also, use as home remedy and very cost effective.
3. Standardization and marketing of Shodankesari lepa is need of era.

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Tutthakadya Malahara – For Rapid Relief in Parikartika

Dr.Maruti T.Narhare

Associate Professor,

Rasashastra & B.K.Dept.,

Late.B.V.Kale Manjara Ayurved Medical College

& Hospital, Latur

Dr.Dipti J.Chewale

Assistant Professor,

Dept. of Shalakya Tantra

Late.B.V.Kale Manjara Ayurved Medical College

& Hospital, Latur

Abstract

Anorectal diseases like arsha,bhangadhara,parikartika etc. are most predominantly found in daily practice. Among these parikartika (fissure in ano) is a Commonest condition and most Painful amongst all Ano-Rectal diseases.

Tutthakadya Malahara) is dahashamak,raktastambhak vranaropak and sandhaniya. Keeping in view these factors application of Tutthakadya Malahara is thought in parikartika .

Tutthakadya Malahara is having better patient compliance is suggested in this study.

Key Words:Tutthakadya Malahara, Parikartika, Malahara

Introduction:

Parikartika - Sanskrit word – ‘ Parikr’ - “all around” and “Kartanam” – the excessive cutting pain around the anus. Parikartika is a condition in which patient has excessive cutting pain around anus Fissure in ano is a similar condition explained in modern science. It is a elongated ulcer in the long axis of anal canal which is very painful. It is initiated by passage of Hard Stool causing Crack at Anal verge and anal spasm.

Anal spasm results in severe pain, tearing of anoderm and decreased blood supply.The cycle of spasm, pain and ischemia contributes to the development of a Fissure in ano.

Various modes of treatments such as oral analgesics, stool softeners,topical anaesthetics, anal stretching by lords method, lateral sphinterectomy etc, which has many untoward effects.Recurrence is very common and most of the methods of treatment are expensive and requires long stay in the hospital.

So, there is need to have a simple method which is having better patient compliance.

Various treatments are suggested by acharyas, like pichu,lepa,picchabasti , application of malahara and anuvasan basti etc for management of parikartika

Tutthakadya Malahara (Ref: Rasatarangini 21/100-104) is dahashamak, raktastambhak vranaropak and sandhaniya. Keeping in view these factors application of Tutthakadya Malahara is thought in parikartika.

So a simple method which is having better patient compliance is suggested in this study.

Aim

1. To study the efficacy of Tutthakadya Malahara in the management of parikartika WSR to Fissure in ano.

Objectives of Study

1. To review and analyse the available literature of Parikartika (fissure in ano) in Ayurvedic and modern medical science.
2. To highlight the pharmacological significance of Tutthakadya Malahara .
3. To promote and update it in current medical stream

Review of Literature:

Parikartika (Fissure in ano) is a elongated ulcer in the long axis of anal canal which is very painful. It is usually initiated by passage of Hard Stool causing Crack at Anal verge and anal spasm.

Tutthakadya Malahara (Ref: Rasatarangini 21/100-104) is dahashamak, raktastambhak vranaropak and sandhaniya. Keeping in view these factors application of Tutthakadya Malahara is thought in parikartika.

It contains Tuttha, Tankana, Kapardik bhasma, Goghrita, Ral & Khatika. Ingredients are easily available, economically cheap and method of preparation of malahara is easy.

Materials and Methods**Materials:**

- Patients: Patients suffering from Fissure in ano attending OPD and IPD, Department of Shalyatantra pmt's ayurved college&hospital, shevgaon,
- Literature: literary aspect of study will be collected from classical Ayurvedic and modern texts and updated recent medical journals.
- Medicine: The required materials are Tutthakadya Malahara will be prepared (Ref: Rasatarangini 21/100-104)

Methodology :**Inclusive criteria:**

1. Patients diagnosed as parikartika - fissure in ano will be included in the study.
2. Patients of both sex in between the age group of 16 to 50yrs will included.

Exclusive criteria:

1. Patients having parikartika secondary to ulcerative colitis, crohn's disease, syphilis and tuberculosis will be excluded.
2. Patients with uncontrolled disease like Diabetes and Hypertension will be excluded.
3. Patients with infectious disease like HIV and HbSAg will be excluded.
4. Patient with any other ano rectal diseases and pregnant woman.
5. Patient undergoing treatment of virechana and basti

Study design: Present study is a non comparative observational clinical study.

Sample size: 30 patients of parikartika randomly selected for the study.

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Procedure: Tutthakadya Malahara will be applied locally, for 7 days, before and after defecation and at bed time. Patients will also receive Eranda Bhrustha Hareetaki tablet - 500 mg at bed time for 7 days for stool softening during the treatment. Pathya apathya will be also explained.

Parameters of study: Following parameters will be considered for the study.

- 1.Gudagata Shoola (pain): Assessment of pain gradation before and after treatment based on 3 degrees i.e. Mild(+), Moderate (+ +), Severe (+ + +).
- 2.Gudagata rakta srava(Bleeding): present or absent ,before and after treatment.
- 3.Spasam - present or absent ,before and after treatment..
- 4.Length of fissure

Criteria for assessment: Criteria for assessment will be based on

A. Relief of symptoms before and after treatment

The results will be scored as

- Complete relief - above 75% improvement,
- Moderate relief - 50 to 75% improvement,
- Mild relief - 25 to 50% improvement,
- No relief - below 25% improvement.

B. Length of fissure

Length of fissure based on the results categorized as below,

- No change in ulcer - no relief,
- Partial healing - Moderate relief,
- Complete healing - complete relief.

C.Overall assessment is done based on the improvement in parameter score before and after treatment which will be subjected to statistical analysis.

Observations & Results:

Observations obtained on the basis of methodology followed are as below.

Table showing distribution of patients according to age

Age	Study Group
15 – 25 yrs	10
25- 35 yrs	10
35 - 45 yrs	10
Total	30

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**Table Showing Percentage of Relief in Each Symptom of 30 Patients
of Fissure-in ano (*Parikartika*)**

Symptoms	Before treatment	After treatment	Difference	% of relief
Pain in anal region	28	10	18	40
Bleeding per rectum	10	5	5	50
spasam	30	12	18	40
Length of fissure	18	8	9	50

Discussion:

1. Tutthakadya Malahara purifies the wounds, lyses the debris and enhances healing process by decreasing swelling & inflammation of parikartika.
2. Tutthakadya Malahara is a cost effective alternative to available ointments for the treatment of parikartika.
3. This ointment is used for dressing purpose for all kind of wound (acute or chronic) irrespective of cause.

Summary:

- Among these parikartika (fissure in ano) is a Commonest condition and most Painful amongst all Ano-Rectal diseases.
- Various treatments are suggested by Ayurved and modern science like as oral analgesics, stool softeners, topical anaesthetics, anal stretching by lords method, lateral sphinterectomy pichu, lepa, picchabasti, application of malahara and anuvasan basti etc.
- Tutthakadya Malahara) is dahashamak, raktastambhak vranaropak and sandhaniya. Keeping in view these factors application of Tutthakadya Malahara is thought in parikartika.
So a simple method which is having better patient compliance is suggested in this study.

Conclusion:

- It is cost effective and non laborious remedy to treat wounds.
- Standardization and marketing of Tutthakadya Malahara is needed.
- Tutthakadya Malahara is a best alternative to available ointments for the treatment of various wounds.
- Medical practitioner should be made aware of this multidimensional drug.

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Etiopathogenesis of Grudhrasi (Sciatica) – A Clinical Study

Dr.Shubhangi Milind Shastri

Assistant Professor,
Rognidan & Vikruti Vidnyana
Late. B. V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Dr.Nilima Khanderao Nandanwankar

Associate Professor,
Stree Rog & Prasuti Tantra
Late. B. V. Kale Ayurved Medical
College & Hospital, Latur

Abstract

Every individual has ability of movement of legs to do his routine work. In general practice low back pain is one of the most common complain second to the common cold. It is the most common chronic pain syndrome in industrial countries. Low back pain accounts for 30-50 % of cases. Low back pain is a very common painful condition seen in grudhrasi. It requires vigorous treatment and if not treated properly requires surgical intervention.

Chikitsa of grudhrasi changes according to hetu samprapti pattern. Hence it requires holistic approach. Doshprakopak & Sthanvaigunya bhava e.g. Ruksha, Laghu etc. causes osteoporosis osteoarthritis, osteophytes or degenerative changes which leads to grudhrasi. In present era, Hetu like tuberculosis of vertebrae, malignancy can cause grudhrasi which is seen in our study. In samhita grudhrasi is explained in the chapter of vatvyadhi. Review and application in present context is taken in the paper

Key Words :- Grudhrasi, Sciatica, Sthanvaigunya .

Introduction

Now days due to changing life style, faulty dietary habits, and labour work and excess use to vehicle, grudhrasi vyadhi is becoming more and more common. The occurrence about 1-10 in 16400 is seen to get rid from pain patients want analgesia. But it is not the complete treatment and has disadvantages such as gastritis renal or hepatic toxicity. The knowledge of hetu and pattern of samprapti of grudhrasi is most important in present era, because nidana parivrajana is important treatment.

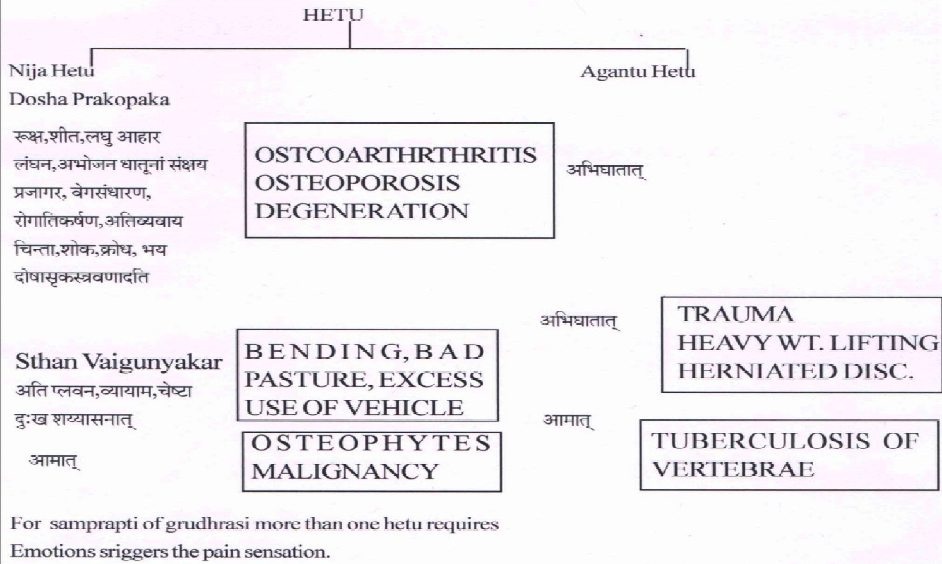
Aim and Object:

- To review the basic concept of disease in present era.
- To study the grudhrasi with respect to etiopathogenesis with special reference to clinical findings in 26 patients.

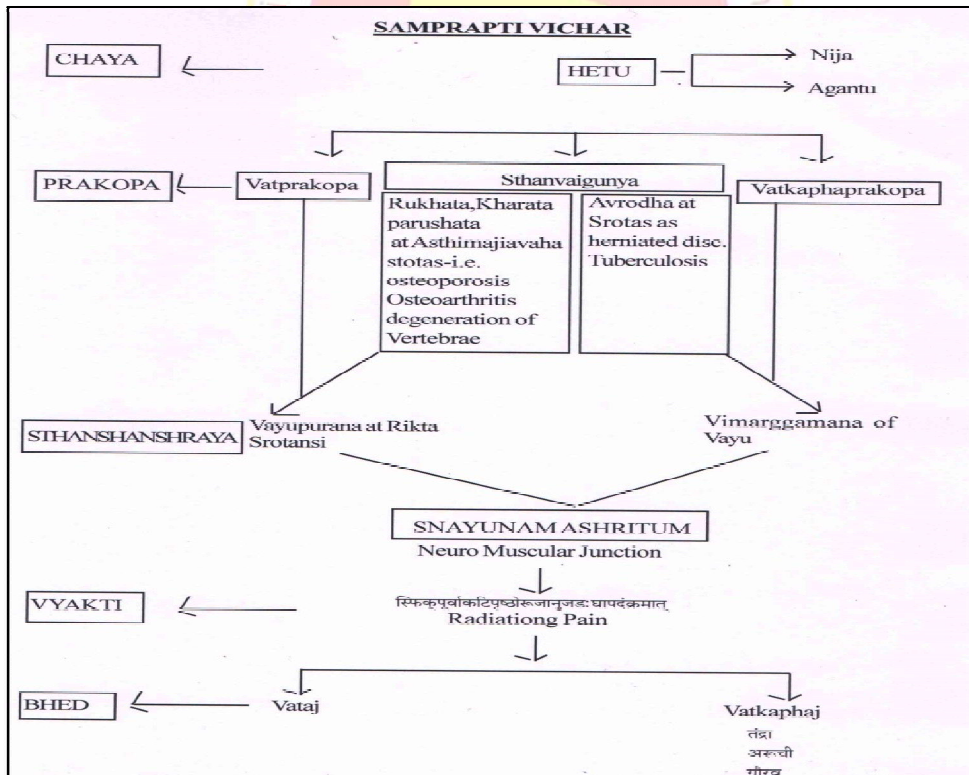
Review Of Literature:-

- Grudhrasi is listed under vatvyadhi in samhita.
- It is mainly classified on the basis of dosha vataj and vatkaphaj

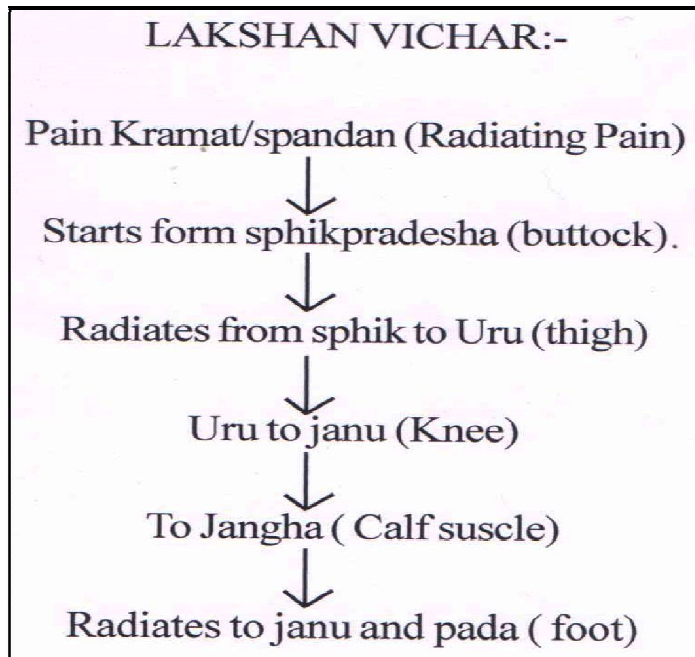
HETU VICHAR :-



Hetu Vichar



Samprapti Vichar



Lakshan Vichar

Materials & Methods

The patient studya was conducted in 2015 - 2016 at O.P.D.and I.P.D. of Late B.V.Kale Ayurved Hospital, Latur.

Criteria for Selection :-

Age between 16 -70 yrs.
Sex- either

Patients complaining of shoola

‘स्फिक्पूर्वाकटिपृष्ठोरुजानुजङ्.घापदंक्रमात् ।’

Straight leg raising (S.L.R.) test positive.

Criteria for Exclusion:-

- Age < 16 >70
- Frauture of femure or spine
- Full details of history and necessary physical examination were done
- Possible radiographic examination i.e. X-Ray lumbosacral spine Ap and lat view were done. Routine lab investigation e.g. Hb.% were done.
- For samprapti of grudhrasimore than one hetu requires Emotions sriggers the pain sensation.

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Observations & Result

Number of patients 26

Sex	M	54%
	F	46%

Male patients are more than female, due to occupation, bending or labour work.

Age

16-40 Years	58%
41-70 Years	42%

During this study age group between 16-40 yrs was highest. This age is not prone to osteoporosis bt invites degenerative conditions.i.e.suggestive of early degenerative changes due to faulty dietary habits. It indicates early aging process.

Prakruti:-

Vatpittanubandhi	35%
Pittakaphanubandhi	27%
Vatkaphanubandhi	38%

Bowel Habits

Regular	35%
Irregular	65%

Irregularity in Bowel Habits is noted in 65 % which Indicate & apanvikruti which leads to further samprapti formation.

Onset:-

Upto 1 month	56%
1-6 month	22%
Above 6 month	22%

Most of the patients are low socio economic.They are dependent on their daily wages. Active worker group is more involved. To avoid the disturbances in work they take treatment earlier.

Affected Leg :-

Right leg	77 %
Left leg	23%

Occupation:-

Worker	55%
House Wife	20 %
Office Worker	15%
Other (teacher etc.)	10%

Workers were seen mostly due to bending and malnutrition, Office Workers were found due to bad posture (Dukhaasanat)

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S.L.R. Test Before Treatment :-

Sever -(0-30 Degree)	39%
Moderate (30-60 Degree)	17%
Mild (60-90 Degree)	44%

In our study worker patients were more. To avoid the disturbances in work, they wants to get rid off the pain.Hence takes treatment in mild condition.

S.L.R. Test For Diagnostic Purpose:- Suggestive of impingement of the P.I.D. on nerve root <40-44%

Tension of nerve root, abnormally sensitive from a cause not necessarily PID > 40 - 56%

Lakshan:-

Mostly Seen	Moderately Seen	Occasional Seen
-Sphik Purvavedana -Kati, Prushtha,Urushoola -Tingling Sensation -Walking disturbance	Nidranash	Jwar

Nidranash Seen due to pain

Hb. Gm %

	M.	F.	
<10(less than 10 gm.%)	64 %	18%	46%
>10 (Greater than 10 gm.%)	36%	27%	09%

Most cases were having the HB% <10 gm % due to Malnutrition and female pts. Were more than males due to vidagdha ahara which leads to malnutrition of further dhatu and leads to anaemia.

Radiological Investigation:-

Degenerative changes	-	78 %
Space reduction L ₅ S ₁	-	67%
Osteophytes	-	34%
Tuberculosis (pott's Spine)	-	04%

Degenerative changes occurs due to Malnutrition. It leads to further dhatukshaya which leads to asthi majja kshaya and

As S₁ is fixed & L₅ is mobile. The most movements are occurring at L₅ S₁ . So the space reduction between L₅ S₁ mostly seen in our study.

Osteophytes can be interpreted as Sam -ashti. Due to sam rasa.

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Magnetic Resonance Imaging :- MRI -4%

M.R.I. is the choice of investigation, but in daily practices and for a low socio economic status it is very difficult to do.

S.L.R. TEST After Treatment :-

Mild improvement	(0-30 ⁰) -	15%
Moderate improvement	(31 ⁰ -61 ⁰)-	06%
Good improvement	(61 ⁰ -90 ⁰) -	79 %

The treatment is effective in improvement of S.L.R. test except in pott's spine. According to hetu pott's spine pt requires antitubercular treatment.

Previously included patients of moderate and mild group after treatment belongs to good improvement group.

Discussion :-

- Chikitsa of grudhrasi changes according to hetu samprapti pattern. Hence it requires holistic approach.
- Patient is managed with pachan, vatanuloman, virechan, local snehana and swedana, basti, katibasti along with shamanaushadhi.
- For pachana guggul kalpa mostly used. Also Maharasndi kwatha, Drakshasava etc. Were use according to availability.
- Local snehana & katibasti softens snayu (muscle ligaments, tendons) and increased elasticity in the body . Katibasti used as a local snehan and also for swedana purpose.
- Swedana causes relaxation of muscles.
- For vatanulomana Avipattikar, Gandharvharitaki churna etc were used according to availability.

Summary

- Chikitsa of grudhrasi changes according to hetu samprapti pattern. Hence it requires holistic approach.
- Grudhrasi is a vatvyadhi, pakvashaya is the mulasthan of vayu and pakvashaya samuthatwa is seen in our study. Hence yogbasti, majjabasti are given according to condition of the patient.
- The patients of pott's spine was managed with antitubercular treatment.

Conclusion

- For the management of grudhrasi the knowledge of hetu, samprapti and lakshan is most important.
- Doshprakopak & Sthanvaigunyakar bhavas e.g. Ruksha, Laghu etc. causes osteoporosis osteoarthritis, osteophytes or degenerative changes which leads to grudhrasi.

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- Grudhrasi is a pakwashayasamuthatwa vatavyadhi & vataj predominancy is seen in our study.
- Syntoms of vatkaphaj grudhrasi like Aruchi. Tandra, Gaurav are not seen in our study.
- For the diagnostic view of grudhrasi & for the knowledge of exact sthansanshraya the clinical diagnostic tools like SLR & other like radiograph MRI are most important.
- In present era, Hetus like tuberculosis of vertebrae, malignancy can cause grudhrasi which is seen in our study.

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The Comparative Study of Disorders of Interphalangeal Joints in Vatavyadhi

Dr. D.N.Bandapalle

Assistant Professor,
Dept.of Rachna Sharir
Late. B. V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Dr.Atul Ravindra Kolapkar

Assistant Professor,
Dept.of Kaumarbhritya,
Late. B. V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Abstract:

Musculoskeletal disorders are having major contribution among the various diseases. According to modern science musculoskeletal disorders affect more than 1/3rd of all adult population over the globe.WHO realized that reduction in mortality must be matched with improved quality of life. Hence 2000-2010 decade has been declared as Bone and Joint Decade (BJD). The prime targets of BJD in India are Rheumatoid Arthritis, Osteoarthritis, Osteoporosis, Spine disorders and Trauma.

Now a days due to Green house effect and Global Warming the Rakta and Pitta vitiated diseases are increasing. Changing life style, altered food habit, increased Stress, Travelling and use of sprouts vitiate Vata. Thus the etiological factors vitiating Vataand Raktaleads to Vatarakta^[1] a disease of joints which is having high prevalence in Sukumar^[2] (mostly feminine gender) leading to MSD and restriction of Stability, Mobility of the joints. Females are affected thrice than males. The persons which are not accustomed to physical strain, if suddenly exposed to heavy physical exercise it may trigger pathological process of Vatarakta^[3].

So the present scenario was undertaken,

- *To study affected structures in Parvasandhidue to Vatarakta.*
- *To study the range of deformities in the Parvasandhi due to Vatarakta*

We found the patients having Vata-Pitta dominantPrakrutiwere more affected than any other Dosha while Kaphaprominent Prakrutiswere less affected.TheDhatu-gatatvaof Vatarakta is more in Raktaand Mamsadhatu followed by AsthiandMajjadhatu in chronic stages. There were evidence of family history of Vataraktain more than 50% patients with Vatarakta found so there must be some hereditary factor causing Vatarakta.

Keywords- Vatarakta,Parvasandhi,Vata,Pitta,Kapha,Prakruti,MSD.

Introduction:

According to modern science musculoskeletal disorders affect more than 1/3rd of all adult population over the globe. The degenerative changes in bones and muscles arise from the age of 30 yrs- 65 yrs. MSD is the major cause of morbidity and disability, limiting activity and impaired quality of life especially among the elders.

The ailments of musculoskeletal disorders (MSD) are as ancient as human civilization.Vata-Shonita, Sandhigatvata,Vatavyadhi and Vatarakta are described as painful and swollen forms of arthritis with differences in clinical profiles. According to Ayurvedic text prevalence of Vatarakta is common in Hasta Pada Moola^[4].Hence we selected to study deformities in Hasta PadaMoolaSandhi due to Vatarakta.Vatarakta can

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be grossly correlated with the Gout. However the proper understanding of *Vatarakta* described in *Ayurvedic* text would reveal that Gout is just one of the conditions which may come under the umbrella of *Vatarakta*; and the scope of *Vatarakta* is much wider than it is popularly understood. Hence *Aacharya Charaka* had written *Vatarakta* and *Vaatvyadhi* as the separate *Adhyay* in *Chikitsasthan*.

The diagnosis criteria applied for *Vatarakta* are taken from *CharakSamhita* and it is said to be the basement of the study. Later, owing to its more complex and acute nature he has described *Vatarakta* as *MahaVaatvyadhi*^[5] in *Chikitsasthan*. *Arundatta* the commentater of *AshtangHridaya* described *Vatarakta* as a special type of *Vaatvyadhi*. Hence we have selected to study deformities in *Vatarakta*.

It is found that near about 60-80% patients out of total joint related opd patients are of *Vatarakta* type patients & females are suffering more in this. In this study we will limit our work to *Parvasandhi* of *Hasta* and *Pada* for structural deformities. Joints other than this, affected due to *Vatarakta* will not be taken into consideration.

Aims

- To study the deformities in the *Parvasandhi* due to *Vatarakta*.
- To study *prakruti*, age and sexwise deformity in *parvasandhi* due to *Vatarakta*.

Objectives

1. To compile the data about deformities due to *Vatarakta* and *SandhiSharir* specifically *Parvasandhi* of *Hasta* and *Pada*.
2. To study the deformities due to *Vatarakta* in *SandhiSharir* with special reference to *Parvasandhi* in accordance with age, sex, economic status, chronicity, *doshaj* types.
3. To study affected structures in *Parvasandhi* due to *Vatarakta*.

Materials And Methods Two types of materials have been utilized for the present study

1. The literary study
2. The clinical study

1. Literary study:

The references related to *SandhiSharir*, *Parvasandhi*, and *Vatarakta* collected from various *Samhitas*. The reference from modern science also collected.

2. Clinical study:

This study has been carried out at Late B. V. Kale (Manjara) Ayurved College & Hospital, Latur. Patients taking treatment in both the centers are selected in the study, period of study started from 18 November 2010 to 7 November 2012.

A. Inclusion Criteria: Patients having signs and symptoms of *Vatarakta*.

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1. No of patients: 30
2. Age: 21 to 70 yrs
3. Sex: Both Male and Female

B.Exclusion Criteria

1. Fracture of *Parv-Sandhi*.
2. Patients with Congenital Deformity.
3. Patients of *Aamvata, Sandhigatvata*.
4. Age below 21 and above 70 years.

Criteria for assessment:

The specified scoring system was applied according to the severity of the signs and symptoms for making the statistical analysis possible.

1.Sandhi – Shool (Pain and Tenderness):

- | | |
|--|-----|
| No pain | : 0 |
| Mild pain and involves 1-2 joints | : 1 |
| Moderate and involves 2-4 joints | : 2 |
| Severe and involves more than 4 joints | : 3 |
| Disturb routine work | : 4 |

2.Sandhi – Shoth (Swelling):

- | | |
|----------------------------------|-----|
| No Shotha | : 0 |
| Redness and <i>UshanaSparsha</i> | : 1 |
| Tenderness on pressure | : 2 |
| Pain on passive movment | : 3 |

3.Gatra – Stabdhata (Morning stiffness)

Criteria of stiffness are made in duration.

- | | |
|-----------------------|-----|
| No stiffness | : 0 |
| Duration up to 15 min | : 1 |
| Duration up to 30 min | : 2 |
| Duration up to 60 min | : 3 |
| Above 1 hour | : 4 |

4. Criterions (parameters) used for table no 2, 3, 4, 5, 6, 8 and 9 are according to this Deformity score

This gradation of deformities was made arbitrary. I have not found the standard gradation of these deformities. In many patients multiple deformities present, hence for statistical analysis the score of these deformities was made. Score was made by addition of grading.

- | | |
|---------------------------------|-----|
| No deformity | : 0 |
| Swelling and skin color changed | : 1 |
| Synovial fluid crystals | : 2 |
| Tophi | : 3 |

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Z deformity (deformity of thumb)	:	4
Swan Neck	:	5
Boutonniere	:	6
Ulnar Deviation (varus/ valgus)	:	7
Tophi + Ulnar Deviation (varus/ valgus)	:	8
Tophi + Swan Neck	:	9
Ulnar deviation (varus/ valgus) + Boutonniere:		10
Ulnar Deviation (varus/ valgus) + Boutonniere + Swan Neck:		11
Multiple deformities	:	12

5. Radiological Assessment :

Normal (WNL)	:	0
Osteoporosis	:	1
Reduced joint space	:	2
Erosions	:	3
Scelrosis / cysts/ tophi	:	4
Osteophytes	:	5
Punch out markings	:	6

6. Angle of Contracture:

Angle of contracture is taken for examination of angle of deformity of joint. This angle is measured by goniometer. The angle of deformed joint is only taken into consideration where only one joint is involved. If more than one joint is involved then this angle is not considered for gradation.

Change of angle (in degrees)	Grade
Nil	0
1 - 10	1
11 – 20	2
21 – 30	3
Above 31	4

Discussion and Conclusion

In the present study we have tried to evaluate structural deformities in *parvasandhi* due to *Vatarakta*. For this study the age group selected is between 21 – 70 years. The lower limit of this trial group is selected to avoid the bias due to incomplete ossification. While the upper limit is to avoid the bias due to degenerative changes in bones and joints. Patients with fractures, congenital disorders, *Aamvata* and *Sandhigatvata* are excluded from the study.

Sex wise distribution of 30 patients

Out of 30 patients 23 patients are female (76.77%) while 7 patients are male (23.33%) in the present population. This can lead to the conclusion that female are prone to *Vatarakta* due to *Sukumar* nature and oxidative stress caused due to heavy household work.

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Age wise distribution

The maximum patients are in the age group of 41 – 50 yrs. This clearly indicates that prevalence of deformities in middle age group is more than the other age groups. The onset is during third decade of life but the deformities occur more in 40 -60 years age group.

Economic status and deformity score

This observation helps to correlate with the synonym of *Vatarakta* as *AadhyaVata*^[6] i.e. it affects mostly patients of higher socio economic group. This particular group has to assess mental stress as well as physical strain due to demanding nature of their lifestyle.

Prakrutiwise distribution of patients

The table shows categorization of the patients according to their *DehaPrakruti*. The maximum patients suffering from *Vatarakta* in the present population are of *VatapittaPrakruti* (60%). The prevalence of *Vatarakta* is almost similar in other two *DwandwajPrakruti*. The most affected *Prakruti* clearly indicates the predominance of *Vata* and *Pitta* (*Raktadue Ashrayashryi* nature) in the pathogenesis of *Vatarakta*

Deformity score and types of *Vatarkta*

It may be observed from the table that 18 patients (60%) are of *Uttanatype* of *Vatarkata* while 12 patients (40%) are with *Gambhir* type. From this it can be concluded that in *Vatarakta* *Tvak* and *Mansa* are deformed in most of the patients with less score of deformity in the present population. While deep structures like *Majja*, *Asthi*, Synovial membrane are deformed in less no. of patients but with more deformity score. The *Dhatugatatva* of *Vatarakta* is more in *Rakta* and *Mamsadhatu* followed by *Asthi* and *Majjadhatu* in chronic stages.

Deformity score and *Doshaja* type of *Vatarakta*

In this table maximum no. of patients are of *Raktaja* and *Vatapittaja* type (6 each) followed by *Vataja* (5) *Pittaja* (4) *Kaphaja* (4). From this it may be concluded that *Doshaja* types like *Raktaja* and *Vatapittaja* are responsible for deformities. Other types are less responsible for deformities. *Tridoshajatype* is less frequent but prone to more deformities.

Distribution according to angle of Contracture –

In the table it may be observed that 16 patients (53.33%) are without change in angle of joints. But 14 patents (46.66%) are with change in angle. It may be concluded that due to vitiation of *Vata* and *RaktaDosha* there is contracture of joints and related muscles developing an angle.

Radiological score and deformity score

It may be observed from the table that maximum no. of patients are with radiological score of 2 (9 patients) i.e. having reduced joint space. It may be due to contracture of joint, synovitis due to vitiated *vata* and *Rakta*. The patients with radiological score 4 i.e. with tophi are next to be observed (8 patients) in the said population. 3 patients with osteoporosis (score 1) are seen. This concludes that the

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patients of *Vatarakta* shows reduced joint space, tophi, osteoporosis and erosions in their radiological assessment.

Distribution according to chronicity and deformity score

Maximum patients with deformity are seen within the one year of occurrence of *Vatarakta*. But the grade of deformity increases with the chronic nature of *Vatarakta*. Almost 66% of the patients showing wide range of deformities are having history of *Vatarakta* for more than 1 year. The deformity score gets increases with the chronic of the disease.

- There is evidence of family history of *Vatarakta* in more than 50% patients with *Vatarakta* so there must be some hereditary factor causing *Vatarakta*.
- The *Vatarakta* is not limited to gout but the diseases like RA, SLE etc also comes under its umbrella.
- Incidence of occurrence of *Vatarakta* is increasing now-a-days because of increased consumption of etiological factors of *Vatarakta* like excess stress, traveling, Sour food, alcoholic beverages, fish and meat etc. in the modern life style.

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Comparative Study of Alark Visha (Rabies) As Par Ayurveda & Modern Science

Dr.Sariput N.Bhosikar,

Assistant Professor,

Dept. of Agad Tantra,

Late.B.V.Kale Manjara Ayurved College

& Hospital,Latur

Dr.Amol Patane

Assistant Professor,

Dept. of Panchkarma,

Late.B.V.Kale Manjara Ayurved College

& Hospital,Latur

Abstract –

Alark is one of the oldest but still 100% fatal disease. It is anthrozo zoonotic disease. About this disease Acharya Shushrut mentioned in detail about this disease. It is kapha vata predominant disease. Symptoms resembles with viddhavrana. Modern science also accept that there is no cure once rabies developed, but in Ayurveda there is magical remedies told by our aacharyas i.e. from mantra treatment to medicinal management.

This paper throws highlights on signs & symptoms, pathogenesis, Diagnosis, prevention, treatment about Rabies as par ayurveda & modern science.

Key words- Alark Visha, Rabis, Jalatras, Hydrophobia

Introduction –

It is one of the oldest recorded diseases. It is known since biblical time. It is zoonotic disease. Zoonoses & human health are matters of particular concern in India, because nearly 80% of Indian population is rural & live in close contact with animal & often not far from wild animals. Rabies is 100% fatal anthrozo zoonotic disease. It is also known as hydrophobia. Alark is the disease mentioned in detail in Sushrut samhita.

In India estimated mortality is approximately 25000 -50000/yr. Recent figures in China is <1000cases/yr. In USA only 2 people dies /yr. Every year approximately 1.1-1.5million people receive post exposure treatment either nerve tissue or cell culture vaccine. India & Bangladesh belongs to high incidence category. In India Rabies occurs all parts of country except Lakshadweep, Andaman & Nikobar⁽¹⁾.

Causative agent of Rabies is Lyssa virus type 1. It is bullet shaped neurotrophic RNA containing Virus. It belongs to Family Rhabdoviridae serotype 1.

Reservoir of infection ⁽²⁾ – It exists in three epidemiological factors.

A) Urban rabies – transfer of rabies from wild life to domestic dogs results in creation of urban rabies. A single rabid dog is capable of biting large no. of humans, animals & may involve the area of 40 km. in its short span of clinical illness.

B) Wild life Rabies – It is an unidentified reservoir of infection. Jackals, Fox, Hyena & other wild life carriers which are main reservoir & transmitters of rabies. In south Africa the disease is enzootic in the mongoose.

C) Bat rabies – It is found in certain Latin American countries like Brazil, Venezuela, Mexico, Trinidad & Tobago & parts of USA. vampire bat is important host & vector of rabies. It has not been reported in India.

Saliva of rabid animal is the source of infection in dogs & cats.

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Aacharya Sushrut in kalpa sthana stated that Due to poison in animals like jackals, dog, wolf, bear, tiger etc. The vayu get vitiated by kapha which take the shelter of sensory nerves i.e. Sanjnavaha strotas & hampers the consciousness. Due to drooping of tail, jaw bone & shoulders with copious flow of saliva from the mouth, The animal in such state become intently blind & deaf, run towards each other at random. When such animal bite in rage leads to sensory loss & profuse bleeding with blackish discoloration takes place from affected part. This features of bite resembles to viddhavrana (Arrow poison)⁽³⁾.

Rabies in man is called hydrophobia. The disease begins with prodromal symptoms such as headache, malaise, sore throat, mild fever lasting for 3 to 4 days. 80% patients complaining of pain, parasthesia & tingling at the site of bite. This is the only prodromal symptom which is considered as reasonably specific.

Prodromal stage ,followed by wide spread excitation and stimulation of all parts of nervous system involving in order of sensory system then motor , then sympathetic system , then mental system.

In human two distinct clinical varieties of rabies are recognised⁽⁴⁾

- a) Furious rabies – i.e. Classical variety of rabies
- b) Dumb rabies – i.e. paralytic variety
- a) Furious rabies – i.e. Classical variety of rabies – patient is intolerant to noise, bright light or cold draught air, aerophobia (fear of air), violent spasm of pharyngeal and neck muscle. Examinations may show increased reflexes and muscle spasm, dilatation of pupils, increased perspiration, lacrimation. Mental changes include fear of death, anger, irritability and depression , swallowing of liquid becomes unsuccessful, at the later stage mere sight or sound of water may provoke , spasm of muscle of deglutition muscle. The patient may die.
- c) Dumb rabies – presents with a symmetrical ascending paralysis resembling the Guillain –Barre syndrome. This variety of rabies occurs after bite of rabid bat.

While **Aacharya Charaka** states⁽⁵⁾ - due to vitiation of tridosha & contrariety of dhatus, suffer from headache, salivation & dropped face & other such fierce animals too vitiate kapha & vata- cause cardiac pain, headache, fever, stiffness, thirst & fainting. Itching, piercing pain, discoloration, numbness, moistening, drying, heat, redness, pain, suppuration, swelling, formation of cyst, shrivelling, tearing down of flesh, boils, growths, rashes & fever. Symptoms & signs of poisonous bite described by Aacharya Charak are more in detail.

Vagbhatacharya mentioned the same symptoms & signs like Charak except severe thirst, fainting & delirium⁽⁶⁾.

Yog Ratnakara ⁽⁷⁾- states that- due to mad dog bite- delirium, Shwas, kasa, Yellowishness of sclera & urine, making sound of dog, Unmad like behaviour, all symptoms aggravates in rainy season. The patient becomes plaintive. As par Yogrtnakar Alerk is vata dosha pradhan.

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Jalatrassa- Generally the person gets frightened by water without cause that could be understood . He has been afflicted with jalatrassa i.e. suffering from hydrophobia, which is a sign of death (Arishta). In such jalatrassa, features are seen in unbitten person considered to be unhealthy or if a healthy person gets easily frightened by water on walking or in sleep should be regarded as fatal symptom⁽⁸⁾.

Pathogenesis⁽⁹⁾ – Rabies virus multiplies in muscle cell & detected at motor end plates of muscle spindles. then they access to peripheral nerves then to carried centripetally by the flow of axoplasm to dorsal nerve root ganglion then further multiply in dorsal root ganglion it massive viral replication of neurons & glial cells so direct transfer of virus from cell to cell. Virus found in CSF then spreads to every tissue through axoplasm of many efferent nerves including ANS. It results in wide spread brain dysfunction & virus spreads in saliva, urine & milk.

Diagnosis⁽¹⁰⁾ - It is on the basis of history of bite by a rabid animal & characteristic signs & symptoms. It can be confirmed by virus isolation (from saliva & other secretions) ,Identification of Antigen in skin biopsies taken from hairy area usually from nape of neck, Anti rabies Antibody detection in blood confirms the diagnosis in second week of illness. Negri body detection from offending animal's brain. Fluorescent antigen can also be detected from animals brain confirms the diagnosis.

Prevention – There is no known cure for symptomatic rabies, but it can be prevented by vaccination, both in human & animals. Virtually every infection with rabies was death sentence, until Louis Pasteur & Emile Roux developed 1st vaccine in 1885⁽¹¹⁾.

Three types of rabies vaccines are available i.e. purified chick embryo cell vaccine (PCECV), purified vero cell rabies vaccine (PVRV) & human diploid cell vaccine (HDCV).

Control of rabies – Domestic animals should be vaccinated.

Treatment

- A) Modern aspect⁽¹²⁾ –Once the CNS disease is established therapy is symptomatic as death is virtually inevitable. The patient should be nursed in quite dark room. Nutritional , Respiratory, & cardiovascular support may be necessary.
- B) Ayurveda Aspect – Aacharya Sushrut in kalpa sthana stated about rabies cases that at the terminal stage, the poison spontaneously aggravated, If the chance of recovery is none. So the poison should be artificially aggravated before reaching the stage of aggravation. This indicates that in poisonous cases- the prophylaxis treatment plays a major role , because as the disease is progressing , it is very difficult to treat & becomes incurable. Now a days it is believed that in rabies , prophylaxis vaccination method having more importance than treatment⁽¹³⁾.

In heart burning & salivation, purgation or emesis should be administered frequently according to the condition. After evacuation, the dietetic order should be followed. The poison situated in head, the wise should be snuff on the roots of Bandhujiva,

Bharngi & black tulasi, moreover fleshed with blood of cock, crow & peacock should be applied on incised scalp⁽¹⁴⁾.

Vagbhatacharya stated that⁽¹⁵⁾ –

- 1) Bite area is burned with hot ghee then application of agad lepa. Drink puran (old) ghee.
- 2) Ankol root swaras (3pal) mix with Goghрут .

Aacharya Sushruta⁽¹⁶⁾ mentioned that -

- 1) press the bite area so let it out all vitiated blood & is burned (cauterised) with boiling ghee.(i.e.Agnikarma)
- 2) After doing mantra bath strong purgatives should be given.(Virechan)
- 3) Dhatura, white Aprajita & punarnava mixture should be effective
- 4) Sharpunkha root (1 karsha) mix with Dhatura root ½ Karsha along with rice should be mixed together, pasted with rice water. Above mixture covered with dhatura leaves & baked(on the fire) in the shape of cake. The prepared cake should be given to patient. After digestion of this medicine the patient behave like mad dog. The patient shift in quite dark room, precaution should be taken that no water content placed in the room. After toxic symptoms subside ,next day after bath, diet of boiled Sali or shashtik rice with tepid milk should be given. On third & fifth day same medicine should be given in half dose.

Autopsy –⁽¹⁷⁾ At autopsy ,widespread infection is usually found in brainstem, hippocampus & basal ganglion. Congestion of blood vessels of CNS & patchial haemorrhage of pia-arachnoid matter is found. Negri bodies are detected in cytoplasm of nerve cells & their processes particularly in the hippocampus & perkinje cells of cerebellum. The classical Negri bodies are detected at post mortem, 90% of all patients with rabies. There are eosinophilic cytoplasmic ovoid bodies- 8-10 nm in diameter, seen in greater number in the neurons of hippocampus & cerebellum.

Conclusion –

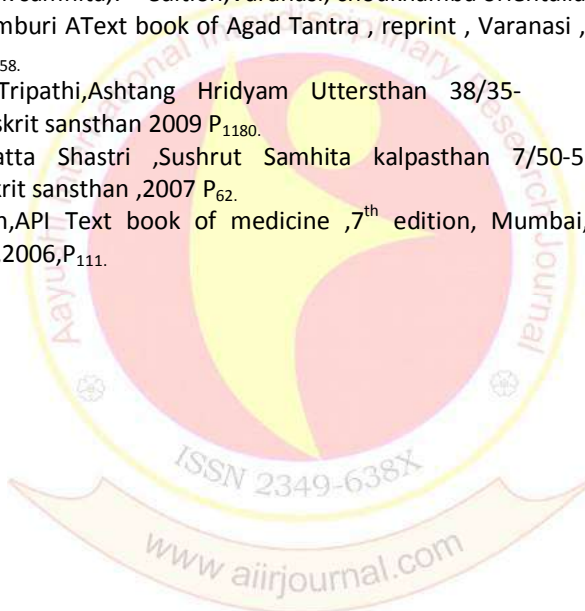
Alar mentioned by aacharyas is more conceptual. By making dosha samyata & homeostasis of dhatu the disease may be place in control. As Rabies has high mortality rate and there is no curable treatment, so prevention is more important. Awareness about the disease concept, vaccination is more necessary. Vaccination to domestic pets plays vital role in controlling the rabies.

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Sadvrutta (Code Of Noble Conduct) : Important Aspect For Good Health

Anuradha Abhimanyu More

Assistant Professor (Ayurved Samhita)

Sanskrit Samhita Siddhant Department

Late. B. V. Kale Manjara Ayurved Medical College & Hospital,

Latur

Abstract

Modern lifestyle has many advantages but on the other hand also have negative effects on health. Ayurveda is a traditional science of life which gives life knowledge. Ayurveda is complete naturalistic system that deals with prevention of disease and cure of disease.

Maintenance of health is first aim of Ayurveda and treating ill is second. Sushruta says equilibrium of actions of Dosha, Agni(digestive fire), Dhatu(tissue channels), Mala(waste product) accompanied by a sensation of pleasant mind, senses and spirit are mentioned as health (Su.Su. 15/48).

Code of noble conduct that is sadvrutta is essential for good health and to cure disease.

Keywords: Sadvrutta, Health

Introduction

Maintenance of health and treating ill is two first aim of Ayurveda. Before dealing with pathology we must understand symptoms of health and prevent disease, hence our main focus is to maintain health.

Health: In *swasthachatushkaof sutrasthana of Charaksamhita* for maintenance of health diet, daily regimen, seasonal regimen, non-suppression of natural urges, suppression of urges which needs to be suppressed, exercise and various practices required for pleasant mind, senses and spirit are required.

Sadvrutta: *Sadvrutta* means good behavior or noble conduct which is important for good health. Good health can be maintained by performances of acts as prescribed in scriptures. These acts include avoidance of harmful act and performance of beneficial act. Such efforts are helpful for prevention of abnormal conditions of senses and mind.

Review of literature

The one's desires of his own well-being should perform noble conducts with proper care. Noble persons have meaningful existence for society.

Indriyopkramniya chapter describes practices or code of conduct in various ways such as physical, vocal, mental etc.

Some of these practices under *sadvrutta* are mentioned below (Ch.Su. 8/17 – Ch.Su. 8/34),

- Stop exercise before exertion
- Be friendly to all creatures
- Speak timely beneficial, measured, sweet words
- Be self-Controlled

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- Envy in actions but not in results
- Be careful and fearless
- One should not tell lie
- One should not provoke quarrel
- One should not take food without washing hands, feet and face and without cleaning mouth
- Should not attend any other work while under the pressure of natural urges
- Should not insult women
- While studying should not recite words incomplete in sound nor in high or course voice, neither too fast nor slowly, nor with excessive delay, nor with too high or too low pitch
- Should not deviate from generally approved principles nor one should break code of conduct
- Should not be impatient or overbold
- Should not have habit of postponing things nor should one indulge in any activity without proper examination
- One's desires of his own well-being should not offer oblations to fire in impure condition
- Thus, one should follow the path of *brahmacharya*, knowledge, charity, friendship, compassions, happiness, detachment and peace

In these literature practices of preventing psychosomatic disturbances regarding code of general, regarding taking diet, related to studies, general principles, regarding self-control, related to fire worship are mentioned.

Discussion

To obtain a good health we cannot avoid importance of noble acts. We can classify these noble conducts as physical (*Kayik*), Mental (*mansika*), Vocal (*Vachik*), Spiritual (*Dharmik*), Social (*Vyavharik*), general (Related to study, diet etc.). Good behavior or noble conducts means performances of beneficial act of avoidance harmful acts.

Thus, code of conduct is helpful in good health. *Charakcharya* says even if something is not stated here but that is prescribed elsewhere as a virtuous act that also is always acceptable to Lord *Atreya* (Ch.Su. 8/35)

Conclusion

Ayurveda is beneficial to mankind in respect of both the world's that is this life and the life beyond (Ch.Su. 1/43).

Code of conduct plays important role to maintain good health. If the person is healthy then his present life is good. The life beyond will be good when this life is good.

Sadvrutta, is related to meaningful existence with the help of good health.

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Ayurvedic Management of Psoriasis – A Case Study

Dr.Sujay S. Dhumal,

Assistant Professor,
Kayachikitsa department,
Late B.V. Kale Majara Ayurved Medical College & Hospital, Latur

Abstract:

Psoriasis is an autoimmune disease of chronic nature. In allopathy various medicines are used for its treatment. But they are having ill effects on the health of patient. In Ayurveda psoriasis can be considered as a type of kushtha and its treatment can be done without much health hazards. In present case study it has found that psoriasis can be treated in a simple, economical and safe way by means of Ayurvedic medicines.

Keywords: *Kushtha, allopathy, psoriasis, Ayurveda etc.*

Introduction

Kushtha is considered as one of the *Ashtamahagada* owing to its chronicity, severity, difficulty to treat and heredity factor⁽¹⁾. *Kushtha* was firstly manifested due to excessive consumption of the offerings made in the *Yajna*⁽²⁾. It is produced due the vitiation of *Tridoshas* and *Tvak, Rakta, Mamsa* and *Lasika*⁽³⁾. According to *Sushruta* it is contagious in nature⁽⁴⁾. Psoriasis in modern medicine is a long lasting autoimmune disease characterized by patches of abnormal skin. These patches are typically red, itchy and scaly. It is generally thought to be a genetic disease triggered by environmental factors. The prevalence of psoriasis in India ranges from 0.44% to 2.2%⁽⁵⁾. Any skin lesion wherever on the body especially in a girl child is considered as stigma in the society. Hence, this case study was undertaken to relieve the signs and symptoms of psoriasis.

A Case Report

A female Muslim patient of 15 years student came to the Out Patient Department of *Kayachikitsa* of LBV Kale Ayurved medical college and hospital on 20/12/2015 suffering from multiple patches on back, trunk and both hands with silvery scaling, mild itching in the affected area since about 1 year. The symptoms tend to worsen in the winter season and relieving in summer season. She had consulted modern dermatologist who diagnosed her with psoriasis. She took the medicines for 6 to 8 months but there was no relief. Her general health was good and both physical examination and blood tests were within normal range.

O/E – Nadi – 78/ min, Niyamit Prakriti – Pittapradhana Vata

Mala – Saam, Vishtbdha Agni – Madhyam

Mutra – Samyaka Koshtha - Madhyam

Jivha – Nirama Family history - Nil

Shabda – Samyak Past history - Nil

Sparsha – Anushnashita Dietary history – Mixed food (non vegetarian dominant)

Drik – Samyaka

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Akriti – Krishna

Treatment Plan-

Patient was prescribed *Avipatti choornam* 5gm on empty stomach in the morning with lukewarm water, *Arogyavardhini Vati* 500 mg 2 times a day, *Mahagandhak Rasayana Vati* 500 mg 2 times a day, *Aragwadhadi Kashayam* 15 ml mixed with water two times a day on empty stomach and *panchatikta ghrta* in *shaman* dose i.e. 10ml before meals was advised. *Mahamarichyadi* tail was given for local application at night. All the modern medicines were discontinued. The above treatment was prescribed for the period of 3 months and the patient was asked for follow up after every 15 days. The patient was assessed using PASI score (Psoriasis Area and Severity Index). The PASI score was recorded before treatment and after treatment.

Results

To assess the relief in symptoms and signs of psoriasis in present patient PASI score was used. Before treatment PASI score was moderate is 10.7 (Table -1) and after treatment of 3 months duration it came to 4 (Table -2)

Table – 1
Table showing PASI score before treatment

Plaque characteristics	Lesion score	Head	Upper Limbs	Trunks	Lower Limbs
Erythema	0 = None	1	2	2	1
Induration	1 = Slight 2 = Moderate	1	2	3	2
Scaling	3 = Severe 4 = Very severe	2	2	2	1
Add together each of the 3 scores for each body region to give 4 separate sums (A)					
Lesion Score Sum (A)		4	6	7	4
Percentage area affected	Area score	Head	Upper Limbs	Trunk	Lower Limbs
Area Score (B)	0 = 0% 1 = 1% - 9% 2 = 10% - 29% 3 = 30% - 49% 4 = 50% - 69% 5 = 70% - 89% 6 = 90% - 100%	1	2	3	1
Multiply lesion Score Sum (A) by Area Score (B), for each body region, to give 4 individual subtotals (C)					
Subtotal (C)		4	12	21	4
Multiply each of the subtotals (C) by amount of body surface area represented by that region i.e. *0.1 for head, *0.2 for upper body, *0.3 for trunk and *0.4 for lower limbs					
Body Surface Area		*0.1	*0.2	*0.3	*0.4
Totals (D)		0.4	2.4	6.3	1.6
Add together each of the scores for each body region to give the final PASI Score					

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PASI Score = 10.7

Table – 2

Table showing PASI score after completion of treatment

Plaque characteristics	Lesion score	Head	Upper Limbs	Trunks	Lower Limbs
Erythema	0 = None	1	1	1	1
Induration	1 = Slight	1	1	1	1
Scaling	2 =Moderate	0	1	1	0
	3 =Severe				
	4 =Very severe				
Add together each of the 3 scores for each body region to give 4 separate sums (A)					
Lesion Score Sum (A)		2	3	3	2
Percentage area affected	Area score	Head	Upper Limbs	Trunk	Lower Limbs
Area Score (B)	0 = 0% 1 = 1% - 9% 2 = 10% - 29% 3 = 30% - 49% 4 = 50% - 69% 5 = 70% - 89% 6=90% - 100%	1	2	2	1
Multiply lesion Score Sum (A) by Area Score (B), for each body region, to give 4 individual subtotals (C)					
Subtotal (C)		2	6	6	2
Multiply each of the subtotals (C) by amount of body surface area represented by that region i.e. *0.1 for head, *0.2 for upper body, *0.3 for trunk and *0.4 for lower limbs					
Body Surface Area		*0.1	*0.2	*0.3	*0.4
Totals (D)		0.2	1.2	1.8	0.8
Add together each of the scores for each body region to give the final PASI Score					

PASI Score = 4

Discussion

According to Ayurveda, *Kushtha* is a *santarpanjanya* disease.⁽⁶⁾ *Triphala*, *Vidanga*, *Musta* are *apatarpana* in nature. Above drugs are also *dipana* and *pachana* in property. They cause dryness of *kleda* in *kushtha*. Also, drugs used for *Shamana* are also causing *apatarpana* especially *Arogyavardhini* and *Aaragwadhadi* kashayam. *Kushtha* is caused due to vitiation of *Vata*, *Pitta*, *Kapha Doshas* and *Tvak*, *Rakta*, *Mamsa* and *Lasika*. *Vata* is mentioned first in the pathogenesis of *Kushtha* owing to its importance. Hence, in *Kushtha Doshas* are led by *Vata* and it should be given special consideration. Accelerated epidermal turnover of skin in psoriasis indicates towards predominance of *Vayu*. Hence *Panchatikta Ghrita* was used for internal oleation in *Shamana* dose for alleviation of *Vayu* as well as *Pitta* which is also contributory factor in pathogenesis of *Kushtha*⁽⁷⁾. *Panchatikta Ghrita* is also blood purifier. *Arogyavardhini vati* is of *Kushthaghnna* property⁽⁸⁾ by virtue of *Pitta virechana*. *Mahagandhak Rasayana* is *Kushthahara*⁽⁹⁾ and *Kandughna*.

Arogyavardhani and *Aragwadhadi Kashayam* pacify *Vata* and *Kapha* doshas. External application of *Mahamarichyadi taila* used smoothness the skin by alleviating *Vayu* and pacifies itching by removing *Kapha*.

Conclusion

From above case study it can be stated that ayurvedic management can cure the cases of psoriasis effectively. It is needed to be studied in a large scale.

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Madhupaka – An Ointment For Mukhapaka (stomatitis)

Dr.Dipti J.Chewale

Assistant Professor,Shalakya Dept.,
Late.B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Dr.Maruti T.Narhare

Associate Professor,Rasashastra & B.K.Dept.,
Late.B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Abstract :

Mukha paka- Stomatitis is very painful and irritating disease occurs in the mouth and gums. It is also known as mouth sores. Stomatitis is one of the most common health problems which everyone experience in his lifetime.Generally Its symptoms are red sore, swelling, inflammation , bleeding and white or pink sores inside the mouth.

Madhupaka ointment is dahashamak, vranaropak and sandhaniya. Keeping in view these factors application of Madhupaka ointment is thought in Mukha paka.

Keywords: Madhupaka ,Mukha paka ,Stomatitis

Introduction:

Stomatitis is a disease with inflammation. It may be caused by stomach indigestion or constipation,due to pure diet, carelessly oral hygiene, medications reaction, metabolism disorders and bacterial infection.

Stomatitis is mostly uncomfortable and make difficulty in swallowing,eating, and brushing the teeth.

Various modes of treatments such as oral,analgesics, stool softeners,topical anaesthetics, several mouth paints and mouth gargles etc, were available. recurrence is very common and most of the methods of treatment are expensive..

Madhupaka (Ref: Yogratnakar) is dahashamak, vranaropak and sandhaniya. Keeping in view these factors application of Madhupaka in ointmentform is thought in fissure in ano.

Aims : To Asses the efficacy of Madhupaka in Mukha paka- Stomatitis.

Objective :

- To provide cost effective remedy to the alining humanity.
- To treat the Stomatitis

Review of literature

In yogratnakara Madhupaka is explained for treating vranas. It has antimicrobial, analgesic and antioxidant property. It removes debris and toxins from ulcers and fastens ulcer healing.

It initiates early granulation and mucus production in Stomatitis.

Materials & Methods:

Madhu – 1 kg

Godugdha - 500 gm

Haridra churna -50 gm

Haritaki churna – 50 gm.

Reference - yogratnakar text /3sloka.

Method of preparation:

All ingredients were mixed properly.

It is heated on mild fire till Godugdha gets solidify.

It forms a ointment like texture.

After self colling it is stored in a container and preserved.

Madhupaka is an ointment should be applied externally on non healing ulcers.

Methodology :**Inclusive criteria:**

- 1) Patients diagnosed as Stomatitis.will be included in the study.
- 2) Patients of both sex in between the age group of 16 to 50yrs will included.

Exclusive criteria:

- 1) Patients having Stomatitis.,secondary to ulcerative colitis, crohn's disease, syphilis and tuberculosis will be excluded.
- 2) Patients with uncontrolled disease like Diabetes and Hypertension will be excluded.
- 3) Patients with infectious disease like HIV and HbSAg will be excluded.

Study design:Present study is a non comparative observetional clinical study.

Sample size: 30 patients of Mouth ulcer randomly selected for the study.

Procedure: Madhupaka ointment will be applied locally, for 7 days three times aday. Patients will also receive Eranda Bhrustha Hareetaki tablet -500 mg at bed time for 7 days for stool softening during the treatment. Pathya apathya will be also explained.

Parameters of study: Following parameters will be considered for the study.

- 1.Mukhghat daha (burnig pain): Assessment of pain gradation before and after treatment based on 3 degrees i.e. Mild(+), Moderate (+ +), Severe (+ + +).
- 2.Mukhagata rakta srava(redness): present or absent ,before and after treatment.
- 3.Difficulty in swallowing - present or absent ,before and after treatment..
- 4.Length of ulcer/ sore before and after treatment..

Criteria for assessment: Criteria for assessment will be based on

A. Relief of symptoms before and after treatment

The results will be scored as

- Complete relief - above 75% improvement,
 Moderate relief - 50 to 75% improvement,
 Mild relief - 25 to 50% improvement,
 No relief - below 25% improvement.

B. Length of fissure

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Length of fissure based on the results categorized as below,

No change in ulcer - no relief,

Partial healing - Moderate relief,

Complete healing - complete relief.

C.Overall assessment is done based on the improvement in parameter score before and after treatment which will be subjected to statistical analysis.

Observations & Results: Observations obtained on the basis of methodology followed are as below.

Table showing distribution of patients according to age

Age	Study Group
15 – 25 yrs	8
25- 35	10
35 – 45	12
Total	30

Table Showing Percentage of Relief in Each Symptom of 30 Patients of Mukha paka

Symptoms	Before treatment	After treatment	Difference	% of relief
Pain in mouth region	30	4	26	84
Redness	14	3	11	79
Swallowing difficulty	24	20	4	58
Length of ulcer	14	12	2	90

Discussion:

- 1) Madhupaka ointment purifies the wounds, lyses the debris and enhances healing process by decreasing swelling & inflammation of Mukha paka
- 2) Madhupaka ointment is a cost effective best alternative to available ointments for the treatment of Mukha paka
- 3) This ointment is used for dressing purpose for all kind of Ulcers (acute or chronic) irrespective of cause.
- 4) It will be more effective when administered orally with external application.
- 5) It has to be tried in diabetic ulcers, mouth ulcers., bed sores etc.

Summary:

Mukha paka is a Commonest condition and most Painful amongst all mukhgate diseases.

Various treatments are suggested by Ayurved and modern science like as oral analgesics, stool softeners, topical anaesthetics etc.

Madhupaka ointment is dahashamak, vranaropak and sandhaniya. Keeping in view these factors application of Madhupaka ointment is thought in Mukha paka.

So a simple method which is having better patient compliance is suggested in this study.

Conclusion

- It is cost effective and non laborious remedy to treat Mukha paka -. Stomatitis
- Standardization and marketing of Madhupaka ointment is needed.
- Madhupaka ointment is a best alternative to available ointments for the treatment of various types of ulcers.
- Medical practitioner should be made aware of this multidimensional drug.

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Role of Snehana Procedures in Geriatrics

Dr.Amol U. Patane ,

Assistant Professor, Dept. of Panchakarma
Late B.V.Kale Manjara Ayurved Medical
College & Hospital, Latur.

Dr.Sariput N.Bhosikar

Assistant Professor, Dept. of Agadtantra,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital, Latur

Abstract :

According to WHO, at present more than 24% population of total world are suffering from geriatric disorders. Population around the world is rapidly aging, which require better long term health care facilities. Geriatrics literally means the care of old persons. In old age, predictable functional declines occur in all people with increasing age. Preservation of functions and improving of quality of life rather than merely prolonging the life should be basic aim while dealing all aspect of geriatric condition. Though modern science is trying to control this problem, in most of cases it has become unsuccessful. Under such circumstances all world is watching towards Ayurveda which from its beginning has an excellent answer to tackle this situation. Ayurveda is not only science of life, rather it is way of life. So to raise effectivity of treatment in all old age groups disorders, at various level a genuine approach of snehana procedures as per doshic predominance in the form of anaharimarja- snehapana-nasya & baheparimarjana- moordhataila-abhyanga, etc. is very important

Key words – Ayurveda, Geriatrics, Panchakarma, snehana procedures,

Introduction :

Geriatrics literally means the care of old persons^[1] Gerontology is the study of the problems of all aspects of aging, that deals with diagnosis, treatment, prevention of diseases and rehabilitation of elderly^[2].

Physiological Changes of Aging: The aging process proceeds at different rates in different people and organ systems age at differing rates within the individual. In certain areas, however, predictable functional declines occur in all people with increasing age. Preservation of functions and improving of quality of life rather than merely prolonging the life^[3]. **Functional system -Changes of Aging:** A considerable decline occurs at functional level of Respiratory system, cardiovascular system, Renal system, Nervous system, Musculoskeletal system, etc^[4].

- Alterations in body mass and total body water
- A decreased ability to maintain internal homeostasis
- A decrease in the function of immunological mechanisms
- Possible nutritional disorders
- Decreases in hearing and visual acuity

National policy for aged:

National Policy for aged under the Ministry of Social Justice and Empowerment seeks health security of older people and it recognizes special health needs of the older persons to be met through strengthening and re-orienting of public health services at Primary Health Care level and creation of adequate health care facilities^[5].

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There is inadequate public awareness on the role of Panchakarma and thereafter Rasayana concept of Ayurveda for slow down the ageing process. Elderly people, medical fraternity and policy makers are not well informed about the simple, holistic, cost-effective options for geriatric health care available in Ayurveda. Huge gap exists in demand and supply position of geriatric care facilities. Increasing number of elderly people with age above 80. Nuclear family system and isolated/ lonely living add to the challenge of geriatric care^[6]. Ayurveda is not only science of life, rather it is way of life. So to raise effectivity of treatment in all old age groups, at various level a genuine approach of snehana procedures as per doshic predominance in the form of anthaparimarja-snehapana-nasya & baheparimarjana- moordhataila-abhyanga, etc. is very important. Hence an humble attempt is made, to explore the role of snehana procedures in geriatric condition.

Strength of Ayurveda in geriatric:

Among eight branches of Ashtang ayurveda, Jara chikitsa or Rasayana tantra of Ayurveda, completely deals with problems related to old age and methods to counter the same. And also, for preserving /maintaining the youthfulness, stamina and vitality profile and Strength^[7].

- *Jara Chikitsa or Rasayana* provides numerous single/compound herbal and herbo-mineral preparations having diversified effects on body systems indicated for the promotion of health as well as treatment of various health related problems^[8].
- Multiple actions of Panchakarma procedures and thereafter implementation of Rasayana therapy include Immuno-modulation, antioxidant action (prevents bio-oxidation there by checking age related disorders, auto immune disorders, degenerative disorders, adaptogenic affects and so on^[9].
- Lifestyle modulation remains integral to the treatment.
- Cost – effective, that is affordable by all sections of People
- Ayurveda have specialized therapeutic procedures for rejuvenation, health promotion and prevention & management of degenerative health problems^[10].
- *Panchakarma* has proven to be efficacious in neuro-muscular, musculo-skeletal, psychosomatic and other chronic health problems of elderly people^[11].

Management :

Panchakarma is a bio-cleansing regimen comprising if five main procedures that facilitates better bioavailability of the pharmacological therapies, helps to bring about homeostasis of body humors, eliminates disease causing complexes from the body and checks the recurrence and progression of the disease^[12]. The five fold measure comprehended in this therapy are- Vamana, Virechana, Asthapana vasti, Anuvasana vasti, Nasya karma. Panchakarma procedures are preceded by Snehana and Swedana applications to make the body systems conducive for elimination of bio-toxins and cleansing of channels. Thus all panchakarma procedures are effective in managing autoimmune, neurological, psychiatric and musculo-skeletal disease of chronic origin^[13].

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- Panchakarma is the biocleansing programme of the body
- Vata is the predominant dosha in old age^[14]
- Vasti is the treatment of choice
- Internal & external administration of different forms of Sneha -sweda is main treatment of vitiated Vata, as vata is the predominant dosha in old age^[15].

Important Snehana procedures, that should be carried out in all geriatric conditions are-

In all classical texts of ayurveda, the context of pancha karma therapy while considering the indications & contraindications of different therapeutic panchakarma procedures, special attention is paid to Bala, Vriddha (old age peoples), Garbhini and Durbala. Many major samshodhana karmas are completely contraindicated in elderly peoples, paediatric, during pregnancy, etc. the main cause is lack of strength (bala) in these conditions, so drastic samshodhana is contraindicated completely^[16]. The poorvakarma like deepana, pachana, internal & external snehana, swdana in various forms, Vasti-Anuvasana, Nasya-Pratimarsha, Sneha -Abhyanga, Shirodhara, Matra vasti, Pindasweda, Pizhichil (Kayaseka), Yapana vasti, Shashtikashali pinda sweda, Brimhana vasti, Akshitarpana, Karnapurna, Kavalagraha, Gandusha, etc can be easily prescribed in all elderly persons without any reservation, because, vata is the mainly vitiated dosha at old age and snehana is the main treatment to control vata.

Sneha pana (internal administration)^[17]

- Abhyantara sneha - Sadya sneha, shamana sneha, Panchaprasrutika peya, mixed in all food materials,
- The positive benefits of regular snehaprayoga in any form are-
 1. Proper functioning of jatharagni
 2. Cleaning of koshta
 3. Proper development-nourishment of all seven dhatus
 4. Promotion of body strength (resulting in Resistance to disease)
 5. Good complexion
 6. Promotion of integrity of indriyas –sense organs.
 7. Prevention or delaying aging process
 8. Enjoyment of life

Sneha Abhyanga (oil massage)^[18]

- It can be performed as therapeutic procedure as well as rejuvenative also.
- It is advised to practice daily so that will prevent the aging process and produces the following effects.
- It imparts smoothness to the skin.
- It improves lustre of the skin
- It takes care of body-exhaustion
- It pacifies Vata (Neurological disorders)
- It improves vision
- It gives longevity

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- It induces a sound sleep
- It strengthens the body

Commonly used oils : Masha taila ,Narayana taila ,Dhanvantara taila ,Ksheera bala taila etc.

Indications: Neurolomuscular disorders-Pakshavatha (Hemiplegia), Pangu (paraplegia), Gridhrasi (Sciatica), Angamarda (Bodyache), Rheumatological problems- Arthritis lumbago etc, Old age (vridha vastha), Rejuvenation of the body

Contraindications: Navajwara (acute fevers), Immediately after Panchakarma ,Ajirna (Indigestion), Raktapitta (Haemorrhagic disorders), Atisara (Diarrhoea)

Sneha Dhara/ Pizhichil^[19] :

- Abundantly practised in Kerala.
- Snehana and Swedana effect with the single procedure.
- Selection of oil according to the condition of the body and disease.
- *Indications:*
- Neuro muscular disorders – Hemiplegia, Para plegia and other degenerative conditions, peripheral neuropathy
- Rheumatological problems – rheumatoid arthritis with deformities, osteo arthritis, and other degenerative joint disorders. Fracture of bones, post fracture stiffness of joints, contusive wounds, dislocation of joints
- As a Rejuvenation & curative therapy & have soothing – calming – relaxation effect on body as well as mind .
- *Contraindications:*
- Painful inflammatory conditions, Acute stages of fever, Diarrhoea, digestive disorders Respiratory disorders –cough, breathing difficulty, infections etc

Shirovasti^[20] :

Shirovasti is the best treatment for Vata located/vitiated in the head region & act on whole brain specifically cerebral cortex functionally.

Medicated oils used in practice : Dhanwantharam taila ,Narayana taila ,Balataila ,Ksheerabala taila ,Chandanadi taila ,Karpasasthyadi taila

Indications : Neurological disorders such as Hemiplegia, Facial palsy, Neuropathy, Sleeplessness, Dryness of mouth and nose .Eye diseases ,chronic diseases of head

Contraindications : Acute inflammatory conditions, Infections ,SOL

Shorodhara^[21] :

Pouring of medicated oil on the forehead in a specific ,oscillatory manner, for a particular period of time is known as shirodhara Sneha either taila/ghrita, etc.

- Shirodhara - with taila , takra, ksheera etc.
- For nourishing the brain tissues and to improve memory and power of sense organs.
- In hypertension, shirodhara is performed with medicated milk(ksheeradhara).
- Medicated takra(takradhara) in skin diseases and insomnia.

Indications: Hemiplegia ,Cerebral palsy, Facial palsy, Headache, Insomnia, Cervical Spondylitis , Anxiety Neurosis, Other psychological disorders, Eye diseases of neurological origin

Contraindications: SOL of brain, Glaucoma, Fever, Conjunctivitis, Inflammatory conditions of head

Shashtikashali Pindasweda/Navarakkizhi ^[22]:

- Navarakkizhi is a special method of administration of navara type of rice cooked in milk and bala kwatha and tied as boluses in muslin cloth.
- It is used for formentation and massage in the body in a specific manner.
- The treatment is practiced as pradhanakarma rather than purvakarma especially in vata disorders and is done periodically for rejuvenation purpose also

Indications : Neuromuscular disorders-Hemiplegia, Paraplegia, Motor neuron disease, Poliomyelitis etc.

Contraindications : Amavata, Indigestion, Diarrhoea, Obesity

Anuvasana Vasti :

Anuvasanaa is an important method of treatment included in panchakarma by which an admixture of medicated oil is administered directly to the pakwasaya, the vata sthana through the ano rectal route with the use of vastiyantra .According to the properties of drugs used in vasti karma it produces effects all over the body such as nourishing, strengthening ,samsamana, of doshas and nourishes all the body, that's why Charakacharya have told Vasti is half of all the treatment modalities^[23]. The following Vastikarmas are indicated for rejuvenation purposes are best in geriatric conditions-

- Snehavasti/mathravasti, Yapanavasti/sidhvasti/brimhanavasti , Rajayapana vasti , Balaguluchyadi vasti , Madhutailika vasti, Ardhamatric vasti ,Ksheera vasti

Nasyakarma :

According to Ayurveda ,nose is way to of entry to head, so all the medicaments applied through it reaches upto brain and does their action. Snehan type of nasya might be acting by stimulating the cerebral cortex & thereby all functional areas may get improved & stimulated.Nasyakarma is indicated in the diseases of head. But it is also applicable in swastha for keeping up the power of sense organs in head and to stimulate the central nervous system. Nasya is advocated to practice daily as a routine in Dinacharya. Specific type of snehana, brimhana, shamana, and pratimarsha can be administered daily for rejuvenation purpose which will brighten the sense organs also^[24].

- Anutaila,ksheerabalataila 101 times,Dhanwantharam 101 times ,karpasasthyadi 101 times and other medicated oils ,swarasa ,decoction etc are also used.

Karnapurana (pouring oil in a ear):Karna purana done in case of karna nada/ tinnitus and bhadirya. It can be done with karma bindu tailam, bala tailam, apamarga tailam etc^[25].

Akshitharpana (keeping medicated ghee in eyes with a special manner)Here the medicated ghee is made to stay over the eyes for a specific period. Eg:Triphala ghritham^[26]

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Gandusha, Kavala (keeping medicated oil/decoction in mouth) simple medicines like tila tailam, mamsa rasa, saptacchadadaya gandoosham kashayam, etc can be used which can improve oropharyngeal & orodental health in all geriatric subjects^[27].

Conclusion & discussion of importance of Snehana in geriatric health care :

Dwadasha Prana, Agni, Dosha, Dhātu, Mala are snigdha in nature & thus interrelated strongly^[28]. Any abnormalities in these aspects will lead to disease, that thing generally happens in geriatric condition of life and this abnormality can be corrected by proper application of snehana procedures only.

Susrutacharya in snehopayogikachikitsa chapter, while telling the importance of sneha –has narrated as- Sneha and Rasa is the essence of the person. Prana, too mainly consists of sneha and as such manageable by snehana modalities only^[29]. After this quotation acharya has told the detailed use of snehana by different modalities like internal use of sneha^[30], unctuous enema, mastishka (a type of shirovasti), shirodhara, nasya, karnapurana, body massage-abhyanga, in food as brhmhana snehapana, snehadhara, anuvasana vasti, that in turn will maintain internal homeostasis of rasadi saptadhatus which is hampered during geriatric condition of life. Thus proper application of snehana procedure is beneficial to body.

From the above discussion it is clear that, to maintain the doshas in normalcy, to pacify the vitiated doshas-specifically vata dosha, to increase the strength of prana- a vital life force, to increase the strength of Agni (agnimulam balam pumsam)^[31], to increase the strength of all dhatus so as to produce the good quality of Ojas, on which functions of mind are dependent, to produce the good quality of pitta dosha on which the Satwa guna is dependent, to pacify vata-which is controller of all humors and degenerative aspects in geriatric phase of life, to produce the good quality of kapha which gives strength to body, proper implementation of selective Snehana procedures and after completing it, application of Rasayana will definitely be able to conquer any disabling condition of old age. Thus ultimately leading to the normal/healthy condition of the mind and body, which is ultimate aim of ayurveda^[32]

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Effect Of Agnikarma And Raktamokshana On Plantar Fasciitis

Dr.Ganesh Pandurang Malwade,

MS Shalyatantra
Assistant Professor,
Dept. of Shalyatantra,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital, Latur

Dr.Naresh kishanrao Kore,

MD Kayachikitsa
Associate Professor,
Dept. of Kayachikitsa,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital, Latur

Abstract

The purpose of the plantar fascia is to fold – to provide support of the longitudinal arch and to serve as a dynamic shock absorber for the foot and entire leg. Plantar fasciitis is an inflammation caused by excessive stretching of the plantar fascia. It is common in middle-aged men and women, but can be diagnosed in all age groups. It occurs in people who tend to stand for long periods of time, or with people who have gained weight rapidly. With athletes, runners are most susceptible due to the repetitive act of foot flexion while running. All these factors, including the wearing of shoes with little or no arch support, and inactivity are also associated with the condition.

According to ayurveda this disease is considered as vatakantaka. This disease is mentioned under vatavyadhi. Susrutha highlights the importance of Agnikarma practice in cases of highly painful conditions precipitated by vata affecting sira, snayu, sandhi and asthi components. For vatakantaka sneha dagdha (agnikarma with snehadravya) is mentioned by vagbhata. Cakradatta mentions suchi dahana. The superiority of Agnikarma technique to any conventional management modalities in terms of simplicity, cost-effectiveness and remission.

Key words: Plantar fasciitis, Vatakantakam, Raktamokshana , Agnikarma,

Introduction

Heel pain comprises a heterogeneous group of clinical conditions presented as pain within / behind / beneath the heel. The condition can be unilateral or bilateral and is worse after rest. Pain beneath the heel accounts for 78% of total cases of painful heel attending the orthopedic clinics (Lester and Buchanan 1984). Tender heel pad and Plantar fascitis are the two exclusive conditions precipitating pain beneath the heel or the os calcis, a condition quite common in females. Post-Calcanal and Retro-Calcanal Bursitis accounts for the majority of cases of pain presented behind the heel. Diseases of calcaneus, arthritis of the sub-talar joint, rupture of the calcaneal tendon, calcaneal paratendonitis, calcaneal apophysitis are the remaining conditions resulting in pain within / behind the heel.

Anatomy Of The Plantar Fascia:- It is a thickened fibrous sheet of connective tissue that originates from the medial tubercle on the undersurface of the calcaneus and fans out, attaching to the plantar plates of the metatarsophalangeal joints to form the medial longitudinal arch of the foot. It provides key functions during running and walking. In general, the purpose of the plantar fascia is twofold – to provide support of the longitudinal arch and to serve as a dynamic shock absorber for the foot and entire leg.

Causes of Inferior Heel Pain :-

A.Plantar fasciitis – pain with first steps of the day,

B.Plantar fascia rupture – sudden, acute, knife-like pain

Soft Tissues:- Fat pad syndrome – atrophy of heel pad, Heel bruise – history of acute impact injury, Bursitis – swelling and erythema of posterior heel, Tendonitis – pain with resisted motions

Skeletal:-Bony point tenderness, Calcaneal stress fracture – pain with weight-bearing; worsens with prolonged weight bearing, Paget's disease – bowed tibias, kyphosis, headaches, Tumor – deep bone pain; constitutional symptoms late in the course, Calcaneal apophysitis (Sever's disease) – posterior heel pain in adolescents

Neurological:-Radiating burning pain, numbness and tingling, especially at night, Tarsal tunnel syndrome – diffuse nerve symptoms over plantar surface, Posterior tibial nerve entrapment – medial plantar heel symptoms, Abductor digiti quinti nerve entrapment – burning pain in heel pad area, The effect of constant jarring of the heel, as from walking on hard roads, Cornification of the skin, Chilblain of the heel, Pressure soreness over the tendo Achillis from boot, shoe, or legging, Bursitis between the tendo Achillis and the calcaneus

Injury:-Tearing of ligament fibres below the internal or external malleolus, or of the long plantar ligament; Tearing of ligament fibres near the insertion of the tendo Achillis; Cracking or fracture of calcaneus; Detachment of hinder end of the astragalus; Bruising of periosetum of the calcaneus

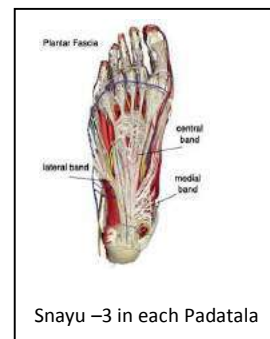
Other:-Fasciitis of the soft parts of the heel occasionally due to gonorrhea; Gout in the heel; Periostitis of the calcaneus; Tuberculous caries of the calcaneus; Foreign body, such as pin, needle, thorn; Sarcoma of the calcaneus

Etiology and Pathophysiology:-Etiology is unknown in approximately 85 percent of cases, but may be Overuse; Training errors; Training on unyielding surfaces; Improper or excessively worn footwear; Sudden increases in weightbearing activity, particularly those involving running, can cause micro-trauma to the plantar fascia. Pathologic findings include mucinoid degeneration, necrosis, and reparative inflammatory process and microtears at the fascia-bone junction.

Signs and Symptoms:-

- Starts as a dull, intermittent heel pain or arch pain, progressing to a sharp, persistent pain.
- A sharp, piercing pain and/or inflammation through heel and foot that usually occurs in the morning or after resting and gradually disappears with walking.
- Tightness in calf muscles or Achilles tendon.
- Noticeable heel pain after long periods of standing or walking.
- Heel pain worsens when climbing stairs or standing on the toes.
- Heel pain lessens with activity but returns during rest.

The pain may be present in acute / sub-acute / acute- on - chronic / chronic pattern.



Diagnosis

- On the basis of the history and physical examination findings.
 - Pain is elicited on deep palpation over calcaneus at the site of the plantar fascial origin and may radiate for 1 to 2 cm distally.
 - Compression of the calcaneus is usually not painful in plantar fasciitis but may reproduce pain with calcaneus stress fracture

It may be associated with – pes planus / pes cavus / obesity or sudden weight gain/achilles tendon tightness and a history of increased load on the foot from running, prolonged standing, or athletic activities.

Differential Diagnosis:- Retrocalcaneal bursitis; Preadventitial Achilles bursitis, or “pump bump” occurs when the bursa between the Achilles tendon and the skin become the inflamed; Achilles Tendinitis; Posterior Tibialis Tendinitis-commonly in women between 45 to 65 years old and is associated with pronation or flatfoot deformity and obesity.

Treatments:-

- *Anti-inflammatory Agents -NSAIDs*
- *Proper Shoes* - adequate arch support and cushioned heels.
- *Arch Supports*
- *Stretching and Strengthening*
- *Splinting and Walking Casts*
- *Extracorporeal Shock-Wave Therapy*
- *Surgery*

The condition is progressive to a zenith and runs a course which is found to be noncompliant to conservative medical management strategies in Ayurveda as well as in Western medicine. In these treatment modalities many more complications are mentioned and seen in various patients, so has need to think in ayurvedic way.

Ayurvedic View: In this disease following conditions can be understood-

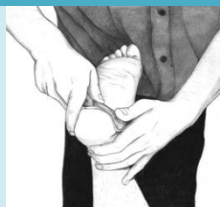


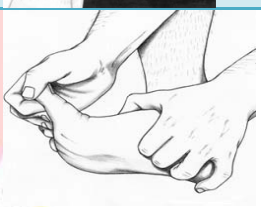
- *Vyadhi Marga – Madhyam*
- *Vyadhi Samuthan – Santarpanajanya/Apatarpanajanya*
- *Sadhya-Asadhyata – Krichrasadhya*

	<i>Doshas</i>	<i>Dushya</i>
<i>Vatakantak¹</i>	<i>Vata</i>	<i>Snayu</i>
<i>Padaharsha²</i>	<i>kapha & vata</i>	<i>Rakta</i>
<i>Padadaha³</i>	<i>pitta & vata</i>	<i>Rakta</i>

Most of the conditions of painful heel can be understood under the term *Vatakantaka (padakantaka)* in the Ayurvedic parlance. It is primarily recognized as a *vatavyadhi*, characterized by pain ‘as if pricked by thorns’ (or the like) in the foot (*pada*) and hence the name. The cause attributed goes to be walking bare-foot on uneven terrains.

Treatments

1. **Abhyanga**⁴ :- external application of medicated oil having *vataghna* property. If atrophic or spastic changes are seen in foot then has to be applied *Mashasaindhava taila*.
2. **Snehana**⁵:- Internal administration of castor oil. Oils are a rich source of omega-3 polyunsaturated fatty acids, particularly eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). These oils have been observed to suppress production of inflammatory mediators in patients with autoimmune conditions, such as rheumatoid arthritis. This may be due to reduced synthesis of key inflammatory mediators – leukotrienes, interleukin-2, and tumor necrosis factor.
3. **Mardana**:- In this disease a special type of massage is needed as follows-

	Position 1	Position 2
Active Myofascial Release with the Graston Tool		
Self Myofascial Release		

4. **Raktamokshana**:- in this disease bloodletting is having a special importance due to its immediate effect as anti-inflammatory and analgesic effect. There are main 2 types of raktamokshana mentioned which are further divided into 4-5 types by shushruta, among them in this disease 2 types are helpful. As this disease is vata predominance so *shring* and *siravedha* can be done.
5. **Swedana and Bandhana**:- As in this disease *dushya* (involved body part) is *Snayu* i.e. Fascia or ligament and was affected by *Vata* so can be given by *Upanaha*⁶ type of *sweada* in which *ushna veerya* drugs (oil+Salt) has to be used and *swastika bandha* has to be administered. This procedure has to be done after *Raktmokshana* therapy for removal of remaining *dosha*.
6. **Agnikarma**:- *Agnikarma* or thermocautery is the para-surgical technique practiced in the surgical specialty of Ayurveda, employed both as a major or ancillary tool. Leaving aside the *prima facie* indications, it is attributed to be the superior technique in highly painful conditions precipitated by *vata* affecting *sira*, *snayu*, *sandhi* and *asthi* components in the body. Until recently, *agnikarma* was exclusively practiced in the domain of thermocautery and electrocautery. Since the classical indications of *agnikarma* undoubtedly include severely painful conditions such as painful heel.

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Material and Methods

A special design heating probe (*salaka*), made out of an alloy of 5 metals (*dhatus*) is being employed to effect the burn (*dahana*). Earlier, Furey J G (1975), Bordelon R L (1983), Lister and Buchanan (1984) have attempted to study painful heel in terms of medical / surgical management, admittedly longing for a safe and satisfactory remedy.

The procedure involves pre-operative preparation, actual cautery by the special design *salaka* and the post-operative events. The red hot *salaka* was applied in the fashion of serial dots (*bindu*) first in the boundaries followed by stamping in criss-cross pattern (*vilekha*) wherever tenderness and located pain are present. Pulp of Aloe vera (*kumari*) was immediately scrubbed over the site for one minute, to bring down the burning pain.

Discussion

Management of painful heel is one of the most intractable and obstinate problems in the orthopedic practice as well as in general practice. Apparently a simple problem, painful heel turns distressing to the patient as it progresses to be a permanent affair! It is equally puzzling for the clinician due to the lack of knowledge of the actual / specific etiology on the one side and absence of safe and satisfactory remedies on the other. There are instances where the Physician over-prescribes pain killer drugs and patients report attended side effects.

People suffering from painful heel are mostly in the middle of their ages. The illness soon turns to be a family problem when the pain is superimposed onto a previously disturbed individual. The subject becomes easily irritable at home and workplace when the heel pain actually starts after sleep / rest. The patient feels dishearted, waiting for the pain everyday! In the observation made by this author, most of the patients are frustrated due to the bouncing pain and the poor response to the previous treatments at the hands of renowned orthopedic surgeons.

In the type of raktamokshana, *Siravyadha*¹ site is mentioned at 2 finger above the *kshipra marma* and has to be done with *Vrihimukha* instrument (A special designed sharp instrument) repeatedly after regular intervals in the condition of numbness. It is contraindicated in the condition of atrophic changes for avoiding further complications as atrophy.

*Agnikarma*⁷ can be done with different types of oils, ghee, honey or honey wax, it will be considered as *snigdha dagdha* which can act as much as deeper than *shalaka*. In this disease *suchi* means needle can be used for the *agnikarma* as an instrument.

Agnikarma has an anti-inflammatory activity, it may be due in part to inhibition of bradykinin production at the site of inflammation by way of limiting plasma kallikrein and fibrin formation. It also stimulates conversion of plasminogen to plasmin, thereby increasing fibrinolysis.

Siravyadha & *Agnikarma* stimulates blood flow and perhaps elicits a beneficial immune response, while others contend the *Siravyadha* & *Agnikarma* in effect re-injure the

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tissue, thereby initiating a healing response. It also stimulates the central nervous system, essentially shutting the neuronal pathways down to relieve the pain.

Possible mechanisms of cure by Agnikarma are discussed at two different levels of physio-pathology. The chronic inflammatory process associated with cases of heel pain is logically manipulated by the controlled sub-clinical burn which acts similar to vaccination procedures. The therapeutic burn induced is self limiting, will not progress to a burn wound, but initiates all acute inflammatory mediators as well as edema fluid to come into play. A major chunk for this activity is derived from the vicinity of basic inflammatory point in relation to painful heel. As the induced effect settles, the material and edema fluid gets absorbed into the system, shrinking the original lesion.

Second school that explains the cure by agnikarma is in relation to HSPs (Heat Shock Proteins) that are released in plenty at the site of therapy. These proteins claims to have strong curative potential and inflammatory lesions in the neighborhood are gradually targeted. There are evidences to believe that HSPs have predictable nature of initiating / mediating / leading the healing energy in a host of localized tissue pathologies.

Concurrent use of internal medication might accelerate the relief of painful heel.

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अ.ह.नि.१५
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- ७ सिराव्यध - ब्रीहिमुखेन द्रव्यद.गले विध्येदुपरि क्षिप्रमर्मणः । रक्तावसेचनं कुर्यादभीक्ष्णं वातकण्टके । स्पापे बहुशो रक्तावसेचनम् । न तु अङ्गम्लानौ शोषभयात् । (अङ्ग.गम्लानौ स्पापेपि रक्तावसेकं नेष्यते शोषभयात् । म्लानिरीषच्छुष्कत्वमिव । इन्दु.) अ.सं.चि. ४४

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Skin Care In Ayurveda: Literary Review

Vd.Sanyogita R. Londhe,

Assistant Professor & Ph.D scholar,
Dept. of Kriya Sharir,
Late B. V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Vd. Pallavi U. Jadhav

Assistant Professor,
Dept. of Dravyagun Vidyan,
Late B. V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Abstract

Present generation spending lots of money and time in glorifying the skin, many chemical and artificial beauty agents cause irreparable skin damage. Over 200 herbs have been mentioned in Ayurveda which can be used to obtain healthy skin and glowing complexion. The use of bioactive ingredients in cosmetics influence biological functions of skin and provides nutrients necessary for the healthy skin. There are several books in Ayurveda which include broad descriptions about therapeutic effect of Ayurvedic plants in the field of skin care. In this article I try to highlight the literature given by Acharya Charaka, Sushruta, Vagbhata, Yognatnakara and Sharangdhara.

Key words: Cosmetics, Skin care, Ayurvedic plants

Introduction

In these days of technology cosmetology is getting higher concern. The aim of cosmetic products is to impart a pleasant and attractive appearance by emphasizing those areas of face or body that look better. These products include various make ups, hair dyes and nail polishes. Human skin is biological marvel and the largest organ in body both by weight and surface area. Where we refer to skin care, we mean care for face. Present generation spending lots of money and time in glorifying the skin, many chemical and artificial beauty agents cause irreparable skin damage.

Ayurveda is ancient medical traditional practice in India. *Ayurvedic* literature describes over 200 herbs, number of minerals and fats to maintain and enhance the health and beauty of skin. But there were no need to separate the cosmetology as a special branch at that period. Now it is the time to highlight the *Ayurveda* in the world of cosmetic with its unique aspects.

Aim

Conceptual study of skin care in *Ayurveda*

Objectives

1. To study skin care from different *Samhitas*
2. To study different methods of skin care from *Ayurveda*

Conceptual study

Skin care through Ayurveda

According to *Ayurveda* healthy skin is a result of overall health condition of individuals and prescribes numerous skin care treatment that needs to be pursued at every stage of life. The function of *Ayurvedic* herbs is to purify skin and eliminate vitiated *tridosha* from the body as they are mainly responsible for skin disorder and other

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diseases. Several herbs have been mentioned in *Ayurveda* which can be used to obtain healthy skin and glowing complexion. Specific measurement for the enhancement of different aspect of beauty and disease conditions in relation to skin are mentioned in ancient *Ayurvedic* texts, they are described in brief.

Charaka Samhita

In contest of skin disorder *Charaka* described about 18 type of *kushtha* obstinate skin disease including leprosy which included *Vipadika*, *Dadru*, pamaets in *Chikitsa Sthan* and also in *Nidan sthan*. Apart from this there are references of ten drug as *Varnya* (complexion promoting)- in *Sutrasthanviz*. *Chandana*(*Santalum album*), *Punnaga*, *Padmaka* (*Nelumbonucifera*), *Usheer* (*Vetiveriazianiodis*), *Madhuka* (*Glycyrrhizaglabra*), *Manjishtha* (*Glycyrrhizaglabra*), *Sariva*, *Paysya*, *Sita*, *Lata*.

Sushruta Samhita

In the *Kshudra rog chikitsa* (treatment of minor disease) many of the skin care treatments are documented.

Vyanga (melasma), *Nilika*(*Naevus*)- puncturing of the vein is done in the forehead and rubbed roughly with *Samudraphena* and applied the paste of bark of *kshiri-vrikshaor* paste of *bala*, *atibala*, *Yashtimadhu*, *Haldi* or of *Arkpashpi*, *Aguru*, *Kaliyaka* and *Gairika*.

Ashtang Hridaya

There are three type of *Mukhalepa* (formulation applied on face) viz. for removal of *dosha*, for removal of poison and *Varnyakara* (Complexion promoting). Mode of application of paste over face, duration and precaution were also elaborately mentioned. Furthermore application of paste varies according to season.

Hemant –paste of seeds of *Ber* (*ziziphusjuba*), *Vasaka* root (*Adhatodavasica*), *SavaraLodhra* (*symplocosracemosa* or *paniculata*), *Sarson* (*Brassica campestris*) were applied.

Shishir– *Kateri* root (*Solanumsurattense*), blacktil (*Sesamumindicum*), bark of *Daruhardra* (*Berberisaristata*), Barly (*Hordeumvulgare*) without husk.

Vasant- Paste of root of *Dabh* (*Imperatacylindrica*), *Chandan* (*Santalum album*), *Khas* (*Vetiveriazianiodis*), *Shirish* (*Albizzialebeck*), *Saunf* (*Foeniculumvulgare*), *Chawal* (*Oriza sativa*)

Grishma–*Kumud* (*Nymphaeanouchali*), *Utpal* (*Nymphoeaindicum*), *Khas* (*Vetiveria Zianiodis*), *Durva*(*Cynodondactylon*), *Yashtimadhu* (*Glycyrrhizaglabra*), *Chandana* (*Santum album*).

Varsha–*Kaliyaka*(*Cosciniumfenestratum*), *Til*(*Sesamumindicum*), *Khas*(*Vetiveria Zianiodis*), *Jatamansi*(*NordostachysJatamansi*), *Tagara*(*Vetiveriawallichii*), *Padamaka*(*Nelumbonucifera*).

Sharad–

Talish(*Abieswebbiana*), *Etkat*(*Sesbaniacannabina*), *Pundarika*(*Nelumbonucifera*), *Mulethi*(*Glycyrrhiza glabra*), *Khas*(*VetiveriaZianiodis*), *Tagara*(*Vetiveriawallichii*) and *Agru*(*Aquilariagalloscha*).

Vagbhata mentioned the benefits of *Mukhalepa* as

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मुखालेपनशीलानां दृढं भवति दर्शनम् ।

वदनं चापरिम्लानं श्लक्ष्णं तामरसोपमम् ।। अ. ह. सू. २२/२२

Which signifies that the persons who are habitual to application of paste of drug over face, the vision become keen, the face never dull and glows like lotus flower.

Ashtanga Samgraha

Lancchana, *Vyanga* (hyperpigmentation of face) and *Nilika* (Naevus) *chikitsa*- in this group of diseases, the nearest vein should be cut and the area covered with the paste of bark of *kshiri-vriksha* that of *Bala* (Sidakordifolia), *Atibala* (Abutilon indicum), *Yashtimadhu* (Glycyrrhizaglabra), *Haridra* or of *Madhuka*, *Aguru*, *Payasya* (Ipomeadigitata), *Kaliyaka* (Cosciniufenestratum). Tender fruit of *Kapittha* (Feronialimonia), root of *Amlika* (Tamarindusindica) and *Sukaradamstra* (teeth of pig) are also added with honey and *ghee*.

Yogaratanakar

In *Kshudra rog* (minor diseases), *nidan*, *chikitsaprakaran* (chapter dealing with diagnosis and prognosis) there 44 types of minor disease of which some are related to skin care-

Vyanga (dark patches on the face)- *TribhuvanBhangapatra* (Cannabis sativa), *Vidhara* (Argyiaspeciosa) and Sesam root (Dalbergiasissoo) or *Masur* (Lenseculinaris) exhibit positive result in dark patches. Application of bark of *Arjuna* (Terminaliaarjuna), *Manjishta* (Rubiakordifolia) and *Adulsa* (Adhatodavasica) in equal amount with butter shows good positive result in *Vyanga*.

Complexion promoting – *Masur* (Lenseculinaris) triturated with milk and applied with *ghrit* for enhancing complexion. *Kumkumadi taila* also prescribed for the promoting complexion.

Sharangdhar Samhita

There are three kinds of *lepa* viz *doshghna*, *vishghna* and *varnya*.

Complexion promoting- *Rakta chandana* (Ptrerocarpussantalinus), *Manjishta* (Rubiakordifolia), *Lodhra* (Symplacosracemosa), *Kushtha* (Saussureaalappa), *Priyangu* (Callicarpamacrophylla) and *Masura* (lenseculinaris) have complexion promoting properties.

Discussion

It is very clear from above description that large number of herbs and other naturally obtained raw material have been formulated into cosmetics products and this pure natural cosmetics are without any synthetic chemical they are not only devoid of side effects but also equally effective in comparison to their modern counterparts. The use of bioactive ingredients in cosmetics influence biological functions of skin and provides nutrients necessary for the healthy skin. The vast array of knowledge of medicinal plants mentioned in Ayurvedic text is very helpful in the development of new cosmetics products for present and future cosmaceuticals industry. The classical texts mentioned in the review are just the tip of the iceberg; apart from them there are several books in

Ayurveda which include broad descriptions about therapeutic effect of Ayurvedic plants in the field of skin care. There are several *Nighantus* containing descriptions about several medicinal plants. There are several books dealing with formulation and pharmaceutics too.

Conclusion

Description of several minerals useful in skin care had been registered from the ancient Indian Astrochemical books; description of all of them is beyond the scope of any single review hence further research and review work is welcomed in this particular field.

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Bioenhancers of Herbal Drug Origin: A Review**Vd.Pallavi U. Jadhav,**Assistant Professor(DravayagunaVigyana),
Late B.V. Kale Manjara Ayurved Medical
College & Hospital,Latur**Vd.Sanyogita R. Londhe**Assistant Professor (Kriya Sharir),
Late B.V. Kale Manjara Ayurved Medical
College & Hospital,Latur**Abstract**

Bioenhancers are agents, which by themselves are not therapeutic entities but when combined with an active drug lead to the potentiation of pharmacologic effect of the drug. Many synthetic and herbal drugs suffer from the problems of low bioavailability. To overcome these issues bioenhancers are used. Bioenhancers are mostly plant and animal origin. Out of these most are Ayurvedic herbal drugs e.g. Piperine extracted from Pippali (Piper longum Linn) and Marich (Piper nigrum Linn), Gingerol extracted from Shunthi (Zingiber Officinalis Roxb), Allicin from Rasona (Allium sativum Linn), Cumin from Shweta Jiraka (Cuminum cyminum Linn) and Krushna Jiraka (Carum carvi Linn), etc. Distilled cow urine is example of animal originated bioenhancers.

The use of bioenhancers is familiar concept in Ayurveda as 'Yogavahi', which was used to enhance bioavailability, tissue distribution and distribution of drugs especially those with poor availability.

This review article gives an account of bioenhancing property of some Ayurvedic drugs and there mechanisms of action.

Key words: Bioenhancer, Bioavailability, Piperine, Allicin, Cumin, Gingerol

Introduction

Many synthetic and herbal drugs suffer from the problem of low bioavailability. Bioavailability is the rate and extent to which a substance enters systemic circulation and becomes available at the required site of action¹.

Maximum bioavailability is attained by drugs administered via intravenous route, whereas drugs administered orally are poorly bioavailable as they readily undergo first pass metabolism and incomplete absorption. Such unutilized drug in the body may lead to adverse effects and also drug resistance². Thus, there is need of molecules which themselves have no same therapeutic activity but when combined with other drugs/molecules enhance their bioavailability. Many natural compounds from medicinal plants have capacity to augment the bioavailability when co-administered with another drug³.

The concept of bioavailability enhancer is derived from *Ayurveda*. It is familiar with 'Yogavahi' concept of *Ayurveda*. In *Charaka Samhita* (Ch. Vi. 1/16), it is mentioned that 'Pippali' possesses this 'Yogavahitva' guna⁴.

Aim: Conceptual study of Bioenhancers of herbal drug origin

Objectives

1. To study definition, classification, mechanism of action of bioenhancers
2. To study mechanism of action of different herbal drugs

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Conceptual Study

Definition of Bioenhancers

Bioenhancers are chemical entities which promote and augment the bioavailability of the drugs which are mixed with them and do not exhibit synergistic effect with the drug.

Drug Absorption Barriers

The drug must cross the epithelial barrier of the intestinal mucosa for its transportation from the lumen of the gut into the systemic circulation and exert its biological actions⁶. There are many anatomical and biological barriers for the oral drug delivery system to penetrate the epithelial membrane. The membranes around cells are lipid bilayers containing proteins such as receptors and carrier molecules.

Drugs cross the lipid membrane by passive diffusion or carrier mediated transport which involves the spending of energy⁶. For the passage of small water-soluble molecules such as ethanol there are aqueous channels within the proteins. The drug molecules larger than about 0.4 nm are facing difficulty in passing through these aqueous channels⁶.

To overcome these drug absorption barriers bioenhancers acts by different mechanism.

Mechanism of Action of Bioenhancers⁷

The following are the chief mechanisms via which the various bioenhancers exert their bioavailability enhancing properties on the drug molecules:

1. By enhancing the absorption of orally administered drugs from gastrointestinal tract by increase in blood supply.
2. By modulating the active transporters located in various locations eg. P-glycoprotein (P-gp) is an efflux pump which pumps out drugs and prevent it from reaching the target site. Bioenhancers in such case act by inhibiting the P-gp.
3. Decreasing the elimination process.
4. Inhibiting the drug metabolizing enzymes like CYP 3A4, CYP1A1, CYP1B2, CYP2E1, in the liver, gut, lungs, and various other locations. This will help to overcome the first pass effect.
5. Inhibiting the renal clearance by preventing glomerular filtration, active tubular secretion by inhibiting P-gp and facilitating passive tubular reabsorption.
6. Reduction in hydrochloric acid secretion and increase in gastrointestinal blood supply.
7. Inhibition of gastrointestinal transit, gastric emptying time and intestinal motility.
8. Modifications in GIT epithelial cell membrane permeability.
9. Choleragogue effect
10. Bioenergetics and thermogenic properties
11. Suppression of first pass metabolism and inhibition of drug metabolizing enzymes and stimulation of gamma glutamyl transpeptidase (GGT) activity which enhances uptake of amino acids.

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Classification of bioenhancer⁸

The bio enhancers are classified into two different classes:

1. Bio enhancers based on origin
2. Bio enhancers based on mechanism of action
 - Based on origin⁷
 1. Plant Origin – Piperine (*Pippali and Maricha*), Curcumin (*Haridra*), Allicin (*Rasona*) etc.
 2. Animal origin – Cow urine distillate
 - Based on mechanism of action⁷
 1. Inhibitors of P-gp effluxpump – Carvone (*Shweta and Krushna Jiraka*) , Naringin (*Draksha*)
 2. Suppressors of CYP- 450 enzymes and its isoenzymes –Quercetin (Citrus fruits), Niringin
 3. Regulators of GIT function to facilitate better absorption – Niaziridin (*Shigru*), Gingerol (*Shunthi*), Glycyrrhizin (*Yashtimadhu*)

A detailed description of some of the bioenhancers based on the above classification system is as follows:

Piperine

Piperine (1-piperoyl piperidine) is an amide alkaloid found in plants of Piperaceae family like *Pippali (Piper longum Linn)*, *Maricha (Pipernigrum Linn)*. The bioenhancing property of piperine was first utilized in the treatment of tuberculosis in human. Piperine was found to increase the bioavailability of rifampicin by about 60% and hence reduce the dose from 450 to 200mg. In medicine piperine is approved to be combined with antitubercular drugs. Piperine also showed enhanced bioavailability when combined with Nevirapine, a potent non-nucleoside inhibitor of HIV-1 reverse transcriptase which is used in combination with other antiretroviral agents for the treatment of HIV-1 infection⁹. Several animal studies on piperine have shown promising results in bioenhancing capacity of piperine for various drugs.

Gingerol

It is extracted from *Shunthi (Zingiber officinalis Roxb)*. Gingerol facilitates better absorption by regulating GI tract function.

The effective dose of the bioenhancer extract is in the range of 10- 30 mg/kg body weight.

It enhances the bioavailability of rifampicin by 65% and ethionamide by 56%. It also enhances the bioavailability of antibiotics (Azithromycin – 78%), anti-fungal (Ketoconazole –125%), anti-viral (Zidovudine – 105%) and anti-cancer (5-fluorouracil – 110%) drugs⁹.

Curcumin

It is extracted from *Haridra (Curcuma longa Linn)*. Curcumin, a flavonoid suppresses drug metabolizing enzymes like CYP3A4 in liver and is also capable of inducing

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change in drug transporter P-gp and thus increased the bioavailability of celiprolol and midazolam.

Curcumin suppresses UDP-glucuronyl transferase level in intestine and hepatic tissues. It also modifies the physiological activity in the gastrointestinal tract leading to better absorption of drugs¹⁰.

Allicin

It is obtained from Rasona (*Allium sativum Linn*). Allicin enhances the fungicidal activity of AmphotericinB against pathogenic fungi such as *Candida albicans*, *AspergillusFumigates*¹⁰.

Naringin

Naringin is the major flavonoid glycoside found in *Draksha (Vitisvinifera Linn)*. It is capable of inhibiting intestinal CYP3A4, CYP3A1, CYP3A2, P-gp and thus acts as a bioenhancer. Naringin at 3.3-10 mg/kg body weight dose enhances the bioavailability of paclitaxel. Other drug bioenhancers are diltiazem, verapamil, saquinavir & cyclosporine A⁹.

Carvone

Found in *Shweta Jiraka (Cuminum cyminum Linn)* and *Krushna Jiraka (Carum carvi Linn)*.

It is a P-gp efflux pump inhibitor. Percentage enhancement of bioavailability for rifampicin is 110%, for cycloserine is 75%, for ethionamide is 68%. Apart from the above bioenhancing effects, it also enhances the bioavailability of anti-biotics (Cefdinir – 89% and Cloxacillin – 100%), anti-fungal (Amphotericin B – 78%), anti-viral (Zidovudine – 92%) and anti-cancer (5-fluorouracil – 90%) drugs at the dose of 1-55 mg/kg body weight¹⁰.

Niaziridin

It is extracted from *Shigru (Moringa oleifera Lam)*. It regulates GIT functions to facilitate better absorption. It enhances the bioavailability of rifampicin by 38.8 folds at 1.0 g/ml. It also enhances the bioavailability of Clotrimazole by 5-6 folds.

Glycyrrhizin

It is extracted from *Yashtimadhu (Glycyrrhiza glabra Linn)*. It enhances the bioavailability of rifampicin by 6.5 fold at the concentration of 1 g/ml. It also enhances the bioavailability of taxol by 5 fold at the concentration¹¹.

Applications

These techniques of bio enhancers is principally targeted the toxic drugs, expensive drugs, rare drugs, poorly bioavailable drugs and the drugs which are used for longer duration.

Since bioenhancers can reduce the dosage and cost of expensive medication while making treatment safer. In humans first time its application has been done in treating TB for which the existing drugs are toxic and expensive and they are administered for longer period¹¹.

Conclusion

There are many herbal drugs which are used as bio enhancers, which can increase activity of active drug when give in combination with active drug. The research is now aimed at use of bioenhancers along with active drugs so as to increase their Bioavailability in the systemic circulation.

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Osteoporosis –An Ayurvedic Approach

Dr.Atul Ravindra Kolapkar

Assistant Professor,
Kaumarbhritya Department,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Dr.D.N.Bandapalle

Assistant Professor,
Dept.of Rachna Sharir,
Late B.V.Kale Manjara Ayurved Medical College
& Hospital,Latur

Abstract

Osteoporosis may be compared with the depletion of asthi dhatu (athshi dhatu kshaya). Compactness of bone tissue (asthi dhatu) is essential for supporting the body (dhaarana) by its skeletal framework; transmitting body by its skeletal framework; transmitting body weight and providing locomotor function. Individual with exelance of bone tissue (asthi saara purusha) is characterised with prominent and well formed bony parts ;teeth and nails and posseses qualities like hard working;enthusiasm andtolerance extreme physical activities. When bone tissue becomes inferior in excellance these qualities are compromised. Certain drugs directly promotes bone formation. Lac (laakshaa); cissus quadrangularis (asthi shrinkhala ect.) are best examples. If depletion of marrow (majja kshaya) leads to osteoporosis treatment should be aimed at the correction of marrow (majjaa).

Introduction:-

Osteoporosis is the term used for diseases that cause a reduction in mass of bone per unit volume. Osteoporosis may be compared with the depletion of *asthi dhatu (athshi dhatu kshay)*. Compactness of bone tissue (*asthi dhatu*) is essential for supporting the body (*dhaarana*) by its skeletal framework; transmitting body by its skeletal framework; transmitting body weight and providing locomotor function. Individual with exelance of bone tissue (*asthi saara purusha*) is characterised with prominent and well formed bony parts; teeth and nails and posseses qualities like hard working; enthusiasm andtolerance extreme physical activities. When bone tissue becomes inferior in excellance these qualities are compromised.

Aim :-

Before analysing the etiopathological aspect of depletion of bone tissue (*asthi kshaya*); certain physiological aspect of bone formation are to be discussed.

Objective:-.

According to ayurveda bone (*asthi*) is formed from fat (*medas*). It is formed by transformation of fat (*medas*) into compact form by virchue of action of metabolic heat or fire (*oooshma*) present in fat itself upon the gross elements (*mahbhoota*) like earth (*prithvee*); water (*jala*); air (*vaayu*) etc. The tissue elements of fat (*medas*) obtain compactness (*samghata*) and attain qualities like stability (*sthairya*) and solidity (*kharatva*). The following laws of tissue transformation can be used to explain formation of bone (*asthi dhatu*).

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Material& Methods:-

a) Theory of sequential transformation (*ksheerhadhi nyaya*):- This uses the analogy of milk products in sequence. From milk curd is made; from curd; butter is obtained and melting butter gives ghee. In the sequence of transformation of tissue; fat (*medas*) is transformed into ashthi dhatu (bone).

b) Theory of selective nutrition (*khale kapot nyaaya*):- This theory is analogous to doves collecting grains from the yard. Each dove collects what it wants. From a general pool of nutrients; those are especially nutritional to the bone tissue are selectively utilised by the bio fire causing tissue metabolism of bone tissue (*asthi dhatvagni*).

c) Theory of sequential selective nutrition (*kadari kulyaa nyaya*):- Analogy of irrigation canals and fields is used here. Each field is supplied with water directly as well as with overflow from upper field. Thus there are direct channels to supply nutrients to the bone tissue and there is sequential transformation of the tissue as well.

These different laws can be used for *asthidhatu* kshaya in therapeutic aspect.

Pathology of osteoporosis (*asthidhatu kshaya*):- Different pathological types cause diminution of *asthi dhatu*. They are enlisted here.

A) Endogenous (*nija*)

- 1) Reduced formation of primary nutrient tissue (*ras dhaatu*).
- 2) Abnormalities (*vikruti*) of the metabolic fire of bone tissue (*asthi dhatvagni*) a) hypoactivity (*asthi dhatvagni mandya*) b) Hyperactivity (*asthi dhatvagni atitakshnya*).
- 3) Hypoactive bio fire of fat tissue (*medo dhatvagni mandya*) 4) Diminution of marrow (*majja dhatu*) i.e. *majja kshaya*.

B) Exogenous (*agantu*)

- 1) Trauma (*abhighat*)-
- a) acute
- b) chronic
- c) combination of above different pathologies

Endogenous depletion of bone (*nija asthi dhaatu kshaya*). Because of starvation (*anashana*); malnutrition (*alpaahara*) i.e. insufficient nutrition etc. The first tissue that is essence of food (*rasa dhatu*) is not properly formed. This leads to generalised depletion of bone tissue (*asthi dhatu kshaya*). This is characterised with osteoporosis seen in under nutrition with reduced calcium intake. The sluggishness (hypoactivity) of metabolic fire of bone tissue (*asthi dhatvagni mandya*) caused reduced metabolic activities in bone (*asthi dhatu*) which leads to abnormal increase of bone tissue (*asthi dhatu vridhi*). Abnormal osteophytes; irregularities in secretions of parathyroid hormone etc. may be thus explained. Hyperactivity (*atitakshnya*) of bio fire of bone tissue (*asthi dhatvagni*) leads to increased transformation of bone into subsequent tissues resulting into depletion of the bone tissue. Increased activity of osteoclasts and conversion of bone calcium to blood calcium leading to osteitis fibrocystica in hyperparathyroidism etc are examples. These two pathological entities (*maandya* or *ati takshnya* of *asthi dhatvagni*) are important and are explained by *vaagbhat* by the aphorism (*sootrai*) "TESHAM SAADA ATIDEPTIBHYAM DHATU VRUDDHI KSHAYODBAHVA" meaning that sluggishness and excessive sharpness of the tissue

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fires respectively causes the increase and depletion of tissues. Even though the sluggishness of tissue fire of bone leads to the increase of the bone tissue; it is not accounted as normal physiology (*prakrit*) .It creates pathology (*vikruti*) like spikes and projections of bones because of osteophytes which is common in osteoporotic lesions. In conditions like Paget's disease the pathology is characterised by greatly accelerated remodeling process in which osteoclastic resorption is massive and new bone formation by osteoblasts is extensive. As a result; there is an irregular thickening and softening of bone and greatly increased vascularity.

- The sluggishness of the tissue fire of fat (*medo dhatvagni maandya*) leads to increase of fat in fat depots (*medo vridhhi*).This causes obesity (*sthaulya*) as well as osteoporosis (*asthi kshaya*).This is commonest clinical presentation. Fat (*medas*) gets accumulated in the body and bone (*asthi*) is not properly formed. Generalised osteoporosis along with osteoarthritis of the weight bearing joints like spine; hip and knee are very common in obesity.Similar conditions are also available in hyperthyroidism; estrogen deficiency in post menopausal syndrome and post hysterectomy complications.All these can be enlisted as an irregularity in proximal tissue leading to the depletion of bone tissue(*asthi dhatu kshaya*).
- Irregularity in prior tissue can also lead to depletion of bone tissue i.e. osteoporosis (*asthi saushirya*) is found in depletion of marrow tissue (*majja kshaya*).The vitiation of the humor vata in bones and marrow (*asthi majjagat vata*) can also lead to osteoporosis.Here diminution in succeeding tissue causes extraction of over nutrition from the previous tissue.Not that fat is prior tissue and marrow is successive tissue to bone.

Exogenous Type of Osteoporosis-

- Trauma (abhighat) leads to depletion of bone tissue (*asthi kshaya*).An acute trauma can cause fracture which is a possible cause of osteoporosis in future. It may also be due to reduced mobility after fracture.Chronic type of trauma is evidenced by stress fracture; osteoarthritis of knee joint is seen in old age and in individuals with jobs demanding excessive walking etc.
- In many cases different pathological factors of both endogenous and exogenous group coexists in combination leading to the depletion of bone tissue.
- The etiological factors affecting the channels of migration of bone tissue (*asthi vaha srotodushti*) are explained bellow.
 - 1) Over exertion (vyayama)
 - 2)Traumatic-excess physical agitation (atisankshobha)
 - 3) Attrition or rubbing of bones(*asthinam ch ati vighattanat*)
 - 4) Food and regimen causing aggravation of Vaata(vaatala aahara-vihara)

Inter Relation Between Asthi And Vata :

The abode vata is *asthi*. But they are not directly complimentary.They are inversely related.Here aggravation of one leads diminution of the other.So depletion of bone is affected by activities and food leading to aggravation of vata.

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Symptomatology Of Asthi Kshaya: Osteoporosis is characterised by the following symptoms-

- 1)Falling of teeth(danta shaat)
- 2)Dryness(raukshya)
- 3)Roughness (parushya)
- 4)Recurrent dislocation of joints due to looseness(sandhi shaithilya)
- 5)Pricking pain in bones (ostalgia;*asthi toda*)
- 6)Desire of consuming meat attached to bone (*asthi baddha mansa abbhilasha*)

• The hair fall; falling of tooth; irregular nail; growth; dental carries are evident in reduced calcium intake and metabolism. Patients of osteoporosis also exhibit these features in early stage itself. Dryness and roughness of skin is also common. This is a symptom of aggravated vata. Cracks in the soles and palms are often seen in patients of Mahatiktak ghee in osteoporosis. Falling of hair as well as cracks. Looseness of joints (sandhi shaithilya) explains the reduced compactness of bone and allied materials in joints. Pricking pain in bones is typical in osteoporosis. The individuals will develop desire for food like meat attached to bone is explained as request of similar properties (samaan guna prarthanaa).

Management of asthi kshaya :-

The management of *asthi kshaya* depends on its pathology. In any case; direct supplementation of bone in the form of cartilage (*tarunasthi*) is recommended. It can be considered as material congruent in generality (Sarvatha samanya dravya). If the patient is not ready to consume the same because of aversion; therapeutic application of similar qualities can be tried.

Enema made from bitter medicines (tikata rasa siddha ksheerbasti) is an important choice in management of osteoporosis. Bitter taste usually aggravates vata. But processing (samskar) bitter materials in combination with milk ghee etc. converts their pharmacological activity and enables them to promote osteogenesis (*asthi janana*) by combination of properties like unctusness (*snigdhata*); absorption (*shoshanatva*) and solidity (*kharatva*). Here this therapeutic application creates the same atmosphere as in transformation of bone from fat. When unctusness (*sneha*) of milk and ghee are subjected to drying by bitter taste; solidity and hardness (*kathinya*) are achieved. So milk enema having ingredients of tiktaka ghrita milk boiled with five bitter (pancha tikta siddha ksheera) sesame oil (*tila taila*) and honey (madhu) are commonly practised in diseases like osteoporosis. Oil enema (*anuvasana*) of guggulu tiktaka ghrit is also treatment of choice.

Summary:-

The sluggishness of tissue fire of fat tissue (medo dhaatvagni mandya) leading to increasing of fat (*medo vridhhi*) and depletion of bone (*asthi kshaya*) should be treated with the farting (medo hara) drugs like guggulu; bhallatak sallaki etc. Guggulu tiktak kwatha are commonly used owing to their lypolitic and osteogenetic properties.

Conclusion:-

Certain drugs directly promotes bone formation. Lac (*laakshaa*); cissus quadrangularis (*asthi shrinkhala* ect.) are best examples. If depletion of marrow (*majja kshaya*) leads to osteoporosis treatment should be aimed at the correction of marrow (*majja*). Potentiated fats with repeated processing (*aavartita sneha*) like kheera balaa can be used for the purpose. When vaata is aggravated in bone and marrow (*asthi majja gata vaata*) showing clinical features of joint pain (*sandhi shoola*); weakness (*bala kshaya*) pain in lower limb (*sakthi shoola*) external and internal administration of fat is advised. Whole body and regional irrigation therapy (*sarvangaa and ekaanga dhaara*); internal unction (*sneha pan*) palliative and eliminative treatments (*shamana and shodhana*) etc. can be done. The treatment principles of joint diseases due to vaata (*sandhi gata vata*) can also be applied in management of osteoporosis (*asthi kshaya*).

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Computer Vision Syndrome

Dr. Sunil Anantrao Walewadikar

MS Shalakya Tantra,
Associate Professor, Dept of shalakya tantra,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital,Latur

Dr.Amol U.Patane

M.D.Panchkarma,
Asst.prof.Dept of Panchkarma,
Late B.V.Kale Manjara Ayurved Medical
College & Hospital,Latur

Abstract

Now a day's many of us have jobs that require us to stare at computer screens for hours at a time . that can put a real strain on your eyes.

Eye problems caused by computer use are fall under the heading CVS. It is not one of the specific problem instead of it includes a whole range of eye strain and pain. Research shows that between 50% and 90% of people who work at computer Screen have at least some symptoms.

Kids who stares at tablets, computer during the day at school also can have issues especially if lighting and their postures are less than ideal.

Key Words: Computer vision, presbiopia, meditation.

Introduction:-

Now a day's wherever we go will see the Computers on every table .In school, College, office, Bank and everywhere use of the computer going on. Without Computer rarely we see the tables. It becomes a effective tool for fast working Using this new Technology it has some advantage and disadvantages regarding health issues. We are going to discuss the effect of computer on our eyes. This termed as Computer vision syndrome I.e.CVS.

This is discussed detail in full paper.

Aims & Objectives :-

To understand the use of computer and eye problems due to excessive strain on eyes.

Reviw Of Literature

Various modern textbooks like 1. Parsons ophthalmology, Banarjees ophthalmology, various magazines. They have described CVS in detail.

Review of Literature :

What causes CVS ?

There are several contributory factors for CVS to develop

- Uncorrected spectacle power
- Inappropriate glasses for computer use
- Difficulty in eye Co-ordination during work
- Strain on muscle of eye due to work style.
- Decreased blink rate or tear formation.
- Glare and reflections form monitor and surrounding

- Poor work station setup or improper use of station
- Job nature and stress

Who can be affected by CVS?

CVS affects 75% of people who work on computer, mostly who work more than 3-4 hours on computer. This includes all professions like computer IT , Accounting, banking also students and children who work on computer more than 3 hours a day have strain on eyes.

Age limit for CVS:

CVS can occur at any age. Children are affected less in number. This does not mean that children are not prone to CVS. If children use computer frequently they will suffer form CVS.

The visual Changes in Teenager are well adopted to Near tasks but strain due to change in image quality, glare, lighting and absence of breaks in between. so strain associated with eye muscle imbalance and power changes need a closer watch as it is the changing phase of physical development.

Symptoms of CVS :

Some common symptoms of CVS are headache, blurred vision, neck pain, fatigue, eye strain, dry eye, irritated eyes, diplopia , vertigo, dizziness , polyopia , difficulty in refocusing of eyes.

Discussion

When we work at a computer our eyes have to focus & refocus all the time. We may look back and forth as we read. We may have to look down at papers and then back on to screen. Our eyes react to changing images on screen to create images in brain. This requires a lot of efforts form eye muscles.

We are more likely to have problems if we already have eye trouble, we need glasses but don't have them, or if we wear the wrong glasses for Computer use. computer work gets harder as our age and lenses in our eyes became less flexible. Mostly at around age 40, our ability to focus on near and far object will start become weak to go away This is presbyopia condition.

Digital eye strain :

Computer, tablets, e-readers, Smartphone, and others electronic devices with visual displays can cause tired eyes,i.e. digital eye strain.

When to eye check- up ?

Ideal time for eye evaluation is at the beginning of one's career it involves extensive computer work,, professionals who work on computer should check their eyes every year regularly..

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What is the best way to treat CVS?

As we know the adage 'prevention is better than cure' seems to fit for CVS, & eye care.

There are three phases to treat CVS.

- Detection
- Management
- Follow up

Summary

The best way to treat CVS is to identify the condition that have contributed to symptom and address them. As earlier the condition is detected, more it helps as a preventive measure. Ideal ocular status and proper ergonomics both of visual and environmental could keep the condition under check so Managements is minimal and Modification becomes the answer. Frequency of follow-up is reduced as condition is easily reversible at early stage.

Conclusion

- 1) Get a Comprehensive eye examination
- 2) Use of Proper lighting system. Lighting in Room should be Comfortable for eyes and prevents our staring into glare on Computer screen.
- 3) Minimize Glare.
- 4) Adjust your Computer display settings.
Positions: the display should be in a proper position so that our head should be kept in naturally comfortable position While using screen.
- 5) Upgrade your display.
- 6) Exercise your eyes – 20-20-20 Rule At every 20 minute spend 20 second looking at 20 feet away
- 7) Blink more often, it washes eyes due to tear formation
- 8) Take frequents breaks.
- 9) Modify your work station.
Seat should be comfortable: comfortable Chair with support for your neck back will help to avoid neck and shoulder strain.
- 10) Monitor your monitor – it should be keep at least 20 inches from your eyes. Center should be about 4 to 6 inches below your eyes. it should be larger with right brightness and Contrast. Wear spectacle advised by your doctor.
- 11) Use some others method like yoga ,Pranayama, Dhyana (meditation)for improvement in concentration, it will reduce headache and muscular pain in CVS.

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Genes and Modern Disease: Predicaments of Modern Nutrition

Dr. Rahul A. Jadhav

Assistant Professor,

Dept.Of Swasthviritta,

Late B.V.Kale Manjara Ayurved Medical College & Hospital,Latur

Abstract

Contemporary humans are genetically adapted to the environment that their ancestors survived in and that consequently selected their genetic makeup. Since the agricultural revolution some 10,000 years ago, the lifestyles and dietary requirements of modern humans have changed dramatically. It is suggested that these changes have occurred too recently on an evolutionary time scale for the modern human genome to adapt. Therefore, our ancestral genome is ill-suited for our current modern consumption and existence, and thus contributes to diseases associated with contemporary lifestyles, such as cardiovascular disease, obesity and type 2 diabetes. It is therefore suggested that a diet similar to our ancestors could circumvent many of our modern illnesses and serve as a reference for better nutrition, health, and longevity. Although this model should certainly be commended for its simplistic dietary practices that no doubt improve health and well-being; its premise is cemented in the thrifty genome hypothesis and the fact that humans are modern hunters and gatherers whose genome is ill-suited for modern diets. This is a disjointed view of modern humans and our ability to evolve under different eco regions and nutritional pressures through post-genomic and post-transcriptional changes in our genome. Accordingly, a major challenge associated with nutritional research is to understand how these changes in our genome reflect on our nutrition habits and lifestyles to ameliorate many of our modern lifestyle diseases.

Keywords: Paleolithic, hunters & gatherer, type 2 diabetes, thrifty genome, epigenetics .

Introduction

The survival of Homo sapiens throughout evolution depended on a number of critical factors. These included the procurement of shelter and food and the ability to adapt to a dynamic and unpredictable environment through gradual changes in the genome over many generations [1,2]. In this context, humans have evolved as highly-developed Hunters and Gatherers (HG) beginning more than 2 million years ago and continuing to about 10,000 years ago; a time which heralded the dawn of agriculture [3]. Since the beginning of the agricultural revolution (and thus less than 1% of Homo evolutionary time) it is suggested that the human genome has remained essentially unchanged [4,5]. It is proposed that during the Paleolithic era, the feeding habits of HG would have been challenged by punctuated times of famine and feast, leading to the assumption that humans traits were selected for during the Paleolithic period [6]. Accordingly, since the agricultural revolution, our principle metabolic and physiological processes have not had the evolutionary time to adapt to the major dietary changes introduced during this period [3-5]. Thus, the traits of our ancestors are outpaced by cultural change and therefore modern humans exist in an environment for which the HG genome is ill-suited [2]. This discordance between our ancestral genetics and the advent of changes in nutritional activity associated with a contemporary lifestyle could be responsible for many of the so called "civilized" disorders associated with insulin

resistance including obesity, cardiovascular disease and diabetes. It is therefore proposed that a Paleolithic diet characterized by higher protein levels, less total fat, more essential fatty acids, & higher fibre could serve as a reference standard for modern human nutrition because it is increasingly acknowledged that low rates of cardiovascular disease and other related disorders such as type 2 diabetes have been observed among more contemporary HG [6,7].

Insulin Resistance and Our “Primitive” Genome

Over five decades ago, Neel [7] suggested that insulin resistance evolved as an adaptive trait to help survive in primitive times during cycles of famine and feast. In fact, the ability to specifically modulate metabolic responses to insulin is evolutionarily conserved in insects, worms, and vertebrates, including humans [8]. Neel noted “during the first 99 per cent or more of man’s life on earth, while he existed as a hunter and gatherer, it was often feast or famine” [7]. Accordingly, carriers of this “thrifty” genotype would have a selective advantage over less ‘thrifty’ genotypes. Neel proposed that a ‘thrifty’ genotype would be “exceptionally efficient in the intake and/or utilization of food” [7]. Consequently, during times of famine, the ‘thrifty’ genotype would allow for increased fat storage and thus represent a survival advantage over a less ‘thrifty’ genotype [2]. While this thrifty genotype would have been beneficial during times of regular famine, it would also pose a liability in modern westernized societies that have regular access to food sources [9]. Accordingly, sedentary lifestyles and positive caloric imbalances through the selection of highly processed foods rich in carbohydrates, are suggested to be implicated in a discordance between our ancestral genes and modern circumstances leading to the dysregulation of ancestral homeostatic processes and contributing to modern diseases such as obesity and type 2 diabetes [1,2,7,10].

Support for this hypothesis comes from several reports; for example studies with diabetic Australian aboriginal peoples noted an improvement in glucose tolerance, insulin sensitivity and the blood lipid profile with a relatively short (7 weeks) implementation of the traditional HG diet of beef, kangaroo, fish, turtle, vegetables and honey: 50% protein, 40% fat, and 10% carbohydrate [11]. Similarly, in a clinical trial on normal healthy sedentary subjects that consumed a Paleolithic diet (lean meat, fruit, vegetables and nuts) for 10 days, there was an observable improvement in blood pressure, a decrease in insulin secretion, an increase in insulin sensitivity, and an improvement in blood lipid profiles [3]. Equally, in a randomized cross-over study of three months duration, diabetic patients receiving a Paleolithic diet (lean meat, fish, fruit, vegetables, root vegetables, eggs, and nuts) showed a reduction in body weight, BMI and waist circumference, lower HbA1c, TAG and diastolic blood pressure, and an improvement in glycaemic control [12]. These studies are further supported by Lindeberg et al. [13] who reported that patients with ischemic heart disease concomitant with glucose intolerance or type 2 diabetes had a large improvement in insulin sensitivity and glucose tolerance when receiving a Paleolithic diet. Even in non-human studies the Paleolithic diet has been successfully used as a model to explain modern disease. For example, pigs fed a cereal-based swine feed or cereal-free Paleolithic diet consisting of vegetables, fruit, meat and tubers, conferred higher insulin

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sensitivity, lower C-reactive protein and lower blood pressure when compared to pigs on the cereal-based feed alone [14].

Our Dynamic Genome

While these kinds of studies in humans have heralded a major paradigm shift by incorporating a decidedly evolutionary interpretation of contemporary diet and health, and the rise in incidence and prevalence in obesity and diabetes, the evolutionary discordance model assumes that our current genome has hardly changed from that of our ancestral genome [6]. Although we can argue about exactly how our ancestors ate and lived, it is clear that the time we have spent in agrarian settlements rather than as HG is miniscule within the span of human evolution. In Paleofantasy, biologist Marlene Zuk [15] suggests that there is a strong body of evidence that our genome has gone through many changes since humans spread out across the globe and developed agriculture and therefore it is difficult to determine a single way of eating to which we were, and remain, best suited. For example, Thompson et al. [16] observed large allele frequency differences between African, Americans and non-African populations and distance from the equator for a variant of the CYP3A5 gene, designated CYP3A5*1/*3. The CYP3A subfamily of cytochrome P450 genes catalyzes the metabolism of endogenous substrates that include bile acids, steroids, and environmental carcinogens such as pesticides [16,17]. It was suggested that this rare variant CYP3A5*1/*3 is implicated in salt and water retention and a risk for salt-sensitive hypertension [18]. Interestingly, the frequency of the CYP3A5*1/*3 allele increased with distance from the equator with the lowest frequency in sub-Saharan Africa, and highest in European and East Asia populations [18].

Human populations use a variety of subsistent strategies to exploit a broad range of ecoregions and dietary needs, and most certainly there is a wide physiological and morphologic variation among populations, some of which is most undoubtedly modified by genetic adaptations to local environments and dietary requirements [19,20]. In this context, Hancock et al. [21] tested the idea that cold and heat stress exerted strong selective pressures on the biological processes underlying common metabolic disorders. They examined the patterns of genetic variance in 82 candidate genes for common metabolic disorders across 52 globally dispersed populations in order to understand if climate played a role in shaping genotypic variation. These studies identified several generic Single Nucleotide Polymorphisms (SNPs) that had significant spatial patterns with climate variation. For example, signals of spatially varying selection for nonsynonymous SNPs were found at the Fatty Acid Binding protein 2 (FABP2) gene. The derived allele at SNP rs1799883, which increases strongly with latitude, was found to increase affinity for long-chain fatty acids, and is consistent with its role in protection against cold temperatures by increasing BMI and fuel for heat generation [21]. In addition, this SNP is also associated with insulin resistance, increased fasting insulin concentration, fasting fatty acid oxidation, and reduced glucose uptake [22,23].

Similarly, in a large genome-wide scan for signals associated with very recent positive selection Voight et al. (2006)[20] it was noted that there were strong signals of selection in the Alcohol Dehydrogenase (ADH) cluster in East Asians. Moreover, genes

involved in carbohydrate metabolism such as mannose metabolism (MAN2A1 in Yoruba and East Asians), sucrose (SI in East Asians), and lactose (LCT in Europeans); and genes implicated in the metabolism of dietary fatty acids including long-chain fatty acid transport protein 4 and peroxisome proliferator-activated receptor delta (SLC27A4 and PPARG in Europeans), carnitine/acylcarnitine translocase (SLC25A20 in East Asians), nuclear receptor coactivator 1 (NCOA1 in Yoruba), and leptin receptor (LEPR in East Asians) also showed strong signals of selection.

Other more recent examples of genetic adaptation due to dietary specialisation include variations in the lactase gene, a trait that is believed to be advantageous in agro-pastoral populations where milk is a major staple of the adult diet, and variations in the amylase gene in agricultural populations that rely on high starch diets as their major staple [24,25]. Similarly, Hancock et al. [19] provided evidence for several SNPs that show concordant differences in allele frequencies across populations that live in the same geographic region, but that differ in their ecoregions, dietary status, or mode of subsistence. These authors identified several strong associations with polar ecoregions, with foraging, and diets rich in roots and tubers. Moreover, several of the strongest signals overlap with those implicated in energy metabolism, and include SNPs associated with influencing glucose levels and susceptibility to type 2 diabetes. Furthermore, several changes in pathways associated with starch and sucrose metabolism were enriched which suggests adaptations to a diet rich in roots and tubers. Among the genes with strong signals in these pathways were several involved in glycogen synthesis and degradation, and liver enzyme hydrolyzes (β -D-glucoside and β -D-galactoside) which may be involved in the detoxification of plant glycosides, such as those found in roots and tubers. The polar ecoregions displayed changes in pathways associated with energy metabolism such as pyruvate metabolism, glycolysis, and gluconeogenesis and suggests a link between adaptations to cold tolerance/stress and energy metabolism.

These studies have reasonable experimental power to detect recent adaptations and it is therefore feasible that most of the genetic signals coincide with the transition to agriculture and animal farming [26]. One mechanism in which natural selection might act on selection specificity to diet for example could be through the targeting of specific gene regulatory components such as promoters, enhancers, etc. Consistent with this notion, Haygood et al. (2007) [27] compared the rates of evolution along the human lineage between a promoter region and nearby intronic sequences. They compared the rates of nucleotide substitutions in the promoter and intronic sequences between human and chimpanzees and identified several cis-regulatory regions of genes known to be involved in neural development and in nutrition, particularly glucose metabolism, evolved at faster rates than introns. They therefore suggest that human adaptations, particularly to changes in diet, have ascended primarily through cis-regulatory regions [27].

In summary, it appears that we may not be at the mercy of our ancestral genetic makeup, and therefore it may be possible to overcome our genetic destiny by implementing specific life style choices. Accordingly, in a rapidly changing environment, it is suggested that the adaptation of a DNA sequence to specific changes is a slow process [28]. Thus, the flexibility for rapid adaptation to the environment is therefore facilitated by

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mechanisms that allow for the modification of a phenotype by epigenetic programming [28].

Gene-Nutrient Interactions: Epigenetic Programming

Our human diet has undergone profound changes in the last five decades and this trend is likely to continue and become more complex well into the 21st century. The nutrient composition of the human diet varies between populations and geographical regions and ethnicity plays a large role in the type of food sources that are consumed [29]. There is a growing awareness of the importance and impact of diet and nutrition on health, but there is little understanding on how these changes affect our genetic 'make-up' and contribute to disease processes.

Primarily, there are three types of nutrient-gene interactions: direct interactions, genetic variations, and epigenetic interactions [29]. Direct interactions typically involve a nutrient that interacts with a receptor usually a transcription factor that is implicated in modulating gene transcription. A classic example of this is the Liver X Receptor (LXR) family of nuclear receptors that are activated by cholesterol and bile acids and facilitate reverse cholesterol efflux and lipogenesis [30,31]. Genetic variations include SNPs that are known to influence nutrient requirements. For example, functional SNPs in the inflammatory genes TNFA, IL-1 and IL-6 have been reported to interact with dietary fatty acids to regulate the production and secretion of cytokines, predisposing an individual to inflammation and altering obesity [16,17]. Epigenetic interactions involve nutrients that can alter the structure of DNA (or of histone proteins in chromatin) so that gene expression is chronically altered. Studies have successfully demonstrated effects on DNA methylation of alcohol, the B vitamins, protein, and micronutrients [29]. In this context, epigenetic changes facilitated by dietary nutrients are emerging as a critical determinant of an organism's response to its environment and biological functionality and disease susceptibility [25].

Epigenetics describes the characteristics of heritable changes in gene function that occur independently of changes in the DNAs nucleotide structure or sequence [32]. At the most basic level, epigenetics is about information that is present in the genome, independent to that coded in the DNA sequence of nucleotides [29]. Epigenetic change may be directly influenced by diet leading to changes in health status, or 'programming' the epigenome so that it responds to nutrients throughout the lifetime of the organism. Moreover, it has recently been demonstrated that the epigenome is highly dynamic and changes in response to aging, physical exercise, and nutrients for example [29,32]. Epigenetics is emerging as perhaps the most important mechanism whereby the diet and nutrients can directly affect the genome and thus the modulation of gene expression [28].

Epigenetics is also under the influence of time and the way in which processes can impact on the epigenome to result in epigenetic 'foot-prints' that can persist for variable amounts of time and thus, influence future metabolic function and health outcomes [29,33]. For example, in one landmark study, the recruitment of individuals who were prenatally exposed to famine during the Dutch Hunger Winter (1944-1945) had, six decades later, epigenetic changes in the IGF2 gene (a key factor in growth and

development) when compared to their unexposed, same sex, siblings [34]. The association was specific for preconceptional exposure, and thus, strengthens the hypothesis that early development is a crucial period for establishing and maintaining epigenetic marks [34]. Thus, nutritional factors at critical stages in life can result in relatively stable epigenetic marks that persist over decades and therefore affect health outcomes, not only for the individual, but also through heritable developmental epigenetic changes during pregnancy to the offspring. For example, global DNA methylation analysis has detected regions of the DNA that are highly variable in methylation status in human subjects, some of which were consistently associated with BMI over time [35].

Accordingly, extensive human epidemiological data have indicated that prenatal and early postnatal nutrition can influence adult susceptibility to diet related diseases including obesity, cancer, heart disease and type 2 diabetes [33,34,36]. For example, studies on seasonally occurring diets in women from rural Gambia identified seasonal variations in methyl-donor nutrients around the time of conception that influence several plasma biomarkers that predict increased/decreased methylation at metastable epialleles (MEs) [37]. Moreover, maternal BMI was also predictive of systemic infant DNA methylation at MEs, and is significant in the perspective of identifying potential markers associated with offspring adiposity and changes in energy homeostasis. Developmental programming such as in these examples is thought to be an evolutionary advantage for the offspring genome to be optimally programmed in response to the maternal environment before birth so that it is metabolically prepared for its new environment after birth [29]. This concept suggests that the early life environment influences offspring characteristics later in life, including the predisposition to develop diseases associated with metabolism [38]. Moreover, to add another level of complexity, it is known that individuals can respond differently to the same dietary intake. For example, dietary cholesterol can cause changes in plasma cholesterol that is dependent on the individual [39-41].

Dietary factors can also alter the post-translational modification of histones and thus alter chromatin structure to influence gene transcription. Zhang et al. (2012) [42] showed that, in rats when fed a high fat diet, some developed obesity while others displayed an obesity-resistant phenotype. These authors demonstrated induction of senescence and aging pathways in obese rats via p16INK4a and p21Cip1 is associated with histone modifications (acetylation and methylation). Similarly, the offspring from rats fed a low protein diet during gestation showed a decrease in the expression of the cell cycle regulator p21 in the mammary gland which was associated with a histone modification at the promoter of the p21 gene [43]. These authors suggest that a maternal protein-restricted diet during pregnancy may alter cell cycle control in offspring and thereby predisposing them to the risk of developing breast cancer.

Accordingly, nutrition's greatest challenge will be to establish basic protocols and principles that are amendable to improving health in all individuals, with the goal of maintaining good health and prevention of disease. Epigenetics will no doubt provide some of the answers to these challenges; however, nongenomic factors are also intimately involved in an individual's response to nutrients, their health status, and risk of

disease [34]. Clearly, nutrition during both the pre- and early post-natal life can programme persistent changes in health and vitality into adulthood. Therefore, understanding the impact of diet on the post-genomic and post-transcriptional processes, taking into account heritable epigenetic traits, are needed to understand personalized diet and ongoing health and longevity.

Conclusion

It has become increasingly popular among many professional communities that consuming a diet similar to our ancestors has enormous therapeutic health benefits over that of more westernized diets consisting predominately of highly refined foods. It is suggested that the human genome has not evolved since the agricultural revolution and therefore, diseases associated with modern lifestyle changes such as cardiovascular disease, obesity and type 2 diabetes is concomitant with our ancestor genome being ill-suited to these modern nutritional processes. While modern disease is undoubtedly associated with poor nutrition habits and reduced physical activity, it is unlikely that thrifty genes are the only explanation for this phenomenon. In fact, we now know that the genome has continued to evolve, and at times, rapidly, in response to environmental and nutritional pressures through genomic SNPs and epigenetic programming. While the evolutionary thrifty gene model has provided a valuable framework for understanding human nutrition in the context of evolution, the assumption that modern culture has outstripped our ancestral genes and therefore is the fundamental cause of westernized disease has resulted in a fragmented view of our ability to adapt to different nutritional pressures and ecoregions and how our dietary patterns can lead to dynamic changes in the genome that affect the health status, of not only our offspring, but well into our adult life many decades later.

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Based on Original article by Stephen Myers and Sheridan Williamson

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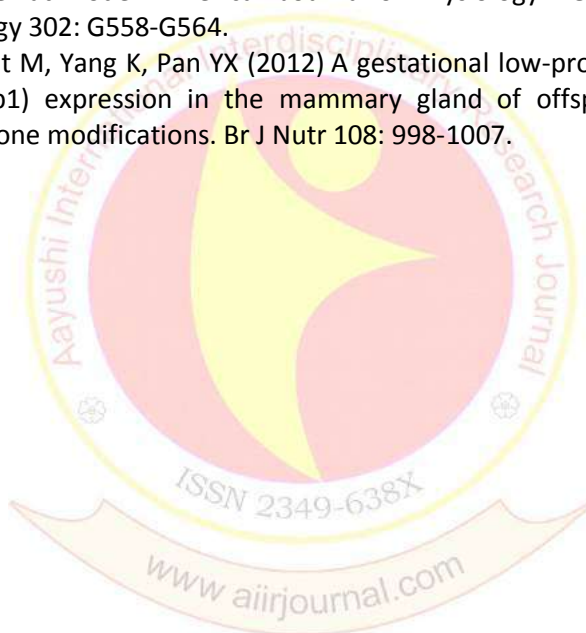
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Study of Twacha Sharir in Vyanga (Chloasma)

Dr.Savita Bharati

P.G. (Scholar),
Dept. of Rachana Sharir,
Late. B.V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Dr.D.N.Bandapalle

Assistant Professor,
Dept. of Rachana Sharir,
Late. B.V. Kale Manjara Ayurved Medical
College & Hospital, Latur

Abstract: Ayurveda is an ancient medical science in our ayurveda, panchagyanendrias,

1. Played important role, out of that sparsendriya
2. Is one of the most important sense organ.

Literary study of twacha according to modern and ayurvedic science. Detailed study of twacha layer by layer with respect to colasma is also study by comparative study of vyanga. About 25% of peoples suffering from vyanga is in the age group of 20-35yrs. and 60% females are more prone to this vyanga is mainly seen in pitta prakruti patients.

Human skin is outer covering of body which protects us. Skin can store fat, water, chloride & sugar it can also store blood by the dilation of blood vessels. Vitamin D3 is synthesized in the skin by the action of ultra violet rays on cholesterol. Skin plays important role in water and electrolyte balance. The main aim of this study is to observe the changes of twacha in vyanga.

Introduction

The skin is considered as the largest organ of the body and has many different functions. The function of skin is thermoregulation, Metabolic function sensation etc. Ayurveda is one of the best and reliable medical sciences. The main principle of ayurveda is to protect our health.

Skin is divided into two main regions the dermis and epidermis, each providing distinct role in overall function of skin. Human skin is outer covering of body which protects us from temperature, regulation, sensation, excessive sweating from body etc.

Skin has different layers which was described in different ways accordingly to their classification, concepts enumeration regarding ayurvedic and modern contemporary science.

Twacha Sharir is explained layer by layer in Brihatrayi and Laghutrayi. Sushruta also described all seven layers, their thickness and diseases according to them.

Chloasma is one of the diseases occur due to increase the hyper pigmentation and raised melanocytes in epidermal and dermal layer of skin.

According to Ayurveda chloasma is compared to vyanga, occurs mainly due to vitiation of, pitta dosha and kapha dosha.

Aims and Objectives

Aims- To study the twachasharir in vyanga.

Objectives-

- To study the literature of *twachasharirin* ayurveda and modern science.
- To study the layers of twacha with reference to vyanga.
- To study the diseases affected by the layers of skin specially second layer.

Review Of Literature

Skin formation :

तस्य खलु एवम् प्रवृत्तस्य शुक्र शोणिततस्यभिपच्यमानस्य ।।
क्षीरस्येव सन्तनिकः सप्तत्वचो भवन्ति ।। (सु.शा. ४/४)

Sushtura described the process of formation of Twacha in the developing foetus. He says that after fertilization of ovum Twacha develops just like a cream on the surface of milk in the uterus during the course of development of Garbha.

Charaka described Twacha as the Matruja Bhava (Maternal factor) which is one of the six Bhavas essential in the development of foetus.

Vagbhata described the formation of Twacha due to Paka of Rakta Dhatu by its Dhatvagni in the foetus. After Paka, it dries up to form Twacha, just like the deposition of cream over the surface of boiled milk.

Table: Showing Layers of the skin according to Sushruta

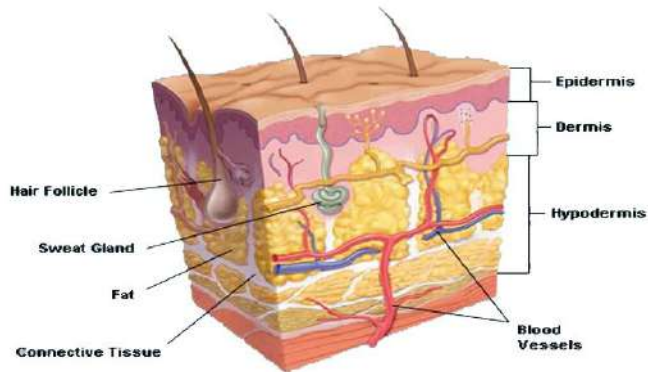
Name	Thickness	Disease
1.Avabhasini	1/18 th of vreehi (0.05 to 0.06mm)	Sidhma, Padmakantaka
2.Lohita	1/16 th of Vreehi (0.06 to 0.07 mm)	Tilakalaka, Nyaccha, Vyanga
3.Shweta	1/12 th of Vreehi (0.08 to 0.09 mm)	Charmadala, Mashaka, Ajagallika
4.Tamra	1/8 th of Vreehi (0.12 to 0.15mm)	Kilasa, Kushtha
5.Vedini	1/5 th of Vreehi (0.2 to 0.3mm)	Kushtha, Visarpa
6.Rohini	1 Vreehi (1 to 1.1 mm)	Granthi, Arbuda, Apachi, Shlee pada, Galaganda
7.Mamsadhara	2 Vreehi (2 to 2.1 mm)	Bhagandara, Vidradhi, Arsha

Sushruta has described seven layers of skin along with the specific names. He has also mentioned the thickness of each layers along with the diseases which reside in the respective layers. Where as Sushruta and Dalhana mentioned 2nd layer is the adhishtana for Vyanga.

Sharangdhara has also mentioned seven layers of skin along with the probable onset of diseases. The names of first six layers are same as Sushruta but a seventh layer is

named as “Sthula” which is the site of Vidradhi. He has mentioned the location of vyanga to 2nd layer of skin i.e. Lohita.

Kashyapain Shareerasthana, 6 layers of twacha has been mentioned. Bhela mentioned 6 layers of twacha



Vyanga

The disease vyangam is described under kshudrarogaprakarana.

Kshudraroga = swalpavyadhi

Kshudrarogaprakarana includes all those diseases whose dosha, dushya, etc, have not been described in detail. Hence all the diseases in the kshudrarogaprakarana are in concise form.

Kshudrarogas have a simple hetu, lakshana and chikitsa. So, they are called as kshudrarogas. Some of the skin diseases are mentioned under kshudrarogas. Vyanga is one amongst them.

There is difference of opinion regarding the total number of kshudrarogas.

According to Susrutha – 44, Vagbhata – 36, Madhavakara – 43, Sharangadara – 60, Yogaratnakara – 44

“Yasyaprakupitahpittahshonitahprapyashushati”

“Krodhayasaprakupithovayuhpittanasamyuta”

“Shokhakrodhahikupitadvathapittanmukha”

Vata, pitta, rakta, krodha, shoka and ayasa are the main etiological factors which Cause the vyangam. Vyanga is a skin disease, so any skin disorder would have the same nidanaKaranas as for kusta, therefore the nidanakranas for kusta are being considered..

Modern Review of Chloasma

Synonyms : melasma, mark of pregnancy liver spot.

Definition- Chloasma is an asymptomatic acquired condition of hyper pigmented masucular lesion, develops slowly & symmetrically over molar areas, bridge of nose and

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forehead more commonly seen in female than male & is not accompanied by inflammation of any other systemic symptoms.

The symptoms of melasma are dark, irregular well demarcated hyperpigmented macules to patches commonly found on the upper cheek, nose, lips, upper lip, and forehead. These patches often develop gradually over time. Melasma does not cause any other symptoms beyond the cosmetic discoloration. Melasma is also common in pre-menopausal women. It is thought to be enhanced by surges in certain hormones.

Materials & Methodology

Before starting any research work it is necessary to list out the materials, required & the methods use of for research.

Sources of data: Two types of materials are used for present study.

a) Clinical study-

b) Literary study-

a) For clinical study Patients are selected from OPD of our college hospital.

b) Literary:

Required literary information for the study are taken from both the Ayurvedic & modern textbooks & they are updated with recent journals of both faculties.

c) Exclusive criteria:

- Patient with secondary systemic involvement.
- Patient suffering with other systemic disorders like renal failure, diabetes hyper tension etc.
- Associated with any other system & metabolic disorders are excluded because, they may change the results of observation.
- Patients below 15 years and above 45 yrs. are excluded

d) Inclusive criteria:

- Patients with classical sign & symptoms of *vyanga* are selected.
- Patients belong to age group between 15 to 45 yrs.

Diagnostic Criteria: According to the clinical features of *vyanga* cases are diagnosed they are

1. Patches over cheeks.
2. Light brown pigmentation.
3. *Shyavam* (dark brown pigmentation).
4. *Neerujam* (painless patches).

Study Duration:

For -30 days .

Follow up - also 30 days.

Observation

1) Sex-wise Distribution

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Table No. 1) showing the sex of the *vyanga* patients.

Sex	No. of Patients	Percentage
Female	19	63%
Male	11	37 %

2) Distribution of patients according to age.

Table No. 2

Age in years	ANE	EXPO	ANC	NR	Total	Percentage.
20-30	05	04	06	00	15	50%
30-40	02	02	00	00	04	13.33%
40-50	03	02	06	00	11	36.66%
Total	10	08	12	00	30	100

3) According to E.S.

Table No. 3 Results by Economical status in *Vyanga*

Economical Sttus	ANE	EXP	ANC	NR	Total	Percentage
Poor	03	04	02	00	09	30 %
Middle.	05	05	07	00	17	56.6 %
Higher class	02	00	02	00	04	13.3 %
Total	10	09	11	00	30	100

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Discussion

Table No. 1 showing the sex of the *vyanga* patients.

Table no.1 shows the sexwisedistribution of 30 patients,out of that 19 are female and 11 are male patients due to insufficien t diet, harmonalchanges,occurs so females are more affected than males.

Table No. 2 Distribution of patients according to age.

Among the 30 patients 15 patients are in between the age group of 20-30 years (50% out of this 5 are anemic. 4 works in sunlight so more prone to exposure and 6 are anc. 10 patients are i n between the age group of 30-40 years 13.33%) out of which 2 Anemic, 2 works in exposure and 6 are Anc. 05patients are in between the age group of 40-50 years. (40 %)out of this 3 are anemic and 2 are in exposure in this study.

Table No. 3 Results by Economical status in *Vyanga*

Above table shows the economical status of the patients.

Among 30 patients 9 (30%) are under poor class out of this 3 are suffering from anemia,4 works in sunlightand 2 are pregnant . 17 (56.6%) are of Middle class out of this 5 having less haemoglobin, 5 are working so more prone to sunlight,dust, and 7 are anc. 4 patients (13.3) are from Higher class out of them 2are anemic and 2 are anc in this study.

Summary: This study is entitled with study of twachasharir in *vyanga* comprises under headings.

- Introduction
- Aims
- Objectives
- Review of Literature
- Observation n& Discussion

Literary study of twacha according to modern and ayurvedic science. Detailed study of twacha layer bylayer with respect to colasma is also study by comparative study of *vyanga*.

Conclusion

- 1) *Vyanga* is the disease caused by the vitiation of *pitta* and *kaphadoshas*.
- 2) *Vyanga* is mostly seen in females than males.
- 3) *Vyanga* disease occurs mainly in middle age i.e 30-40 years.
- 4) Female patients are seen in the age group of 40-50 years,mostly menopausal stage starts in this age,so females having harmonal imbalance are prone to *vyanga* skin disease.
- 5) Economically poor class peoples suffered due to in adequate diet.
- 6) Duration of disease also study here,more chronic patients that is they are suffering from *vyanga* since more than two years are seen in this study.

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Scientific Basis And Role Of Various Panchakarma And Allied Procedures In The Management Of Pakshaghat W.S.R To Hemiplegia

Dr.Sumol Mohanrao Bhosale

PG (Scholar)

Dept.Sharir Rachna ,

Late B.V. Kale Manjara Ayurved Medical

College & Hospital. Latur

Dr.Andand M. Pawar

MD (panchakarma) IPGT &RA, GAU,Jamnagar

Associate Professor and HOD (Panchakaram Dept.)

Late B.V. Kale Manjara Ayurved Medical

College &Hospital,Latur

Abstract :

Ayurveda is a complete science which not only cure the disease but helps to prevent the disease In present paper we are going to discuss various Ayurved procedures mentioned for the treatment of pakshaghata w.s.r. hemiplegia introduction, ayurved literary review of pakshaghata and modern aspect of hemiplegia will be discussed then various panchakarma procedures like virechana,basti and nasya their local and systemic actions along with scientific basis will be discussed. There are various allied external procedures mentioned in classics like snehan,swedana , pindasweda,shirodhara, shirobasti .In present paper their scientific basis also discussed and highlighted at last summary and conclusion will be made for further study and scope.

Keynotes : pakshaghata ,panchakarma ,snehana, swedana ,murdhataila

Introduction:

Vatvyadhis are the most difficult vyadhis to treat and cure .pakshaghat is amongst one of them, vitiated *vat* dosha derange the function of *sira* and *snayu* which affects the locomotive functions of one side of the body including upper and lower limbs either left or right side called *vam* and *dakshin pakshaghata* respectively .this vyadhi can be correlated with hemiplegia.it occurs due Hypertension and cerebrovascular consequences called stroke.Stroke is one of the emerging life threatening condition 80% of the time it results into hemiplegia.it causes severe burden on society,it causes socio-economical and emotional burden.It need proper management and prevention.in modern science there is basic management for stroke which helps to restore life and proper circulation to brain and vital organs but consequences of stroke like paralysis of limbs which affects the normal functions of daily routine, though physiotherapy offers various encouraging results but still patients functional debility resides and patient unable to regain its normalcy.

In ayurveda there are lot of medications and therapeutic procedures which helps to regain the normalcy by means of improvement in locomotive functions of limbs also general health of the patient is get improved and patients mental strengths also get boosted in present article we are going to highlight the scientific understanding of various *panchakarma* and associated therapies useful in the treatment of *pakshaghata* w.s.r. hemiplegia.

Aims and objectives:

- 1.To study the various therapeutic procedures mentioned in ayurved for the treatment of *pakshaghata* w.s.r. to hemiplegia

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- 2.To understand the scientific basis for the *panchakarma* procedures mentioned for the treatment of *pakshaghata* w.s.r to hemiplegia
- 3.To understand the scientific basis of allied external procedures mentioned in ayurveda for the treatment of *pakshaghata* w.s.r to hemiplegia

Conceptual Review:

Ayurved review:

Pakshaghata : Vitiated *Vata* seizing the vessels, affecting the function of one side of the body and constricting the veins afflicts the right or left side of the body, producing loss of movement, pain and loss of speech. It comes under *Vata* vyadhi (Ekanga roga) its synonyms are Pakshavadha, Ekangavata , ekangrog .

Causative factors for *pakshaghata* are

1)**Aharajanya** : Excessive intake of *annadravya* which are *Ruksha, Shita, Laghu* in *Guna*, *Alpa Anna Sevana, Langhana* and *Ama*. *Vijayrakshita* says that *Ama* causes *Prakopa* by *Avarana*.

2)**Viharajanya** : *Ativyavaya, Atiprajagarana, Atiplavana, Ativyayama, Dukhashaiyya, Dukhasana, Divaswapna, Vegadharana* and *Atiadhva*.

3)**Manasa** : *Atichinta, Shoka, Krodha* and *Bhaya*.

4)**Agantuja** : *Abhighata, Marmaghata, Gaja apatamsana, Ushtra aptamsana, Ashwa apatamsana* and *shigra yana apatamsana*. Here *Vijayrakshita* gives one more meaning of the word '*Apatamsana*'. He says that besides '*Patanam*' and '*Dhatuksharana*' it also means '*Ucchvasarodha*' i.e. difficulty in inspiration caused by riding on elephant, camel, horse or other fast vehicle.

5)**Miscellaneous** : *Vishama Upachara, Dosha Atisravana, Asruka Atisravana, Dhatu Sankshaya, Rogatikarshana* and *Riktasrotasa* are other *nidana* of *Vatavyadhi*

Rupa (sign and symptoms)

Vama or *Dakshina Pakshahanana* along with *Chestanivriti* :(Loss of voluntary movements, hallmark of this disease,*Ruja* (Pain),*Vakstambha* :(Aphasia or Dysarthria), *Anyatra Pakshahanana,Sandhi bandha vimoksha*(debility and joint weakness), *Akarmanya,Acetanam* (loss of sensation or consciousness), *Sira Snayu Vishosha*(atrophy) , *Daha, Murchchha, Shaitya, Shotha.etc*

CHIKITSA(Treatment protocol):

SHAMANA (palliativetreatment), *SHODHANA* (purificativetreatment), *PATHYAPATHYA* (dietary advisory),*MANAS* (counseling)*SNEHANA* (oleation massage),*SWEDANA*(sudation), *VIRECHANA*(purgation) , *BASTI, NASYA, MURDHATAILA*

Modern review:

Hemiplegia: Hemiplegia means loss of strength or voluntary movement on either side of body.

Etiology- Sequel of Cardio Vascular Accident,Thrombus, embolus or hemorrhage.

Cerebrovascular Accidents.

Sudden onset: Vascular (thrombosis,embolisand hemorrhage), intracranial infections, trauma, hysteria

Gradual onset: Tumor, hematoma, infections, congenital defects-
Transient hemiplegia- Ischemia, post epileptic, hysterical, ms,

Sign and symptoms-

Unconsciousness with flaccidity of limbs, Loss of movements and speech, Muscles are stiff and overly contracted any (spastic hemiplegia) or conversely soft and flabby (flaccid hemiplegia), Pain, Aphasia, Disorders of the sphincters-urinary incontinence or urinary retention, fecal incontinence is still. Behavior problems like anxiety, anger, irritability, lack of concentration or comprehension, depression

Treatment protocol:

Pharmacological ,Surgical ,Physical therapy,Rehabilitation Occupational Role of *Panchakarma* and Associated Procedures in *Pakshaghata*

Material And Methods :

Individual scientific assessment of panchakarma procedures done with the help of classical n scientific references and clinical experience.

Basic scientific understanding of allied procedure had been done with the help references and clinical experience detailed description of therapeutic importance of procedures had been given

Scientific evaluation of various procedures:

A-Snehana-Bahya Abhyanga (Massage), Sarvanga And Shiroabhyanga

Mode Of Actions:

- A-THERMAL
- B-MECHANICAL
- C-CHEMICAL
- D-EMOTIONAL

Effects:

Vascular and lymphatic circulation get improved and restored at musculoskeletal system

Due to increase in vascular circulation there is supply of nutrients get increased to systems and organs As circulation get increased the excretion of waste also get increased from various organs and systems (clearance)

Due to massage there is stimulation to muscles and nerve endings which in turns helps to improve the motor and sensory activities Tendons and muscles get activated due to massage

Due to medicated oil used for massage Penetrating action, soothing effects , irritation and stimulation at neuromuscular junction helps to reduce pain ,relieve contractures and improve motor activities of the limbs

Role of process-methods of massage

Various traditional massaging methods are applied in procedures which acts on on arteries, veins ,lymph nodes, muscles, tendons, ligaments, cartilages and nerves. There are certain special points called *Marma* and specific techniques (Accupresure) also stimulated during procedure which in turn helps to improve motor and sensory functions

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B-Swedana:

It is a therapeutic process in which various fomentation techniques are used for the sudation purpose .various drugs are used in this process by direct boiling and make a steam or heating them.

Mode of action and Therapeutic effect Circulation at respective system improves, Excretion get increased Nutrition get improved Stimulation and Activation at muscles, tendons and nerve endings helps to improve motor and sensory functions.

Sankar Sweda-Pinda Sweda:In this process a specific massage is done by heated medication are made in the form of bolus and covered by cloths and used to do massage over affected parts .Drugs used and the methodology used in this process helps to improve nerve activities ,it gives strength to muscles and tendons,it also provide nutrition to muscles

Shashtik Shali Pinda Sweda:Action – Due to specific drugs and grains used in this process actions of massage and sudation along with that nutrition and stimulation get observed .

Nirgundipatra Pind Sweda:Action-massage and sudation does stimulation and activation of nerve tissue, reduction of pain and stiffness, avoids rigidity and contractures

C-Murdhataila:

A process in which specific therapeutic massage done and keeping of oil or pouring of medicated oil over head and forehead is done for specific duration.

Shirobasti And Shirodhara

Stimulation and Activation to nerve cells and tissues,Reduces cerebral congestion and infarcts , Restores circulation,Stimulates regeneration of nerve cells,Reduce anxiety and depression, Helpful in hypertension and Induces sleep.

Panchakarma procedures used in pakshaghata:

1-NASYA: a process in which medicated oil drops are introduced inside the nostrils after massage and fomentation over head and face.

Role of nasya process:

Various drugs in the form of medicated oil,churna ,decoction and plant juices are used which having certain medicinal values which helps to stimulates and activates the brain tissues and improves central nervous functioning

Modus operandi of nasya:

Effect on Neuro – Vascular Junction:

The lowering of the head,Elevation of lower extremities,Fomentation of face.These procedures seem to have an impact on blood circulation to the head. As the efferent vasodilator nerves are spread out on the superficial surface of the face which after stimulation at surface of the face, by fomentation may angender the increased blood flow to the brain, i.e. momentary hyperemia. On this ground, it can be stated that the modus operandi of Nasya Karma has a definite impact on central neurovascular system & likely lower the blood brain barrier to enable certain drug absorption in the brain tissues.

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Effect on Neuro-Endocrine level:

The peripheral olfactory nerves are chemoreceptor in nature. This olfactory nerves differs from other cranial nerves, except optic nerve, in its nature of phylogenetically closely related to brain. The drugs for *nasya* having aromatic compounds and pharamones which get absorbed and stimulates various centers inside the brain and having therapeutic importance.

Effect of Neuro-Psychological levels:

The adjacent nerves called terminal nerves which run along the olfactory are connected with limbic system of brain including hypothalamus (Hamilton 1966). This limbic system is also concerned with behavioural aspect of human being, besides control over an endocrine secretions. Thus, certain drugs administered through nose may have an impact on immediate psychological functions by acting on limbic system through olfactory nerves such a phenomena has been revealed in the work of Cowley et al (1975).

Effective drugs absorption & transportation:

Keeping the head in lowered position & retention of medicine in naso pharynx help in providing sufficient time for local drug absorption. Any liquid soluble substance has greater chance for passive absorption directly through the cell of lining membrane. On the other hand, massage & local fomentation also enhances the drug absorption (Fingl 198). The later course of drug transfusion can occur in two ways –

1. By systemic circulation
2. Direct pooling into the intracranial region.

This direct transportation can be assumed again in two paths, viz.

- By Vascular path
- By Lymphatic path

Importance of Post *Nasya* Massage on baroreceptors :

The texts have recommended light massage on the frontal, temporal, maxillary, mastoid & on Manya region. A comfortable massage on the above regions may help to subside the irritation of somatic construction due to heat stimulation.

It may also help in removing the slush created in these regions. However, interesting here is regarding Manya which is a *Marma* existing in neck on either side of the trachea which likely correspond to the carotid sinuses of the neck. Pressure applied on the baroreceptors may bring the deranged cerebral arterial pressure to normalcy (Hejmadi S. 1985).

2-Basti:

Basti is a process in which medicated oil or medicated decoction made in combination with medicated drugs ,salt, honey ,medicated oil and medicated pastes given in the form of enema to the patients

- 1-Role of *basti* process.
 - 2-Role of drugs used and their specific combination (Anuvasan and Niruha *basti*)
- Scientific aspect of enema / rectal administration of the drug

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Action on Three different locations.

- Effects on the contents of the colon-Enconic
- Effect exerted on the tissue of the colon Endconic
- Systemic action for which the term-Diaconic.

Basti Actions

Action on colon as mentioned above ,Digestion-Nutrition.(Gastro colic reflex)
Absorption of drugs–Therapeutic.,Evacuation-Metabolic waste (toxins) as purification.
(Action in relation with purification and evacuation of toxins.) It Harmonizes the VIP
Production.

Vaso Active Intestinal Peptides (VIP's)

Action on ENTERIC NERVOUS SYSTEM. (Gut contains Millions Neurons like that of
the Spinal Cord Major Neurotransmitters like Serotonin, histamine, Nitric oxide are in the
Gut. CNS & ENS are communicated by a cable called VAGUS NERVE)

Action on bacterial flora.(B12),Action through Enterogastric reflex.,Action on
sacral Flexus,Bladder .

Colon Therapy- colonic irrigation irrigation

3-Virechana :

It is process in which medicated drugs given for the purpose of purgation by
following internal oleation for few days and metabolic waste excreted out through rectal
route

Action and effects

Systemic effects due to internal oleation and massage and fomentation after it
having systemic effects ,Local evacuation due to process metabolic waste get evacuated
through rectal route ,Physician induced mild inflammation at gut -changes permeability
,Drugs accelerate the passage of food ,Drugs increase GI motility and stimulates intestinal
wall to excrete out more toxins for evacuation.

Observation:

By understanding the scientific basis and clinical experience regarding importance
of panchakarma procedures and some external procedures in *pakshaghata* w.s.r to
hemiplegia.it has been observed that all these procedures are important and proved to
be helpful to cure the disease

Summary:

In present article basic scientific understanding of *panchakarma* procedures and
allied external procedures had been explained in detail, introduction regarding
pakshaghata and hemiplegic diseases and its prevalence had been given.

Aims and objectives of study defined, detail explanation of *panchakarma*
procedures like *virechana,nasya* and *basti* given in detail,allied procedures
abhyanga,pindsweda and *murdhatail* had been discussed with scientific basis at last
conclusion made on study ground .

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Conclusion:

There are various therapies and procedures mentioned in ayurved classics for the treatment of pakshaghat w.s.r to hemiplegia

Pancharma processes like *virechana, basti* and *nasya* having scientific basis to apply and having role in the treatment of *pakshaghata* by acting on various levels like brain and musculoskeletal system by evacuating toxins and systemic purification

Various allied procedures like *snehana, swedana, pindasweda, shirodhara, shirobasti* having scientific basis and action on neuromuscular junctions, circulation and musculoskeletal system.

Various drugs used in above procedures also having scientific basis and direct action on CNS and musculoskeletal system

Ayurved medicaments used in processes proves beneficial to prevent further deterioration, maintain general health thus helpful to improve the condition as whole. acts as rejuvenator, as antioxidants and nutritive.

Thus Ayurveda can provides encouraging results in various neurological conditions. like hemiplegia, paraplegia, MND, etc.

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Anatomical Study Of Garbhashayagriva WSR To Garbhashayagrivagata Vrana (Cervical Erosion)

DR. Anjali Shivalal Nichale

PG (Scholar)

Dept.of Rachana Sharir

Late B.V.Kale Manjara Ayurved Collage
& Hospital, Latur

Dr. Abhijit B. Patil

Associate Professor,

Dept.of Rachana Sharir

Late B.V.Kale Manjara Ayurved Collage
& Hospital, Latur

Abstract:

Due to today's life style women are facing multiple disorders. Certain disease may not be life threatening but troublesome and irritating to an individual in day to day routine activity. Cervical erosion is one among them increasing day by day and common condition of all the age group. It is asymptomatic in initial stage but later on it progresses to show many symptoms like white discharge, itching, dyspareunia etc. It is a benign condition but if left untreated may lead up to infertility and predisposes to cervical malignancy.

To understand this disease, it is necessary to understand anatomical consideration of yoni i.e cervix.

Introduction

The health of nation mainly depends on the health of woman because woman is the centre point of a family, society, Nation & the World. She has to intersperse many functions like achievement of conception, child birth etc. That's way reproductive health is as important as other aspect of health. Due to today's life style women are facing multiple disorders. Certain disease may not be life threatening but troublesome and irritating to an individual in day to day routine activity. Cervical erosion is one among them increasing day by day and common condition of all the age group. It is asymptomatic in initial stage but later on it progresses to show many symptoms like white discharge, itching, dyspareunia etc. It is a benign condition but if left untreated may lead up to infertility and predisposes to cervical malignancy. .

To know proper etiopathogenesis & management of any disease, the Knowledge of normal anatomy and Physiology of concerned system is extremely essential. Here the subject GarbhashayaGrivamukhagatvrana is related to yoni. To understand this disease, it is necessary to understand anatomical consideration of yoni i.e cervix.

Cervix is the lowermost part of the uterus it extends from the isthmus & end at the external os which open in to vagina.

Aim: Anatomical study of Garbhashayagriva.w.s.r to garbhashayagrivaGatavrana(cervical erosion)

Objective

- 1) To Study the Garbhashayagriva (cervix) as per Ayurved & modern science
- 2) To Study cervical erosion as per ayurved & modern view.

Need of Study

- 1)As has been stated the cervical erosion is common cause of which discharge from the vagina which ultimately lead to psychological problem in the ladies. Indirectly the cervical erosion also causes infertility in the women. Hence it is great problem in today.
- 2)In modern science cervical erosion has been described extensively but none of treatment provided is satisfactory.

Review of Literature

Anatomy of Garbhashayagriva

In the Ayurvedic classics female system is referred by word “yoni”. Especially in description of Yonivyapad as yoni is described as ‘Tryavarta yoni’ i.e. having three avartas.

शंखनाभ्याकृतियोनिस्र्यावर्ता सा प्रकीर्तिता ।
तस्यास्तृतीयेत्वातर्ते गर्भशय्या प्रतिष्ठिता ।। (सु.शा.५/५५)

Means female genital system having three parts from outside to inwards.

- 1st Avartaapatha patta or vagina
- 2nd Avarta Garbhashaya greeva or cervix
- 3rd Avarta Garbhashaya or uterus

Among this Garbhashayagriva is considered to be in 2nd avarta.

According to modern science cervix is the lower most part of the uterus it extends from the isthmus and ends at ext. os which open into the vagina.

Length of cervix 2.5cm, it is narrow and cylindrical part of the uterus. The cervix projects through the anterior wall of the vagina which is divided into two parts.

- 1) **Portio vaginal's**: It is the part the cervix which protrudes into the vaginal vault & Comprises the lower half part of the cervix.
- 2) **Supra vaginal protion**: upper half part of cervix is termed as the supra vaginal portion.

Cervical Erosion:

There is no direct reference regarding the cervical erosion in ayurvedic classics, but it can be considered one among the twenty yonirogas explained by charaka & susruta.

After going through the detailed description of vrana & the characteristic features of cervical erosion i.e. srava etc. it can be coined as GarbhashayagrivaGataVrana. It shows many symptoms like white discharge, itching, dyspareunia etc. From pathological view point, GarbhashayagrivaGataVrana resembles with pittaja and Kaphajayonivyapad due to its signs and symptoms. But vrana is most acceptable since it is showing similar character. TwakMamsagataVrana can be taken as cervical erosion by their adhishthana as yoni and symptom as srava.

The similarity between Vrana and GarbhashayagrivaGataVrana are

- Causes of vrana i.e. Nija and Agantuja
- Srava, vrana and associated symptoms.

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Formation of Erosion :

In the active phase of erosion, squamocolumnar junction moves out from the os due to inflammation, infection, trauma, hormonal changes, changes in pH results into swallowing of squamous epithelium.

It becomes very delicate gradually it goes off viz. continuing process leading to "Erosion".

Materials & Method:-

Materials:-

- 1) Review of garbhashayagriva from various Samhitas.
- 2) Literature such as various research papers, journals & different text of modern science will be referred.
- 3) 30 number of patients will be taken for my research project.

Method:-

1. Type of study - Anatomical study
2. Separate case paper Performa & Questionnaires will be prepared as per need.

Given data will be Statistically analysed & presented

Inclusive Criteria:-

1. Selection of patient will be done on socio-economical status.
2. Female of age group between 20 to 48 years.

Exclusion Criteria:-

1. Female age below 20 years & above 48yrs.

Observation:

Distribution Of 24 Patients According To Age

Age group (years)	Total	%
20-29	13	54.16
30-45	11	45.83

From the observation it was noticed that maximum no. of patients were from the Age group of 20-29 year as 54.16% followed by from Age 30-45 years i.e. 45.83%

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Distribution Of 24 Patients according To Education

<i>Education</i>	<i>Total</i>	<i>%</i>
Graduate	2	8.33
Secondary school	5	20.83
Primary school	14	58.33
Illiterate	3	12.5

Education wise distribution showed maximum no. of patients i.e. 58.33% of patients were having education up to primary school level and 20.83% of patients were educated up to secondary school level. 8.33% of patients were educated upto graduation and out of all 12.50% of patients were illiterate.

Distribution Of 24 Patients According To Gravida

<i>Gravida</i>	<i>Total</i>	<i>%</i>
Primipara	1	4.16
Multipara	21	87.5
Nullipara	2	8.33

The above table shows 87.5% patients were having multipara, 8.33% patients were nullipara and 4.16% patients were primipara

Distribution Of 24 Patients According to Chief Complaints

<i>Chief Complaint</i>	<i>Total</i>	<i>%</i>
Yonitaha Srava	23	95.8
Yonitaha Kandu	17	70.83
Katisula	20	83.33
Yonitahadaha	14	58.33

Maximum no. of patients i.e. 95.8% were suffering from yonitaha srava and 83.33% of patients were suffering from Katisula 70.83% patients were having yonitahadaha

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Discussion

Cervix is lower most part of uterus. It is considered as IInd avarta among three avartas. Explanation about Garbhashayagriva in Ayurvedic and modern perspective then Vrana concept has been considered. Characteristic feature of cervical erosion that is srava and vrana are considered for the diagnosis of Garbhahsayagrivayata Vrana. The Vrana proper and youni vyapada are taken into consideration.

Similarly there are no direct reference of Garbhashayagrivagata Vrana but havintrrg similar signs and symptoms of cervical erosion, Vrana and Yoni vyapada can be correlated.

Age wise distribution - showed that patients who were registered for the present study were aged between 20-45 years age groups. Most of the patients were belonging to the age groups of 20-29 yrs i.e. 54.16% and followed by 30-48 yrs. i.e. 45.83% of patients. The high incidence of cervical erosion between 20-29 years may be due to estrogenic effect, which is dominant during the child peak pre-reproductive age. Among them former one causes hormonal imbalance where as later one causes local irritation to cervical tissue and net effect is cervical erosion. This period according to Ayurveda is the period of Pitta dominance and also regression of Kapha dominance i.e. border line period of Kapha regression and Pitta dominance. Naturally dominant condition of dosas in body, helps in the formation of such a pittakaphaja disease.

Education wise - distribution showed more number of patients i.e. 58.33% of patients were having education up to primary level, 20.83% of patients were educated up to secondary level, 8.33% patients were illiterate. This clearly indicate that the lack of perfect knowledge about hygiene and lack of awareness about health condition among this group.

According to chief complain -wise distribution short look on incidence of symptoms revealed that main symptoms of cervical erosion or Garbhasaya grivagata Vrana was yonitahasrava was found in 95.8% of patients. Symptoms like yonikandu, Yonidaha, Mutradaha also with Katisule incidence in 70.83%, 58.33% 16.66% 83.33% of patients respectively. All firms the cardinal symptoms of cervical erosion. As cervical erosion is Vrana (of cervix) it is obvious thing it gives off Srava in the form of P/V discharge. That Vrana is mainly due to Kapha Pitta vitiation that's why due to Kleda irritation to leads to itching at vulval parts.

Burning due to vitiated Pitta and alongwith excoriated skin due to which itching appears. In the later stage symptom like burning micturation appears. In modern view if any infective foci present in the genital system due to compact nature of urogenital system retrograde (ascending infection take places presenting as a burning micturation.)

According to Gravida- Data showing obstetric status showed that incidence of cervical erosion was found to be high in multipara patients (87.51%). It is well known fact that physiologically during the pregnancy cervical erosion is commonly seen.

Repeated hormonal changes though it may be due to physiology e.g. pregnancy, they results in cervical erosion. In the same way once cervical erosion presents e.g. in

pregnancy it takes due time to heal meanwhile that process of harmonalinharmony repeats. according to Ayurvedic , it is clear that due to repeated deliveries vata vitiates and also excessive strain or trauma to cervix during labour makes Khavaigunyata which ultimately turns into erosion.

Summary

This study entitled with Anatomical study of Garbhashayagreevaw.s.r to garbhashayagreevaGatavrana (cervical erosion) comprises under headings

- A. Introduction
- B. Aims and objectives
- C. Review of literature
- D. Materials and Methods
- E. Observations and Results
- F. Discussion
- G. Summary Conclusion

Conclusion

From the conceptual study and detailed discussion following conclusion can be drawn Garbhasayagriva in IIndavarta is a part of uterus.It is 4 angula in length. It is made up of 3 extra pesi.Explanation about Garbhasayagriva in Ayurvedic and modern perspective then Vrana concept has been considered.

There is no direct reference of GarbhasayagrivagataVrana. But considering signs and symptoms of cervical erosion, Vrana and Yonigyapada can be correlated. There is much similarity between Vrana and GarbhashayagrivagataVrana as

- Cause of VranaAgantuja and Nija
- Srava, Vrana and associated symptom

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Treatment Protocol for Gridhrasi- Sciatica

Vd.Sujata Sampatrao Ghuge

PG (Scholar) Rachana Sharir
Dept. of Rachana Sharir,
Late B. V. Kale Manjara Ayurved
Medical College & Hospital,Latur

Dr.Aruna S.Rupnar

Assistant Poffessor,
Dept. Rachana Sharir,
Late B.V.Kale Manjara Ayurved
Medical College & Hospital,Latur

Abstract

According to Ayurveda, there are 80 types of Vaat vyadhi , sciatica is one of them now due to altered life style, late night job, eating fast foods, addiction to tobacco , alcohol, smoking, long time sitting and standing jobs are main reason for altering the function of dosha. Gridhrasi disease is correlated with Sciatica. Sciatic condition is a result of aggravation of Vayu and excess physical strain. Sciatica is characterised by pain spreading from hip, gluteal region, thighs, knee, legs and to the feet, stiffness.

Ayurvedic treatment include Snehan, Swedan, Mridu Samshodhana, Basti, Shiravyadha /Rakta-mokshana, Agni karma. Ayurvedic Medicine include Yogaraj guggulu, Gokshuradi guggulu.

Keywords : Gridhrasi; Sciatica.

Introduction:

Sciatica is nerve pain from irritation of the sciatic nerve. symptoms are leg pain, tingling, numbness, weakness that radiate along the sciatic nerve from the lower back to the buttocks and leg. The pain is caused by irritation or compression of the sciatic nerve. It is observed that in this disease, the patient's gait is altered as his leg becomes tense, and slightly curved due to pain. Ultimately, the patient walks similar to the walk of a vulture. Hence the name Gridhrasi. Common causes are intake of Vata aggravating factors like peanut, masur, chana, pigeon pea, Excess intake of dry, light and cold food, astringent food. Heavy weight lifting, long walk, improper lie or sitting position. Suppression of urine, feces . Depend on Dosha imbalance , Sciatica is of two types- 1. Vataj Gridhrasi, 2. Vata Kaphaja Gridhrasi.

Conceptual Study :

Ayurvedic Management :

As it is one among Vata disorders ,

Sneha –application, sprinkling or pouring of oil over the affected area may be carried out .

Swedana- tub bath, pizichil. sudation with oil added medicated herbal pastes,

Application of poultice are beneficial.

Mridu Samshodhana- mild purgation is preferred.

BASTI, SIRAVEDH, AGNIKARMA. Formulations useful are Yogaraja guggulu, Gokshuradi guggulu, Kishora guggulu. This treatment gives good result in Gridhrasi patient.

Material and Methods:

All classical texts and modern text available in library, various references regarding Gridhrasi are studied.

Ayurvedic texts are studied and applied as basic holistic approach of snehan karma along with swedan, basti, siravedh, and drugs.

Discussion:

Gridhrasi is a shoopalpradhana Nanatmaja Vata-vyadhi, intervening with the functional ability of low back and lower limbs. In this disease onset of Ruk (pain), Toda (numbing pain), and stambha (stiffness) is initially in kati (lumbosacral region)

And radiates distal to prista, janu, jangha, till paada. Arundutta in his commentary defined clearly that due to vata in kandra (tendon) the pain is produced at the time of raising leg straight and it restricts the moments of thigh. According to Ayurved and Modern science the main cause is aggregation of Vaat Dosha and the main symptom is pain. For this snehan is best. Oil has property to reduce pain and vata shaman. The important clinical test for diagnosis of sciatica known as SLR.

Restricted SLR test consolidates the diagnosis clinically and even the illness can be confirmed by imaging techniques. Prolapse of intervertebral disc, external mechanical pressure and degenerative changes of the lumbar spine are the commonest cause for sciatica. In Charaka Samhita, *Gridhrasi* is counted as a *Swedana Sadhya Vyadhi* and *Basti Karma* also indicated in *Gridhrasi Roga*.

Conclusion:

From above conceptual study it is clear that gridhrasi can be correlated with sciatica disease. Treatment modalities mentioned in Ayurveda classics like snehan, swedana, mrudusamshodhana, basti, siravedh etc. are proved to be beneficial in the treatment of gridhrasi. Further clinical studies on this subject need to be done and evaluated

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Jalauka: A Friend Of Vaidya

Dr. Laxmikant B.Pethkar

P.G.Scholar Final Year Dept.of Rachana Sharir,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Dr.Sunil V.Mulje

Professor & HOD P.G.Dept.of Rachana Sharir,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Abstract

Jalaukacharana is a type of rakthamokshana therapy, which helps to eliminate vitiated dosha and toxins that accumulate in the body. Leech application removes some toxins accumulated in the body. Leech application has been recognised and used for medicinal purposes since ages to treat the pittaj diseases of rakta.

Jalaukaavacharana gives quick relief in Raktadushtijanya Vikaras and Vatavyadhis. Every medical practioner should made aware about Jalaukaavacharanavidhi

Key Words: Jalauka, rakthamokshana, rakta pitta

Introduction

Acharya Sushruta the father of surgery has detailed explained about the Jalauka and wide applicability of this magical creature in about 600 B.C. Medical leeching is presently one of the brightest stars dazzling in the sky of medical field.

Leeches are most specialized annelids. About 300 species of leeches are known to occur in the tropical and temperate part of the world. Most of the leeches are found in fresh water while some in marine water. Most of leeches are ectoparasites, living on blood of vertebrates.

The leech that we are applying in our practice highly resemble with Hirudinaria medicinalis. Leech application has been recognised and used for medicinal purposes since ages to treat the pittaj diseases of rakta. Jalaukaavacharana is considered as one of the parasurgical procedure.

Here we are aimed to overview the jaluka in detail.

Aims & Objective: To overview the creature of Jalauka.

Review & Literature:

Detail information regarding Jalauka Avacharana Vidhi are well explained by all Acharya, Acharya Sushruta, Acharya Charaka, Acharya Vagbhata. In Sushruta Samhita explanation regarding Jalauka Vidhi, Types of Jalauka are well explained. Sushrut has mentioned two types of Jalauka ; i. Savish Jalauka i.e. poisonous leech, unfit for medicinal purpose , ii. Nirvish jalauka i.e. non-poisonous leech, fit for medicinal purpose.

Materials & Method :

Material – Jalauka

Method :

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Purvakarma: Person should be sit or lie down on examination table. Body part where you wanted to apply Jalauka that part should be well dry with the help of cotton piece.

Pradhan Karma : Healthy Jalauka should be take and apply on that part. After application of Jalauka, head of the Jalauka should be covered with the help of wet piece of cloth. If person feel Toda, Kandu then Jalauka should be removed. Jalauka should not be removed artificialy from applied part. After sucking of impure blood Jalauka gets detached.

Paschat Karma : After removal of Jalauka Shatadhauta Ghruta should be anointed and tide bandage should be done to prevent the bleeding.

Observation & Result:

Before application of Jalauka to the patient, paste of Sarshap and Haridra should be applied on the body of Jalauka. It is also recommended to make a small incision over the site of its application to facilitate its application.

Appearance of wave like movements over the body of Jalauka indicates that it is sucking blood. Jalauka should be allowed to suck blood till it continues to suck the dooshit blood. Appearance of symptoms like mild pricking sensation and itching at the site of bite indicates that Jalauka is now sucking the pure blood.

When these symptoms appear, then Jalauka should be removed from the body by putting some salt over the mouth of Jalauka. It has also been advised to induce Vaman to the Jalauka by squeezing the Jalauka from tail to head end after removal from the body of the patient

When person feel kandutoda at that Jalauka applied part then Jalauka should be removed with the help of sprinkling of salt. Tide Bandage should be done on applied part for prevent bleeding. Jalauka purification done in haridra water.

Discussion:

Jalaukacharana is a type of rakthamokshana therapy, which helps to eliminate vitiated dosha and toxins that accumulate in the body. Leech application removes some toxins accumulated in the body. Leech application has been recognised and used for medicinal purposes since ages to treat the pittaj diseases of rakta.

Jalauka is the major tool for the treatment of different Raktadushtijanya disorders.

Summery:

Since ancient time Jalauka were used by Acharyas for treeting various disorders. Ex. Kushta, Vidradhhi, Glucoma, etc. Jalauka is a soft body animal found in ponds and river. Jalauka is of two types, Savisha Jalauka & Nirvisha Jalauka. Jalaukaavacharanaprocedure should be done under supervision of qualified vaidya.

Jalaukaavacharana gives quick relief in Raktadushtijanya Vikaras and pittaja vyadhis. Every medical practioner should make aware about Jalaukaavacharanavidhi.

Conclusion: Jalauka vidhi provides comprehensive relief in Pittaj and rakta dusti vikaras. Jalauka helps improve the blood supply to the tissues and in the removal of vitiated pathogenic material accumulated in the tissues.

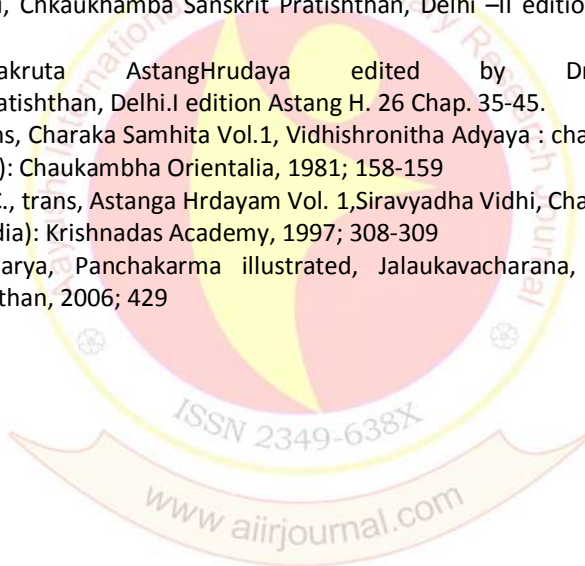
Jalauka possesses various pharmacological properties like antimicrobial, analgesic, mucolytic and thrombolytic.

Jalauka should be used after proper examination about Savisha & Nirvisha Jalauka. Jalaukavidhi is a OPD level parasurgical procedure

Research should also be encouraged to establish its uses and any possible complications associated with its use.

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Observational Study Of Anatomical Position Of Calculus And Its Symptom

Dr.Hanuman R.Kadam

P.G.(Scholar) first year, Dept.Rachana sharer,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Dr.Sunil V.Mulje

Professor & HOD,P.G. Dept.Rachana sharer,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Abstract

In this observational study we differentiat the diagnosis of calculus according to its symptom with material,methodology and data collection .the symptom of calculus varies according to the anatomical positon of calculus in urinary system. The symptoms varies according to the position of calculus in urinary system.

Key Words: Calculus, Mutrashmari, Mutravaha srotas.

Introduction:-

MUTRASHMARI is one of the most common disease in mutravaha strotas.Acharya sushrut has describe the detail about mutrashamri but the exact description about position of calculus is not maintioned.as per patients complaint we can randomaly diagnose it as mutrashmari but its position cant states.& due to improper diagnosis we cant treat Patient with proper manner.in ayurveda we see the detail symptoms about mutrashmari but here we differentiate the position of calculus according to the symptom.

Aims And Objectives: To study the anatomical position of calculus according to the symptoms.

Material:-

30 patients of mutrashamari having symptoms like abdominal pain, incontinence of urine(MUTRADHARA SANG) ,Haematuria(SARUDHIR MUTRATA)is taken for the study.

For diagnosis USG ABD PELVIS,KFT ,URINE ROUTINE MICROSCOPIC,CBC.X RAY ABD.

Methodology:

As we do the usg report we find the calculus in different position in urinary system hence we can understand the symptoms varies according to the position of calculus

All these patients having symptoms

Symptom	A	B	C
1-Abd.pain	+	+	+
2-Nausea	+	+	+
3-Haematuria	—	+	+
4-Fever with chills	—	+	+
A-Renal calculi			
B-Upper ureteric calculi			
C-Lower ureteric calculi			

Observations-

30 patients of above mutrashmari taken for study out of that 12 are male and 8 are females of age between 18 to 50.

As per above study we find the

14 patient of group A

06 patients of group B

10 patients of group C

Result-

As per above study we can see the symptoms of calculus varies according to its position in urinary system.

Summary-

In daily opd level we see the lots of patient of mutrashamari but calculus position cant state. As per this study we can differntiat the position of calculus.

Conclusion-

Symptoms of mutrashamari varies according to the anatomical position of calculus in urinary system

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Understanding Anatomy of Female Reproductive System W.S.R. to Vandhyatva

Dr. Jyoti Baburao Patil

PG Scholar,
Dept.of Rachana Sharir
Late B.V.Kale Manjara Ayurved Collage
& Hospital, Latur

Dr. Abhijit B. Patil

Associate Professor,
Dept.of Rachana Sharir
Late B.V.Kale Manjara Ayurved Collage
& Hospital,Latur

1. 'Abstract' :-

Female reproductive system is the most important system in the female body, because it reproduces a new life.

If there is any defect in the anatomy (mainly congenital) of any organ of the reproductive system it leads to female infertility which is a major source of personal misery in our society. So; it is a need to understand normal anatomy as well as abnormality of female reproductive system regarding with infertility.

According to ayurveda, infertility can be compared with Vandhyatva And causes of vandhyatva include suchimukhi yoni, antarmukh yoni, etc. Which can be compared with pin hole os, atresia vagina, etc.

Key Notes: vandhyatva, infertility, garbhashay, reproductive system. etc

2. Introduction :-

Female reproductive system is the most important system in the female body, because it's ability to give birth or reproduce a new life So; that it should be anatomically as well as physiologically normal.

If there is any defect or abnormality in any part of the reproductive system it causes female infertility.

Female reproductive system consist of many internal and external organs such as uterus, vagina, Fallopian tubes, ovary, vulva, bartholin's glands, etc. If there is any anatomical defect in the uterus, vagina, fallopian tubes, etc. it leads to female infertility.

According to ayurveda, infertility can be compared with vandhyatva. The common anatomical causes of vandhyatva are suchimukh; yoni, mahayoni, antarmukh yoni, etc. Which can be compared with pin hole os, uterine prolapsed, retroverted uterus, atresia vagina, etc.

4. Aim and Objectives :-

1. To study normal anatomy of female reproductive system.
2. To study anatomical defects of uterus, vagina, etc.
3. To study causes of vandhyatva according to ayurveda.
4. And it's comparison with female infertility.

5. Review of Literature :- According to Ayurveda, Infertility can be compared with vandhyatva. Anatomy of female Reproductive system (according to Modern)

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- Female reproductive system consists of external and internal genital organs.

- External genital organs are :-

1. Vulva
2. Labia Majora
3. Labia Minora
4. Clitoris
5. Bartholin's glands
6. Vestibule

- Internal genital organs are :-

1. Uterus
2. Fallopian tubes
3. Ovary
4. Vagina

Internal organs play important role in conception. So; it is necessary to understand their anatomy and defects regarding with infertility.

1. Uterus :-

i) The uterus is a thick – walled, muscular, hollow organ. Piriform

ii) Shape – shaped

iii) Dimensions – 3 × 2 × 1 inch Wt. – 30 to 40 gms.

iv) Parts :- (a) Upper part / body

(b) Lower cylindrical part – cervix.

v) Normal position – anteversion

vi) Applied Anatomy of the uterus :-

a) In some cases the uterus comes to lie in straight line with the vagina. It is called as 'retroverted uterus'.

b) Sometimes the uterus passes downwards into the vagina invaginating it which is called as 'prolapse of uterus.'

2. Fallopian tubes :-

1. They are tortuous ducts which convey ova from the ovary to the uterus.

2. Spermatozoa introduced into the vagina pass into the uterus and from there into the uterine tubes.

3. Fertilization usually takes place in the lateral part of the tube.

4. Applied Anatomy :-

a) Sterility – Inability to have a child is called sterility. The most common cause of sterility in the female is tubal blockage which may be congenital or caused by infection.

3. Ovary :-

1. The ovaries are the female gonads.

2. Ova are formed in them.

3. Each ovary lies in the ovarian fossa on the lateral pelvic wall.

4. Parts :- Each ovary has 2 poles –

a) Upper / tubal pole

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- b) Lower / uterine pole.
- 2 Borders – (a) anterior / mesovarian
(b) posterior / free border.
- 2 Surfaces – (a) lateral surface
(b) Medial surface
- 5. Applied Anatomy :-
 - a) ovarian cysts
 - b) CA of ovary
 - c) endometriosis

4. Vagina :-

- 1. The vagina is a fibromuscular canal, forming the female copulatory organ.
- 2. It is situated behind the bladder and to front of the rectum and anal canal.

* Female Reproductive system (According to Ayurveda)

According to Ayurveda; Garbhashaya'(uterus) is the most important organ of female reproductive system.

The shape of Garbhashaya is 'Rohit Matsyakruti.' And yoni is tryavartta (i.e. 3 layered)

- Infertility (According to Modern) :-

1. Definition :- "Infertility is defined as the inability of a couple to achieve conception after one year of unprotected coitus."

- 2. Types :-

- a. Primary infertility
- b. Secondary infertility
- 3. Causes of infertility in females :-
 - a) Ovarian Factors :- e.g. Anovulation
 - b) Tubal Factors :- Partial or complete bilateral tubal obstruction.
 - c) Uterine Factors :- Uterine absence, atrophy or hypoplasia, a uterine prolapsed
 - d) Cervical Factors :- Pinhole external os, Impenetrable cervical mucus
 - e) Vaginal Factors :- Atresia vagina.

- Infertility (According to Ayurveda) :-

According to Ayurveda; Infertility can be compared with vendhyatva.

- Vandhyatva is classified mainly in 2 types :-

- 1. Adivandhya (primary infertility)
- 2. Kak – Vandhya (Secondary infertility)

The causes of vandhyatva are also described in 'Yoni – Vyapad', like Shandhi yoni, suchimukhi yoni, mahayoni, etc.

1. षण्डी योनी :-

‘बीजदोषात्तु गर्भस्थमारुतोपहताशया ।

नृद्वेषिणी अस्तनी चैव षण्डी स्यात् अनुपक्रमा ।।’- च. चि. 30/34

2. सूचीमुखी योनी :-

‘गर्भस्थायाः स्त्रिया रौक्ष्याद् वायुयोनि प्रदूषयन ।

मातृदोषादणुद्वारा कुर्यात् सूचीमुखी तु सा ।।’च. चि. 30/32

Of which suchimukhi yoni can be compared with pin hole os, mahayoni can be compared with uterine prolapsed, etc.

6. Material :-

A) **Literary Research** :- Literary review of female reproductive system, stree – shareer, infertility and vandhyatva from various modern texts, ayurvedic classical text books.

7. Conclusion :-

From the study we can condude that female reproductive system plays important role in fertility. And it's abnormality can leads to infertility.

Infertility can be compared with vandhyatva. Because most of the causes of infertility are same as that of causes of vandhyatva.

So that treatment of vandhyatva mentioned in classsical ayurvedic texts can be very useful to treat infertility and can give best results.

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Anatomical Research Protocol For Janusandhi W.S.R To Knee Joint

Dr.Pratibha Purushottam Kulkarni

PG (Scholar) First year, Dept.Rachana sharer,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Dr. Sunil V Mulje

Professor & HOD,P.G. Dept.Rachana sharer,
Late.B.V.Kale Manjara Ayurved Medical
College And Hospital, Latur

Abstract :

Janusandhi is the most important sandhi having a major role of our day to day body activities. Now a days, a large number of individuals are suffering from Janusandhishool and specially having a painful and restricted movements.

Hence taking this fact in mind, I have planned to take research topic regarding the anatomical study of janusandhi according the Ayurvedic sanhitas and simultaneously according to the modern science. This research work will be done in two parts i.e in first part literary study of the topic will be done and in second part clinical study will be carried out

Key words: janusandhi,kneejoint,sandhi,sandhishool etc

Introducation:

Janusandhi is the most important sandhi having a major role of our day to day body activities.Now a days, a large number of individuals are suffering from Janusandhishool and specially having a painful and restricted movements.Janusandhi is classified under the korasandhi of sandhi prakaras described intently in different Ayurvedic classics as the region between Uru and Jangha .In Charak Sanhita shareer sthana, it is mentioned that Janusandhi are two in numbers while considering the sankhya shareera.The average measurement of Janusandhi is noted as fourteen anguli as girth by Acharya Sushruta , sixteen anguli as girth by Acharya Charaka and length is of four anguli.

In Modern Science Janusandhi is described as Knee Joint and it is the largest and most complex joint of the body.The complexity is the result of fusion of three joints in one. It is compound synovial and modified hinge joint.

Aims and Objective:

To Study the Janusandhi and Knee Joint according to Ayurveda and Modern Science in details .

Review of Related Literature

Anatomical study of Janusandhi as described In Ayurveda text and modern texts.

Definition of Sandhi : Etymologically the word Sandhi is taken from Sanskrit root Shabdakalpadruma.Meaning of the word sandhi is 'to unite' or a 'meeting point'.Sandhi can be considered as a union of two or more bones.

Number of Sandhis : Ayurveda classics shows difference of opinions regarding number Of joints presents in body due to various reasons.

CharakSanhita	200	,	AsthangHrudaya	200
SushrutSanhita	210	,	AsthangSangraha	210
Sarangdhara	210	,	KashyapaSanhita	381

Classification of Sandhis : According to range of movements-

- 1) Chestavanta A) Bahuchala B) Isatchala
- 2) SthiraSandhi

Anatomical classification of Joints : Sushrut Sanhita classifies the joints as follows

कोरोलूखलसामुद्रगप्रतरतुन्नसेवनीवायसतुण्मण्डलशंङ्खावर्ता :। सु.श. ५/२७

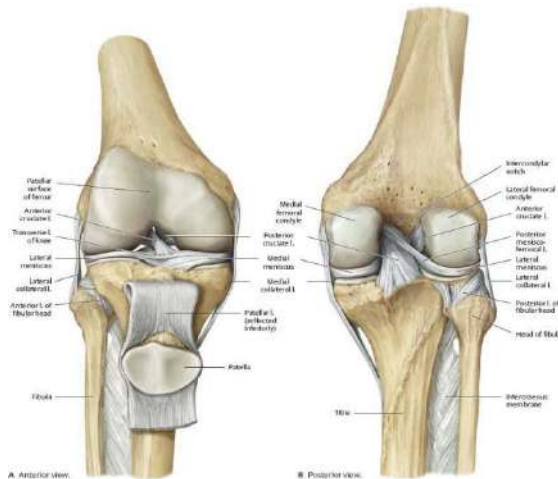
Kora Sandhi : This sandhi looks like a flower bud when seen in flexed condition of the joint from a distance that is why, it may be called as Kora sandhi, Kora means a bud.

Janu Sandhi : Janusandhi is classified under the korasandhi of sandhiprakaras described intensely in different Ayurvedic classics as the region between Uru and Jangha. In Charak Sanhita shareersthana, it is mentioned that Janusandhi are two in numbers while considering the sankhyashareera. The average measurement of Janusandhi is noted as fourteen anguli as girth by Acharya Sushruta, sixteen anguli as girth by Acharya Charaka and length is of four anguli.

जानुगुल्फवङ्क्षणेष्वेकैकः । २ सु.श. ५/२६
द्वे जानुनी, द्वे जानुकपालिके ...।३ चरक श. ७/६
षोडशाङ्गुलीप्रबाहू।४ च. वि. ८/११७

Knee Joint :

In Modern Science Janusandhi is described as Knee Joint and is the largest and most complex joint of the body. The complexity is the result of fusion of three joints in one. It is compound synovial and modified hinge joint⁵. Janusandhi shool may be co-related in modern science with osteoarthritis of knee joint. Human Anatomy by B.D. Chaurasia. Vol. II 7th Edition 2016



Methodology

A special case paper is designed for the case history in details with follow up. X-Ray readings and Densitometer parameters will be collected and evaluated simultaneously.

Research / Study design

Materials:

- A) **Literary Research** :Literary review of Janusandhi and Knee joint from various Ayurvedic and Modern Texts and internet articles related to the topic.
- 1) **Diagnostic Criteria** : Patients with the signs & symptoms of Janusandhishool is the main criteria for the diagnosis like
 - 1.Radiology, 2.Pain & Restricted movements, 3. Presence of crepitus,
 4. Tenderness.
- 2) **Investigations** :
 - X- Ray - AP & Lat. Views of knee joint.
 - Bone Density Measurements with the help of Densitometer.
 - Routine Blood Investigations with RA Test.

Radiological Assesment :

	Right Knee Joint	Left Knee Joint
Osteoporosis		
Reduced Joint Space		
Erosions		
Osteophytes		
Punch out markings		

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Evaluation Of Janusandhishool :

LAKSHANA / SYMPTOMS	GRADING				
	0	1	2	3	4
Shool / Pain & Tenderness					
Shotha / Swelling					
Gatrastabdhata					

Conclusion

Literary study of janusandhi according to Ayurveda texts and study of knee joint according to modern science has been done. Conclusion depending upon clinical study will be published thereafter.

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