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Sr.No	Title of Paper	FIRST /SECON D AUTHOR	Name of Author	Dept of Teacher	Name of Journal	Year of Public ation	ISSN NO	Link of recoganition in UGC enlistment of Journal	Name of the indexing database	Sign
	Critical Analysis of Yukti Pramana and Anumana Pramana in Charak Samhita	FIRST	Vd. Jayashree R. Vaidya	Samhita and Siddhanta	Satyanveshanam today.	2019	2395- 1826			
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1.	A Comparative Study on Two Methods Of Navasagar Shodhana	SECOND	Dr.Ninad Sathe	Rasashastr a & Bhaishajya Kalpana	WJPR	2019	ISSN 2277- 7105	Index Copernicus Google Scholar Socolar- china ISRA	
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15	Preparation of Bruhanmarichyadi Taila (Oil) and its conversion into an ointment.	SECOND	Dr. Ashvini Deshmukh	Rasashastr a & Bhaishajya Kalpana	Ayurved Patrika National Journal	2019	ISSN 2278- 0726		
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# A critical review of *Vyanga* w. s. r. to Melasma-A classical and modern approach.

# Namrata S. Kote<sup>1</sup>, Ashvini Y. Deshmukh<sup>2</sup>

<sup>1</sup>P.G. Scholar,

<sup>2</sup>Associate Professor,

Rasa Shastra and Bhaishajya Kalpana, Y.M.T Ayurvedic Medical College & Hospital,

Kharghar, Navi Mumbai, Maharashta.

\*Corresponding author: <u>kotenamrata30@gmail.com</u>

# ABSTRACT

In todays globalized era facial impressions has become very important to survive. Good Facial complexion with depigmented skin helps to Improve personality and selfconfidence. Various cosmetic disorders are occurring due to hectic lifestyle, dietary habits, increased pollution etc.

Vyanga is one of those cosmetological issues which affect one's facial beauty. Vyanga is classified as kshudraroga in classical texts which occurs due to vitiated vata and pitta dosha and characterized by the presence of Niruja and Shyavavarna mandalas on face. It is one of the most common problem as regards the face is concerned. On the basis of clinical features, it can be compared with facial melanosis, one of the hyperpigmented disorders.

Before treating any disorder it is very important to understand it by all means like by signs and symptoms, etiology, pathogenesis, classification to achieve a success in treatment.

Current article focuses to gather all of types, diagnosis, etiology, pathogenesis and treatment of vyanga according to both modern and classical view. **KEYWORDS** – Vyanga, Melasma, topical-internal-procedural treatment.

# INTRODUCTION-

The concept of beauty i.e. its maintenance and enhancement also cosmeceutics used for treating various cosmetic disorders is as old as human race. In those days mostly natural products were used to improve the beauty or to treat cosmetic disorders. Few years or decades back the use of chemical or synthetic cosmetic products was on the top. But again now-a-days peoples are returning towards the natural way of living, natural foods, organic farming and natural or herbal or ayurvedic cosmetics.

Modern depigmenting agents such as hydroquinone, kojic acid etc. although highly effective can raise several safety concerns e.g. ochronosis. atrophy, carcinogenesis, and other local and systemic side effects with long term exposure. Hence the appropriate use of granthokta medications for treatment of vyanga is definitely going to overcome such side effects due to modern

medications.

Also this study will be helpful to compare classical and modern point of vyanga i.e. melasma in each aspect of disease.

# AIMS AND OBJECTIVES-

- 1. To review and gather modern approach of vyanga.
- 2. To review and gather classical approach of vyanga.
- 3. To correlate both the approaches of vyanga.

# MATERIAL AND METHOD-

Materials used for this article was various classical texts –Brihatrayi, Laghutrayi, various Nighantu's and rasagranthas and modern texts, published journals, articles, books and websites etc.

# MELASMA ACCORDING TO MODERN SCIENCE-

Melasma is generally a clinical diagnosis consisting of symmetric reticulated hyper melanosis in three predominant facial patterns<sup>[1]</sup>

- 1. Centro facial- 50–80% of cases is the Centro facial pattern, which affects the forehead, nose, and upper lip.
- 2. Malar- restricted to the malar cheeks on the face. while mandibular melasma is present on the jawline and chin.
- 3. Mandibular- while mandibular melasma is present on the jawline and chin.
- 4. Extra facial- occur on non-facial body parts, including the neck, sternum, forearms, and upper extremities.

# Diagnosis-<sup>[1]</sup>

1. A Wood's lamp, the hyperpigmentation can be accentuated when the pigment is epidermal. How- ever, this accentuation may be seen with dermal or mixed melasma.

2. Reflectance confocal microscopy (RCM) is a non-invasive technique that detects pigmentary changes in melasma at a cellular level resolution.

# Epidemiology-

Melasma is а common acquired hyperpigmentary disorder, prevalence of which varies between 1.5% and 33.3% depending on the population. Its prevalence in pregnancy is around 50-70%. An Indian man represents 20.5-25.83% of the cases.<sup>[2]</sup> An Indian study of 312 patients with melasma found a 4:1 female to male ratio.<sup>[1]</sup>

# **Etiology-**

Several factors have been implicated in the etiology of melasma. These are genetic predisposition, UV radiation, thyroid disease, pregnancy, oral contraceptive pills (OCPs) and drugs such as phenytoin.<sup>[2]</sup>

# Pathogenesis-<sup>[3]</sup>

Multiple factors have been incriminated in the pathogenesis of melasma. The current concepts include.

# Increased melanisation

In melasma, there is no increase in the actual number of melanocytes. Melanocytes in lesional melasma skin are highly dendritic, and shows increased DNA synthesis in electron microscopic studies. Melanocytic activity is exaggerated resulting in increased formation, melanisation and transfer of melanosomes keratinocytes. to The melanosomes are also increased in size. Higher amounts of melanin are found in the epidermis and within macrophages in melanogenesis dermis. Increased associated genes and proteins are also found in the epidermis. In addition, there are high levels of tyrosinase-related protein 1 (TRP-1) mRNA indicating a regulating mechanism at the mRNA level.

# **Basal membrane damage**

This leads to falling off or migration of active melanocytes and melanin into the dermis and may be responsible for the persistent hyperpigmentation in melasma.

# Dermal microenvironment

Dermal inflammation caused by ultraviolet (UV) irradiation may activate fibroblasts, resulting in up-regulation of stem cell factors leading to increased melanogenesis.

# Vascular factors

Interactions between altered cutaneous vasculature and melanocytes influence the development of hyperpigmentation in the overlying epidermis. There is a significant increase in both number and size of the dermal blood vessels in melasma lesions. Melanocytes respond to angiogenic factors as they express increased number of vascular endothelial growth factor (VEGF) receptors.

# Neural factors

It has been reported that lesional melasma skin has increased expression of nerve growth factor receptors and neural endopeptidases thus paving way for various neural peptides to act as etiological factors.

# Miscellaneous

Stem cell factor, c-kit and mast cells may also have probable roles. Tranexamic acid has been found to prevent binding of plasminogen to keratinocytes, leading to a possible mechanism for treatment of melasma.

# Classification of Melasma-<sup>[2]</sup>

On the depth of melanin pigments it classify into 3 types.

1. **Epidermal-** It appears light brown in colour. In this type melanin deposit in basal and supra-basal layers of epidermis. In wood's light examination it shows

enhancement to contrast. It show good response to treatment.

2. **Dermal-** It is bluish gray in colour. In it melanin loaded melanophages seen in superficial and mid dermis. In wood's light examination it shows no enhancement. It responds poor to treatment.

3. **Mixed**-It is of dark brown coloured. There melanin deposition found in the epidermis and dermis. In woods light examination some area shows contrast enhancement. It shows partial response to treatment.

# Clinical assessment-<sup>[1]</sup>

- 1. Melasma Area and Severity Index (MASI) is a validated scale used to measure the extent of facial hyperpigmentation.
- 2. modified MASI (mMASI) is a global score that incorporates both objective data and patient's subjective assessment. It is now used in clinical trials.
- 3. Balkrishnan and colleagues created the Melasma Quality of Life Scale (MELASQOL). The scale consists of 10 questions pertaining to the quality of life and impact of the disease rated on a Likert scale.
- 4. Dermatology Life Quality Index (DLQI)
- 5. SKINDEX-16

# Treatment-<sup>[1]</sup>

Treatments for melasma include topical, oral, procedural, and combination treatments.

**Topical** - Iron oxide, Hydroquinone (HQ), Azelaic acid, Ascorbic acid, Kojic acid, Tretinoin, Corticosteroids, Ascorbic acid, Niacinamide.

**Oral -** Tranexamic acid, Polypodium leucotomos, Glutathione.

Procedures-chemicalpeels,Microneedling, Laser and Light treatment.REVIEWOFVYANGAASPERAYURVEDA-

According to the classical texts vyanga has been classified into " Kshudraroga". Aacharya charaka has mentioned vyanga as Raktapradoshaja vikara.<sup>[4]</sup> Vagbhata has mentioned vyanga in Raktavridhikar vikara.<sup>[5]</sup>

Aacharya sushruta has given **pathophysiology** of vyanga as-

"Due to anger and exertion vata dosha get vitiated and with help of pitta dosha this vata forms circular, painless, thin, bluish-black patches mostly on facial region."<sup>[6]</sup>

Besides sushruta has also mention that origin of vyanga occurs at second layer of skin Named "Lohita".<sup>[7]</sup>

From these references we can conclude that vyanga occurs mainly due to vitiated vata, pitta dosha and Rakta dhatu.

# **Classification of vyanga**-<sup>[8]</sup>

Vagbhatacharya has classified vyanga in four sub types according to dominance of doshas.

- 1. Vatika-Blackish coloured and rough in nature.
- 2. Paittika-Blue coloured in centre and copper coloured in periphery.
- 3. Kaphaja-Whitish in colour and itchy nature.
- 4. Raktaja-In centre copper and on periphery blood coloured associate with burning and tingling sensation.

# Review of vyangahar chikitsa-

Our classical texts has given scattered information related to vyangahar chikitsa. By gathering all those references we can classified this chikitsa as- 1. Shodhan chikitsa 2. Shaman chikitsa. [sep]1. Shodhan chikitsa-<sup>[9]</sup>

- Vaman
- Virechan
- Nasya (Bhringaraj swaras)
- Raktamokshan
- 2. Shaman chikitisa-

For Internal use-

- Gandhapashan churna<sup>[10]</sup>
- Somraji churna<sup>[11]</sup>
- Avalgujaadi gutika<sup>[12]</sup>
- Khadiroudak<sup>[13]</sup>
- Amrutankur vati
- Panchatiktaghrita Guggulu
- Mahamanjishthadi Kwath

# For external use-

From Charaka samhita -

1.	Varnya gana- (Chandana,
	Nagkeshar, Padmaka, Ushir,
	Yashtimadhu,
	Manjishtha, Sariva, Payasa,
	sita, lata.) <sup>[14]</sup>

From Chakradatta-<sup>[15]</sup>

1	Navaneeta + Guda + Madhu +
	Badarmajja lepa
2	Varuna twak with goatmilk
3	Jatiphala Kalka lepa
4	Katu taila abhyanga
5	Kaliyakadi lepa, Yavadi lepa
6	Haridradya Taila, Kanak taila,
	Manjishthadya Taila
7	Kumkumadi taila Prathama and
	Dwitiya, varnak Ghrita

From Sushruta samhita-<sup>[16]</sup>

1	Kshirivriksha twak lepa
2	Bala + Atibala + Yashtimadu +
	Haridra lepa
3	Payasya + Arkapushpi + Aguru +
	Chandan + Gairika lepa

From Ashtanga Hridaya-<sup>[17]</sup>

1	Kshirivrikshatwak and buds with
	milk lepa
2	Arjuna twak + manjishtha with
	Honey
3	Raktachandan + Manjishtha +
	Kushtha + Lodhra + Vatankura +
	Masura
4	Jiraka + Shahajiraka + Krushna tila
	with milk
5	Masura with ghrita and honey,
	Shalmalikantaka with milk
6	Matulunga + Kushtha with honey,
	shwetamusli + goat milk with honey
7	Jambu and amra patra + Dadhi +
	Haridra + Daruharidra + Nava guda
8	Utpalpatra + tagar + Priyangu
	+ Daruharidra + Badarmajja
	lepa or Snehasidha (Sneha
	according to season) with
	Yashtimadhu kwath as drava
	dravya.
9	Yava, sarjarasa, Lodhra, Ushir,
	Chandan, Madhu, Ghrita, guda
	processed in Gomutra
10	Manjishthadi Sneha

From Sharangdhar samhita-<sup>[18]</sup>

1	Matulungajata + Gosharita +
	Manashila + Ghrita
2	Vacha + Lodhra + Saindhava +
	Sarshapa
3	Ashvakhuramasi lepa
4	Vatapatradi lepa

From various Rasagrantha and other literatures-

1	Bhangapatra +	Shinshpa +	
	Sthavirmula	lepa,	
	Arkaksheera	+Haridra	
	(yogratnakar)		

2	Aranya tulsi root with goat milk					
	(v.m.r.)					
3	Ingudiphalamajja with cold					
	water, Tamradi Taila,					
	Krishnatildi lepa					
	(rajmartanda)					
4	Manjishthadi Taila (Vangasena)					
5	Makshika + Hartal + Tutha +					
	Rajavarta + Shilajatu + Mahishaksha					
	guggulu with milk, Dadimatwak with					
	honey (R.R.)					
6	Madhu + Siktha + Gairika + Ghrita +					
	Guda + Guggulu + Shalniryas					
	(Rasakamdhenu)					

# CONCLUSION

Though modern medicine has wide range cosmetics for of treating hyperpigmentation disorders, Ayurveda had already given more potent range of topical formulations for treating hyperpigmentation disorders like vyanga. This article had made an attempt to collect all such formulations from Ayurvedic literatures. also various clinical and in vitro trials had already been studied and published regarding this formulations. Besides. one can use various permutation and combination in this drugs and formulations also can convert them into suitable new dosage form for easy application, administration etc. This can help to bring such effective formulations to this globalized era and compete with modern can cosmeceuticals.

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- 17. Dr. Gadre G.K., Sartha

	vagbhata	Uttarsthan	32/15-32,
	Choukhar	nba	surbharti
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18.	Dr.	Tripathi	В.,

Sharandhara Samhita Uttarkhanda 11/9-15, Choukhamba surbharti prakashan, Varanasi.

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Remedial role of *ahara vidhi vidhan* in *swasthyarakshanam*-A conceptual study. Mamtora Deepak Masuma<sup>\*1</sup>, Kale R. Deepa<sup>2</sup>

- 1. P. G. Scholar,
- 2. Professor, HOD

Kriya Sharir, YMT Ayurved Medical College, Kharghar, Navi Mumbai, Maharashtra. \*Corresponding author: Phone- 8169846887; email- <u>mamtoramasuma0@gmail.com</u>

# ABSTRACT-

Every living being needs Ahara for growth, repair, survival and maintenance of body. People are so busy in achieving their life goals that lifestyle disorders are on a surge due to ignorance of people towards their dietary habits. The three basic pillars of Avurveda are Ahara, Nidra and Bramhacharya. In this Ahara has been placed first which shows the importance of Swasthyarakshanam Ahara in (maintenance of health) and Vikar Prashamanam (curative aspects of diseases). If we follow proper dietary principles then only we can get optimum benefits from the food we consume. Avurveda has mentioned guidelines regarding food intake called as Ahara Vidhi Vidhan. The following article is compiled based on the literature available in Avurvedic granths as well as data available online. Scientific explanation for each concept is explained. As a pandemic is occurring currently people are more conscious towards increasing their immunity and Ayurved can provide a good basis for it just by following basic dietary guidelines. The aim of the study is to imply that tremendous research can be done to justify the literature available in

# the classic textbooks.

**KEYWORDS-** *ahara vidhi vidhan, swasthyarakshanam,* dietary guidelines, *ahara.* 

# **INTRODUCTION-**

In present era, people are excessively occupied in their fight to thrive hence lifestyle diseases such as Diabetes mellitus, obesity, asthma, hypertension, anxiety are on an upswing. Despite many adavances in the field of medicine, bio medical engineering, huge expenditures in invention of machines for early and advanced detection of diseases there is no way to bring down the rate of deaths in developing and developed countries. Modern medicine has been under a scrutiny for not being able to control lifestyle disorders, bring down mortality rates and increasing expectancy of life.

To tackle this problem, they have developed a branch called 'Preventive and Social medicine' 'Community or medicine'. It deals with diseases affecting community as a whole and treats by preventive and promotive aspects as food habits. Ayurveda has already mentioned the increase Vvadhikshamatva ways to (immunity) through Ahara. dietary guidelines Vidhan), (Ahara Vidhi

# Dincharya, Rutucharya.

Good nutrition and what you put into your body is the foundation for good health. "Food is Medicine" is a term which was originally coined by Hippocrates, the father of Western medicine; it was his belief that eating wholesome food is the basis for good health. Hippocrates said almost 2500 years ago "Leave your drugs in the chemist's pot if you can heal the patient with food."

Acharya Charak has mentioned food as *Prana* if consumed with all the rules but if taken in a faulty manner, it may even cause death.<sup>(1)</sup> The healthy body as well as diseases are the results of *Ahara* we consume.<sup>(2)</sup> In today's franctic life, the ancient norms of living a healthy life which includes the proper method of consumption of food has been forgotten, hence, this study was undertaken to evaluate the remedial role of *Ahara* in maintaining health as well as protecting from diseases.

For achieving complete health, *Ayurveda* has described three *Upasthambas* - *Ahara*, *Nidra* and *Bramhacharya*. Here ahara has been acknowledged first which indicates the level of importance it holds, hence *Acharya Charak* has explained *Ahara Vidhi Vidhan* in detail. Modern science has also mentioned importance of dietetics, it is a field of science that determines how nutrition and good eating affects our overall health.<sup>(3)</sup>

# AIMS AND OBJECTIVES-AIMS-

To evaluate and establish importance of *Ahara Vidhi Vidhan* (dietary guidelines) in maintenance of health of human body, mind and soul.

# **OBJECTIVES-**

1. To study detailed review of *Ahara Vidhi Vidhan* from *Granths*, textbooks and data available online.

2. To evaluate scientific explaination of the data available.

3. To justify numerous studies can be done in near future based on ahara and dietary guidelines to increase immunity and health.

# MATERIALS AND METHODS-

- 1. All the literary data was collected from available *Samhitas*. *Granths* and textbooks.
- 2. Online data was also reviewed to collect the information
- 3. Previous articles and dissertations were referred.

Ahara Vidhi Vidhan is the description of ways on "How to consume food"hence it is a crucial way for Swasthyarakshanam. In many diseases Viruddha Ahara or Vikruta Ahara is considered to be an important Hetu and Nidana Parivarjana is one of the way to treat diseases hence Ahara Vidhi Vidhan can be used in Vikara Prashamanam as well.

Acharya Charak has first mentioned Ahara Vidhi Vidhan in first chapter of Vimansthan.

Following concepts are mentioned under *Ahara Vidhi Vidhan*. Scientific and modern explaination has been tried to evaluated for each concept.

# USHNAM ASHNIYAT-

This is the first concept under *Ahara Vidhi Vidhan*. It means consuming warm food.

Firstly warm food is more palatable. Heating the food also kills microbes since many organisms cannot survive at a high temperature. Consumption of warm food will help in *Vata anulomana*. Due to *Ushna Guna*, secretion of *Pitta* is increased and *Pitta* plays an important role in digestion.

- If cold temperatures such as ice water or cold food in the diet- enter the stomach, the body works quickly to warm it and it may cause lethargy.<sup>(4)</sup> According to Ayurveda as well shita anna, the prepared food left for a long time if taken causes *Stambhana, Agnimandya, Aruchi, Hrillas, Vistambha, Romaharsha*.<sup>(5)</sup>
- Cold foods, especially drinks, can send a shock through the entire body, forcing your digestive system to work harder to break them down and absorb the nutrients. As cold food is harder for the body to digest, you're more likely to experience bloating or wind following a cold meal, and you could also experience some digestive sensitivity through the day too.<sup>(6)</sup> According to Ayurveda Vata Dosha Prakop is responsible for symptoms like Aadhman, Aatop and Shita Guna is responsible for Vata Dosha Prakop.
- Even on a hot day, warm liquids generally soothe the system, Colonoscopy find patients warm liquids infused in the colon help alleviate pain or spasms. The wisdom from our grandmothers was to drink warm liquids — the belief being that warmth caused the muscles to relax - even the minuscule muscles that support the blood vessels.<sup>(4)</sup>
- Food allergies have become increasingly common around the world, and some of the most popular allergies to food include milk and egg. Interestingly, a large percentage (70% and over) of those who are allergic to

milk and eggs can tolerate them when they've been cooked as the cooking process changes the structure of the proteins which can affect allergic reactions. Again, more research needs to be done in this area.<sup>(6)</sup>

- If the food is warm, the person will eat slowly hence the amount of food consumed will be less because of the "20 minute eating rule". When the food goes in the gut, glucose starts absorbing between 5 to 20 minutes and the satiety hormones in the gut are released due to glucose surge and spike in insulin.<sup>(7)</sup>
- If the food is heated repeatedly then it becomes *Vidahi* which is not healthy. People who carry tiffins in the offices or schools lack the benefits of ushna ahara.
- Ushnam Ashniyat is the first concept mentioned in Ahara Vidhi Vidhan providing the possibility of concept that consumption of food should be started with Ushna Ahara. That's why appetizers or starters are served first in any restaurants and not ice-creams.

# SNIGHDHAM ASHNIYAT-

- Fatty food enhances the taste of food stuff because flavors dissolve in fats.<sup>(8)</sup>
- It increases the *Agni* (digestive power) hence the food gets easily digested. This can be explained by the example of adding oil to fire to increase it.
- Due to *Snigdha Guna* it helps in *Vata Anuloma* hence it helps in preventing flatus and also relives constipation.
- *Snigdha Dravyas* promotes the first

Avasthapak. Because of Kledan Guna Kapha Dosha increases. Kledak Kapha promotes Madhura Avasthapak. Bodhak Kapha is secreted on the tongue which increases the Ruchi in food.

- Since *Snigdha Guna* helps in digestion it helps in increasing *Bala*, slows down ageing process, gives strength to *Indriyas* (sense organs), increases complexion of the body.
- *Ghrita* is *Vata Pitta Shamaka* and *Taila* is *Vata Kapha Shamaka* hence if the food contains both *Ghrita* and *Taila* then it can decrease all the three *Doshas*.<sup>(9)</sup>
- *Snigdham Ashniyat* doesn't only mean consumption of *Ghrita* and *Taila*, it also means consumption of food with Snigdha Gunas like *Godhuma, Shali* etc.
- According to modern Science, fats provide high concentrated source of energy since they can store more energy than other macro nutrients like carbohydrates and proteins hence our body stores them as reserves.(10)
- There are vitamins which are only soluble in fats like vitamin A,D,E,K. hence body needs these fats to be able to use these vitamins.
  - Vitamin A is known to increase vision and immunity.
  - Vitamin D is used for absoprtion of calcium by bones.
  - Vitamin E is an antioxidant which again helps in providing immunity against diseases.
  - Vitamin K is helpful in blood clotting.

- Modern Science has divided fats into saturated fatty acids, unsaturated fatty acids and Trans fat.<sup>(11)</sup>
- Unsaturated fatty acids are in the liquid form at room temperature. They can improve blood cholesterol levels, ease inflammation, stabilize heart rhythms. Mono Unsaturated fatty acids and poly unsaturated fatty acida are types on unsaturated fatty acids.
- Omega 3 which is a poly unsaturated fatty acid create a greater sense of fullness for longer periods so that stomach doesn't want food again, preventing obesity, it also boosts serotonin level in brain helping improvement in mood and motivation. It also stimulates muscle protein synthesis in older adults.<sup>(12)</sup>
- Saturated fats are one of the bad fats. They are mostly solid at room temperature. In large quantities they can increase the risk of heart disease, weight gain.<sup>(13)</sup>
- Trans fatty acids, more commonly  $\triangleright$ called trans fats, are made by heating liquid vegetable oils in the presence of hydrogen gas and a catalyst, a process called hydrogenation. (11)Trans fats are worst type of fats for body because- Raise bad LDL and lower good HDL. Create inflammation-a reaction related to immunity – which has been implicated in heart disease, stroke, diabetes, and other chronic conditions. Contribute to insulin resistance. Can have harmful health effects even in small amounts - for each additional 2 percent of calories from trans fat consumed daily, the risk of coronary heart disease increases by 23 percent.
- Atisnigdhta (extreme greasiness) or

asnigdhta (roughness) can cause delay in digestion. Extreme oily and fatty food is hard to digest causing lethary (Gauravta), Praseka, Alasya, Aruchi etc. Ruksha Ahara increases property of Vata hence causing decrease in Bala, Varnya etc.

• Knowledge about *Snigdhta* can help in choosing the right types and quantity of fats in food thereby increasing immunity of body.

# MATRAVAT ASHNIYAT-

- Food taken in proper quantity is termed as *Matravat Ahara*. *Ayurveda* has described 2 types of *Matra-Sarvagraha* (quantity of whole meal) and *Parigraha* (individual quantity).
- Every individual is different hence the quantity of food required by every individual will be different. One standard quantity cannot be applicable to everyone. Quantity of food also depends on *Prakriti* of the individual as well *Gunas* of the food stuffs.
- Acharya Charaka has mentioned 'Ahara Matra Tu Agni Bala Apekshini' this proves that quantity of Ahara depends on digestion as well as Bala.<sup>(14)</sup>
- A balanced diet consists of all macronutrients as well as micro nutrients to ensure proper growth and protection of body.
- A person consuming *Matravat Ahara* shows following symptoms- no heaviness on abdomen, proper functioning of heart, no any kind of distension on sides of abdomen due to food, satisfaction of all *Indriyas* (sense organs), fulfillment of hunger and thirst, no hurdles in sitting, standing, lying down, walking, breathing or

laughing, proper digestion of food eaten, increase in strength and complexion of body.<sup>(15)</sup>

 Modern Science has suggested consuming food on basis of calories. Calorie requirement is different for every person according to age, gender, type of lifestyle they live.

• Effects of over eating-(16)

1. Overeating causes the stomach to expand beyond its normal size to adjust to the large amount of food. The expanded stomach pushes against other organs, making you uncomfortable. This discomfort can take the form of feeling tired, sluggish or drowsy. Your clothes also may feel tight, too

2. Eating too much food requires your organs to work harder. They secrete extra hormones and enzymes to break the food down.

3. To break down food, the stomach produces hydrochloric acid. If you overeat, this acid may back up into the esophagus resulting in heartburn. Consuming too much food that is high in fat, like pizza and cheeseburgers, may make you more susceptible to heartburn.

4. Your stomach may also produce gas, leaving you with an uncomfortable full feeling. Your metabolism may speed up as it tries to burn off those extra calories. You may experience a temporary feeling of being hot, sweaty or even dizzy.

# JEERNE ASHNIYAT-

- It means food should be consumed only after previously consumed meal is digested.
- If food is consumed when the previous food is undigested then the undigested food i.e. *Ahara Rasa* gets mixed with this food and produces *Ama* which increases all the *Doshas* and is the main cause of every disease.
- Acharya Charaka has also said
   Kalabhojanam Aarogyakaranam<sup>(17)</sup>

hence food should be consumed on proper timings.

# VIRYA AVIRUDHAM ASHNIYAT-

- One should consume *Ahara* which is not opposite in its *Virya* i.e. the food should not be opposite in its potency. This ensures that body is protected from diseases caused due to *Viruddha Ahara*.
- According to modern concept it can be explained as agonist and antagonist foods.
- A new branch called topography (a science related to combination of food) is emerging, which tells about the combination of basic categories of the food.<sup>(18)</sup>
- Even in chinese medicine a term similar to *Virya* of food has been described called as *YinYang* food.<sup>(19)</sup> *Yin* food are called as cold foods because they have cooling effects on body and *Yang* foods are called as Hot foods because they bring warmth to the body.
- Acharya Charak has also mentioned that wong combinations of food can also cause death.<sup>(20)</sup> Hence a detailed knowledge about it can help in protection of the body.

# ISHTA DESHE ISHTA SARVA UPKARNAM ASHNIYAT-

- It means one should eat food in a place with good ambience, which is favourable to us which does not cause any kind of mental or physical stress to our body. One should also use proper clean utensils in order to avoid transmission of germs cauisng diseases.
- If while consuming food our body is subjected to emotional stress then a person tends to overeat, because

adrenal glands release hormone called cortisol, and cortisol increases appetite and may also ramp up motivation in general, including the motivation to eat. Studies have shown that physical or emotional distress increases the intake of food high in fat, sugar, or both. High cortisol levels, in combination with high insulin levels, may be responsible. Other research suggests that ghrelin, a "hunger hormone," may have a role. Once fat ingested. and sugar-filled foods seem to have a feedback effect that dampens stress related responses and emotions. These foods really are "comfort" foods in that they seem to counteract stress- and this may contribute to people's stress-induced craving for those foods. (21)

- If there is negative environment then there is constriction of the muscles, adrenalin and increased heartbeat. Nothing could be less compatible with good digestion. Adrenalin and acids are flowing into the stomach and there is an increased arousal, a general stress reaction. This can be followed by headache, stomach cramps and a crummy mood.<sup>(22)</sup>
- Clean utensils are also necessary because if utensils are unclean then it can cause cross contamination between utensils and food eventually causing diseases. If utensils touched by a carrier of the disease is uncleaned then the chances of spread of diseases to others increases manifold. It is an important point which should be applied in this era of pandemic.
- *Ishta Upkarnan* can also mean the different types of metals and alloys from which utensils is made of. For

example eating in gold and silver utensil alleviates *Doshas* and improves eye sight, cooking in iron vessel can treat anemia, eating on leaves is appetizing and stimulates *Agni*. Similarly in Indian households water is stored in earthen utensils.<sup>(23)</sup>

# NA ATIDHRUTAM ASHNIYAT-

- One should not consume food in a hurry. By doing so food can enter respiratory tract causing choking or hiccups.
- If food is taken in proper speed the enzymatic juices get mixed properly with bolus leading to proper digestion.
- Eating food fast can lead to metabolic syndrome which is collection of five risk factors namely high blood pressure, high triglycerides, high blood sugar, low level of good cholesterol and a large wait line.
- In a study conducted among Japanese people, it was concluded that eating speed was associated with obesity and future prevalence of Metabolic slowly syndrome. Eating may therefore indicated to be a crucial lifestyle factor for preventing metabolic syndrome.<sup>(24)</sup>

# NA ATIVILAMBIT ASHNIYAT-

If food is eaten very slowly then satiety cannot be achieved, also, the digestion becomes improper.

# AJALPANA AHSANA TANMAN BHUNJITA-

While consuming food, our mind should be fully concentrated on eating. We should not laugh or talk while eating. In today's era people have the habit of consuming food while watching TV or scrolling through their smartphones. Even small kids are made to watch TV or phone while eating. Such kind of disturbed concentration while eating can lead to choking hazard or can result in eating too much or too less.

Eating infront of a TV induces Pavlovian response. It is a method to cause reflex response or behaviour by training with repetitive action.<sup>(25)</sup> So, if you habitually eat in front of a TV, you will feel hungry as soon as you turn on TV.<sup>(22)</sup>

Acharya Charak has also mentioned that even Pathya Ahara will not be digested because of Chinta (worry) Bhaya (fear) Krodh (anger) Shokh (sorrows) and due to improper bed and sleeping habits.<sup>(26)</sup> If food doesn't get digested properly then it will eventually lead to decreased immunity as Dhatu Poshan will not be completed.

# ATMANAM ABHISAMIKSHYA BHUNJITAM-

Diet of a person depends on his *Prakriti*, *Agnibala, Jaranshakti, Abhyavaranshakti, Satmya, Dosha*. If a person is already suffering from any disease then also his diet changes. Pregnant women, lactating mothers, labourers need more amount of food and nutrition in order to maintain *Swasthya*.

# **DISCUSSION-**

Improper dietary habit is primary reason for the increasing trend of health disorders in current era. Intake of frozen, canned, processed food play an important role. So there is need to awake the people about the importance of fresh food. Diet play a vital role in maintaining health and treating diseases by some following proper rules according to need in both condition.

One should consume only that food in proper quantity which is *ushna*, *snigdha and matravata*. Food should be consumed after the digestion of previously ingested food, food should be *virya aviruddha*, taken in an *ishta desha and* provided with *sarvopakarana*. Food should not be taken speedily or too slowly, without *Ahara Vidhi Vidhana*. These are the code and conducts for taking diet of any dietetic science.

Above mentioned explaination of Ahara Vidhi Vidhan according to Ayurvedic and modern point of view has tried to cover each and every aspect of food ethics to increase the *Swasthya* of people at the very basic level. Along with Pathya, healthy Ahara its Vidhi should be considered equally important. A good physician should have knowledge of ahara and its rules so that he can guide peopple properly. In the modern era of westernization providing a scientific basis to the ancient values provided by Ayurveda can attract people to follow the norms and protect themselves from lifestyle diseases even before the disease manifests itself. As the time goes by, people will be more conscious towards protecting their health. Ahara Vidhi can be considered as Asamvavi Karana of health and diseases hence extensive reasearch can be made in this field to ensure Swasthyarakshana. Many diseases can be prevented arising merely due to faulty dietary habits. Healthier eating habits may help to lower the risk for many health problems.

# **CONCLUSION:**

Our granths are store houses of valuable thoughts. Diet is considered as basic most cause of life. Not only diet but also method of food intake has an important role in the continuity of healthy life. The application of these rules is effective in maintenance of health as well as in the curative aspect for many diseases. Each Ahara vidhi vidhan has a specific role in digestion and maintenance of health. In presence of all the mentioned factors, food gets utilized properly to get optimum benefis.

According to *Kashyap Samhita*, food has always been an important way to treat illness and maintain health and that's why he called food as *Mahabhaishyajya*. Based on the above mentioned points, a person can decide the pros and cons of the food and the manner in which he consumes food. Proper changes can be made to diet regimen to increase one's health and immunity by following the rules of dietics i.e. *Ahara Vidhi Vidhan*.

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Research Article

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# A COMPARATIVE STUDY ON TWO METHODS OF NAVASAGAR SHODHANA

# \*<sup>1</sup>Dr. Mrunmayi Mhaskar and <sup>2</sup>Dr. Ninad Sathe

<sup>1</sup>PG Scholar (Rasashastra & Bhaishajya Kalpana Department),
 <sup>2</sup>Professor (Rasashastra & Bhaishajya Kalpana Department), Vice Principal,
 Dr. G.D. Pol Foundation's, Y.M.T. Ayurvedic Medical College, Kharghar, Navi Mumbai.

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\*Corresponding Author Dr. Mrunmayi Mhaskar PG Scholar (Rasashastra & Bhaishajya Kalpana Department), Dr. G.D. Pol Foundation's, Y.M.T. Ayurvedic Medical College, Kharghar, Navi Mumbai.

# ABSTRACT

In *Rasashastra* (the branch of *Ayurveda* that deals with pharmaceutical processing of *Ayurvedic* formulations), *shodhana* is a process that is employed either to detoxify, purify or to potentiate the efficacy of the raw materials (of herbal, mineral, metal or animal origin). *Navasagar* (NH<sub>4</sub>Cl) is used in *Ayurveda* as a single drug as well as in the preparation of many *Ayurvedic* medicines. It may contain impurities & adulterants like sand, NaCl, etc. *Navasagar shodhana* aims at removing these impurities. In this paper we have documented *Navasagar shodhana* done by 2 methods & the Elemental analysis of *Navasagar* before & after *shodhana* using XRF technique. **KEYWORDS:** *Navasagar, Shodhana, Rasashastra.* 

# INTRODUCTION

*Ayurveda* involves the use of drugs obtained from plant, animal & mineral origin. These crude drugs/ raw materials are naturally available, so they generally possess unwanted impurities, adulterants & toxic substances, which can lead to harmful health problems. Hence to prevent this, *shodhana* (purification/ detoxification) process of these raw materials is described in *Ayurveda* before they can be used as medicines. *Shodhana* is a process in which, *kshalana* (washing), *mardana* (pounding), *bhavana* (levigation), *swedana* (boiling), *bharjana* (frying), *nirvapa* (heating & dipping in specified liquids), etc. are carried out on raw materials with a view to eliminate impurities.<sup>[1]</sup> *Navasagar* (Ammonium chloride (NH<sub>4</sub>Cl)) is an inorganic salt which comes under the group of '*Sadharana rasa'* in *Rasashastra*.<sup>[2]</sup> In *Ayurveda, Navasagar* is used as a *Jatharagni pradipak* (improves digestion/ appetizer),

*saraka* (purgative), *expectorant*, etc.<sup>[3]</sup> It is also used in the preparation of many *Ayurvedic* medicines such as – *Rasasindur*, *Shankha drava*, *Shwet parpati*, *Vrishchik danshahara lepa*, etc.<sup>[4]</sup> Raw *Navasagar* may contain impurities & adulterants like sand, NaCl, etc.<sup>[5]</sup> *Navasagar shodhana* aims at eliminating these impurities. In the classical *Ayurvedic* text '*Rasatarangini*', two methods of *Navasagar shodhnana* are mentioned, they are-<sup>[3]</sup>

- 1. Dissolving the *Ashuddha Navsagar* in 3 times water, filtering it through filter cloth & then heating the solution till all the water evaporates leaving behind *Shuddha Navasagar*.<sup>[3]</sup>
- 2. By Urdhvapatana (sublimation) using Damruyantra.<sup>[3]</sup>

### **MATERIALS AND METHOD**

### Table 1: Materials for first method.

Ashuddha Navasagar	Khalwa yantra	Weighing machine	Water
Measuring cylinder	Stainless steel vessels & spoon	Cloth for filtration	Gas stove

### Table 2: Materials for second method.

Ashuddha Navasagar	Khalwa yantra	Weighing machine	2 earthen pots	Cloth
Multani mati (soil)	Gas stove	Water	Pyrometer	Knife

### Navasagar shodhana method 1

- *Ashuddha Navasagar* was taken in *khalwa yanta* & powdered. With the help of weighing machine, 200 gm of *Ashuddha Navasagar* powder was weighed & taken in stainless steel vessel.
- To this, 3 times water i.e. 600 ml water was added. The mixture was stirred till the *Navasagar* completely dissolved in water.
- The above solution was filtered through 4 layers of filter cloth. Filtration was repeated 3 times.
- Then the solution was heated on gas stove on medium-low flame (initially on medium flame & when most of the water evaporated, the gas was turned to low flame; during this period the *Navasagar* solution was stirred continuously) till all the water evaporated leaving behind *Shuddha Navasagar* in fine white powder form.
- Weight of Shuddha Navasagar obtained was noted.

### Navasagar shodhana method 2

- With the help of weighing machine, 180 gm of powdered *Ashuddha Navasagar* was weighed & taken in one earthen pot.
- Another earthen pot having a round bottom was inverted & placed on top of the first earthen pot such that the mouths of both the earthen pots were perfectly aligned on each other.
- This joint between the two pots was sealed by *matkapad* layer (cloth strip was wrapped on the joint & *multani mati* paste (*multani mati* + water) layer was given on it). Then it was allowed to dry. Seven such *matkapad* layers were given to completely seal the joint. Thus the '*Damruyantra*' was prepared.
- The *Damruyantra* was then placed on the gas stove & heat was given to the lower pot.
- A Wet cloth was placed on top of the upper pot & I.V. drip set was used to ensure a slow steady flow of cool water on this cloth to keep the cloth continuously cool throughout the process, thus maintaining the cool temperature of the upper pot in comparison to the lower pot. (Fig. 1).
- Temperature of the upper pot & lower pot was monitored throughout the process using pyrometer.
- The outer temperature of the lower pot was maintained between 300-320°C since Navasagar sublimates at 338°C. Outer temperature of the upper pot was maintained in between 40-50°C.
- This process was carried out for 3 hours.
- After 3 hours, heating was stopped & the *Damruyantra* was allowed to cool down at room temperature.
- After that, the *matkapad* layer seal was scrapped & removed using a knife. The upper pot was carefully separated.
- o Shuddha Navasagar deposited inside the upper pot (Fig. 2) was collected & weighed.
- The impurities that remained behind in the lower pot (Fig. 3) were also collected separately & weighed.



Fig. 1 Damruyantra



Fig. 2:ShuddhaNavasagardeposited in upper pot.



Fig. 3 Impurities that remained behind in lower pot

# **OBSERVATIONS**

 Table 3: Observations.

	Method 1	Method 2		
	(Filtration Method)	(Urdhvapatana Method)		
Time required for complete procedure	4 hours	3 days (2 days for preparing damruyantra by giving matkapad layer + 1 day for urdhvapatana)		
Color & form of Shuddha	White coloured fine	Yellowish white coloured fine		
Navasagar	powder	powder.		
Weight of <i>Navasagar</i> before <i>shodhana</i>	200 gm	180 gm		
Weight of <i>Navasagar</i> after <i>shodhana</i>	199 gm	60 gm		
Total loss in weight after <i>shodhana</i> process	1 gm	120 gm		
Percentage of loss in weight after <i>shodhana</i> process	0.5%	66.67%		
Weight of impurities	Very few impurities like a few sand particles were observed on the filter cloth after filtration; but these impurities could not be collected for weighing.	2.053 gm (In the form of fine powder brownish black in color)		
Other observations during the procedure	When <i>navasagar</i> was dissolved in water the resulting solution became cool (endothermic reaction).	When lower pot of <i>damruyantra</i> was heated, white fumes were observed from the top of the upper pot even though there were no visible cracks in the pot. When the <i>Damruyantra</i> was opened, the <i>shuddha Navasagar</i> was observed to be deposited only near the mouth region of the upper pot & not at the round bottom region.		

### RESULTS

No.	Component	Result
1	Cl	98.4 mass%
2	K	0.461 mass%
3	Ca	0.460 mass%
4	Si	0.448 mass%
5	Fe	0.122 mass%
6	Br	0.0243 mass%
7	Pb	0.0231 mass%
8	Cu	0.0173 mass%
9	Zn	0.0131 mass%

Table 4: Elemental analysis result of Ashuddha Navasagar by XRF technique.

Table 5: Elemental analysis result of Shuddha Navasagar obtained by first method(filtration method) by XRF technique.

No.	Component	Result
1	Cl	99.8 mass%
2	CaO	0.0977 mass%
3	Fe <sub>2</sub> O <sub>3</sub>	0.0740 mass%
4	Br	0.0214 mass%
5	CuO	0.0082 mass%
6	ZnO	0.0061 mass%
7	PbO	0.0027 mass%

Table 6	: Elemental	analysis	result	of Shuddha	Navasagar	obtained	by second	method
(Urdhva	<i>patana</i> metl	10d) by X	RF tec	hnique.				

No.	Component	Result
1	Cl	99.8 mass%
2	Fe <sub>2</sub> O <sub>3</sub>	0.101 mass%
3	CaO	0.0714 mass%
4	Br	0.0115 mass%
5	CuO	0.0082 mass%
6	ZnO	0.0070 mass%
7	SrO	0.0008 mass%

### DISCUSSION

The two methods of *Navasagar shodhana* are based on the properties of *Navasagar* i.e. it is easily soluble in water & it sublimates at 338<sup>o</sup>C temperature.<sup>[5]</sup>

The first method is based on the property of *Navasagar* that it is easily soluble in water. Using the first *shodhana* method, we can eliminate only those impurities & adulterants that are insoluble in water, like sand particles; but impurities like NaCl that are soluble in water cannot be eliminated by this method as they would also dissolve in water along with *Navasagar* & easily pass through the filter cloth & sediment back when heated.

The second method i.e. *urdhvapatana* is based on the sublimation property of *Navasagar*. Sublimation is the process in which a solid turns to a gas without first forming a liquid (or vice versa).<sup>[6]</sup> When *Navasagar* in the lower pot of *Damruyantra* is heated, it sublimates at 338<sup>o</sup>C & is converted in to gaseous state. These vapours then rise up in the *Damruyantra* & come in contact with the cool surface of the upper pot, which converts the vapours back into solid state & it gets deposited inside the upper pot. This method of *shodhana* can be used to eliminate impurities that are both soluble & insoluble in water since sublimation is the special property of *Navasagar* & all those substances that cannot sublimate will remain behind in the lower pot & only *Shuddha Navasagar* will sublimate & get deposited in the upper pot of *Damruyantra*.

After the filtration process, the percentage of loss in weight of *Navasagar* was only 0.5%, since only insoluble impurities were eliminated by this process. Whereas after *urdhvapatana* process, the percentage of loss in weight of *Navasagar* was 66.67% even though the impurities that remained behind amounted to only 1.14%. The remaining 65.53% loss may be due to the percolation of water that was used to cool the upper pot through the porous surface of the earthen pot. *Navasagar* being readily soluble in water, must have dissolved in it & must have been brought to the surface of the upper pot of *Damruyantra*, some of it must have flowed down along with the water, whereas some of it may have evaporated. This may be one of the reasons why white fumes were observed from the top of the upper pot even though there were no visible cracks in the pot. This also explains why, when the *Damruyantra* was opened, the *shuddha Navasagar* was observed to be deposited only near the mouth region of the upper pot and the round bottom region. All the *Navasagar* that reached the round bottom region of the upper pot was not in direct contact with water, the *shuddha Navasagar* that deposited in this part remained as it is.

So it may be better to use a pot that is not porous instead of the traditional earthen pot used for making the *Damruyantra*. This can be the further scope for this study.

From the XRF analysis reports it is evident that the elements K & Si have been eliminated from *Ashuddha Navasagar* after the first *shodhana* method, whereas K, Si & Pb have been

eliminated after the second *shodhana* method. An increase of 1.4 mass% can be seen in the mass% of Cl in both *shuddha Navasagars* in comparison to the *ashuddha Navasagar*. It can also be observed that the rest of the elements have also been eliminated to some extent after both the *shodhana* processes & have remained only in trace quantities. The SrO element is seen in very trace quantity (0.0008 mass %) in *shuddha Navasagar* obtained by *urdhvapatana* method which may be the addition from the earthen pot.

### CONCLUSION

Filtration method of *Navasagar shodhana* is useful for eliminating only those impurities that are insoluble in water.

*Urdhvapatana* (sublimation) method of *Navasagar shodhana* is useful to eliminate impurities that are both soluble/ insoluble in water. But instead of the porous earthen pot used for making *damruyantra*, it may be better to use some other pot (like borosilicate glassware) that is not porous, to prevent loss of *shuddha Navasagar*.

Since *Navasagar* contains impurities that are both soluble/ insoluble in water, it is better to use *urdhvapatana* (sublimation) method to eliminate all the impurities from it.

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# "SYSTEMIC REVIEW OF AMRUTMANJIRI, A POTENT AYURVED HERBOMINERAL COMBINATION AGAINST COVID-19 PANDEMIC."

### Usha Rajput<sup>1</sup>, Meenakshi Amrutkar<sup>2</sup>, Ashvini Deshmukh<sup>3</sup>, Sandeep Rajput<sup>4</sup>

1.(PG scholar,RSBK) , 2. (PG guide, Associate Professor, RSBK),3. (Associate Professor, RSBK), 4. Associate Professor, Balrog

Dr. G D Pol Fondation's YMTAMC, Kharghar, Navi Mumbai., Maharashtra

### Abstract:

A Novel corona virus was identified as the causative agent and was subsequently termed COVID-19 by the World Health Organization and there is no scientific treatment for the disease till date. *Ayurveda* is a science of life main focus of *ayurveda* to cure the disease root causes and maintain the health of healthy individuals. *Amrutmanjiri* ras is a compound drug used in *sannipataj jwar*, *Kasa Shwas, Aamavat*, The content present in *Amrutmanjiri* are having properties such as antiviral ,expectorant, reducing infection of upper respiratory tract. An *Amrutmanjiri* content has been included in Indian pharmacopeia as well as in literature of many other ancient civilization. In *Ayurveda Amrutmanjiri* is one of the important medicine which is been referred in many texts with many therapeutic uses. Thus the content of *Amrutmanjiri* is found to have prominent antiviral activity .so we can use *Amrutmanjiri* as Antiviral Drug.

Keywords: Amrutmanjiri, Sannipatik jwar, Covid -19 treatment, Fever, Saam jwar, Aamvat.

### **Corresponding Author:**

Dr. Usha Rajput(PG scholar,RSBK) Dr. G D Pol Fondation's YMTAMC,Kharghar, Navi Mumbai. Email id- <u>usharajput2014@gmail.com</u>



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### **INTRODUCTION:**

COVID-19 is caused by Beta corona virus named SARS-CoV-2 that affect the lower respiratory tract and manifest as pneumonia in Humans<sup>[1]</sup>, structurally the SARS corona virus (SARS-CoV) has a well - defined composition comprising 14 binding residues that directly interact with human angiotensin-converting enzyme 2.of these amino acids, 8 have been conserved in SARS CoV-2<sup>[2]</sup>. Most SARS-CoV-2 infected patients have developed mild symptoms such as dry cough, sore throat, and fever. The majority of cases have spontaneously resolved. However, some have developed various fatal complications including organ failure, septic shock, pulmonary oedema, severe pneumonia, and Acute Respiratory Distress Syndrome (ARDS)<sup>[3]</sup>At present, no effective antiviral treatment or vaccine is available for COVID-19. However, a randomized multicentre controlled clinical trial is currently underway to assess the efficacy and safety of patients with COVID-19 (ChiCTR2000029573). First-line treatment for fevers includes antipyretic therapy such as paracetamol, while ex- pectorants such as guaifenesin may be used for a non-productive cough. [4] There are currently few studies that define the patho physiological characteristics of COVID-19, and there is great uncertainty regarding its mechanism of spread. Current knowledge is largely derived from similar corona viruses, which are transmitted from human-to-human through respiratory fumets <sup>[5]</sup>Same in *avurveda sankramik* disease.

Ancient wisdom has been the basis of modern medicine and therapeutics. An impressive number

of drugs have been isolated from natural sources. Many of this isolation are based on the use of these agents in traditional medicine. Amrutmanjiri ras are mentioned in our classics, among which the familiar one which is described in Bhaishajya ratnavali has been taken for review in this article. Man has been using Natural products, including plants, animals and minerals have been the basis of treatment of disease. In the History of human The disease which persist at the time of death is jwara (HYPER PYREXIA), In Ayurveda jwara is given top most importance because it is believed that jwara is the first disease to trouble mankind and it becomes the basic for other disease to exist. Many type of *iwaras* are explained by our acharyas/scholars and one of them is sannipataj *jwara*<sup>[6]</sup>.

### AMRUTMANJIRI IN DETAIL<sup>[7]</sup>

*Amrutmanjiri* rasa an *Ayurvedic* herb mineral formulation is indicated in the management of *jwara* (Hyper pyrexia) and *Sannipataj jwara*. It contains two mineral drugs and five herbal drugs.

### Matra-125 to 250 mg

Anupan-Aadrak swaras, Madhu,Tambul patraras, Ushndak.

Swad- Aamla.

Varna- Raktabha

**Indication of Amrutmanjiri** – Sannipat jwara,Aagnimandya, Aajirna, Aamavat, Kasa five types, Shwasa, Sarvang graham, Jirnajwara, Kshya.

Tab	le 1	showing	Amrutm	anjiri l	ngredien	ts In d	letail-
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Content	Quantit	Rasa	Viry	Vipak	Guna	Doshaghnata	Indication
	у	(taste)	а				
Shudha Hingula <sup>[8]</sup>	1 part	Tiktha	Ushn	-		Tridoshaghna	Jwara, Aamavat, Rasayan,
(cinnabar)		Kasha	а				Deepan, Vrushya, Sarva

		ya , Katu					Rogaghna, Kamala,Pliha, Kushta and Vishanashak
Vatsanabh <sup>[9]</sup> (Aconi	1 part	Madhu	Ushn	Katu	Laahu.	Vatakaphahara.	Jwara(Sannipatai).
<i>tum ferox)</i>	-	r	a		Ruksh,	Jwarahara,	Madhumeha, Shwasa,
					Teekshna,	Jangamvishaha	Kasa, Pleehodara,
					Vyavayi,	ra, Madakari,	Agnimandya, Vata rogas,
					Vikasi	Kushthaghna,	
Shudha	1 part	Katu	-	-	Ushna,Ruks	Vatakaphaghna	Kaphavishleshaka,
Tankan <sup>[10]</sup> (Borax)					ha,		Hrudhya, Kasa Shwsa
					Teekshna,		Hara, Sthavara
					Sara.		vishanashaka,AgniDeepak
Marich <sup>[11]</sup> (Piper	1 part	Katu	Ushn	Aardr	Ruksha,	Pittakar,	Shwasa, Shula, Krumirog
nigrum)			а	а-	Tikshna	Kaphahara,	nashak
				Madh		Vatahara	
				ur			
Pippali <sup>[12]</sup> (Piper	1 part	Katu	Ushn	Madh	Laghu,	Vatashleshmah	Jwara,Aamavat, Udara,
longum)			а	ur	Sneegdha,	ara, Deepana,	Pliha
					Teekshna.	Vrushya,	Roga,Kushta,Prameha,Gu
						Rasayan.	lma, Arsha, Shula.
Javitri <sup>[13]</sup>	1 part	Tikta,	Ushn	Katu	Laghu,	Kaphaghna,	Kasa,Krumi,Shwasa,
patra(Myristica			а		Tikshna,	Vataghna,	Shosha,Rhudrog,
fragrans)						Deepan, Grahi,	Pinas.Mukhadurgandha
						Ruchikar	hara
Jambiri nimbu	For	Aamla	Ushn	Aamla	Guru,	Vata,	Kasa,
swaras <sup>[14]</sup> (Citrus	trituratio		а			Kaphahara	Kaphotkleshaghna,Krumi
lemon)	n.						ghna, Aasyavairasyahara.
							Rhutpida, Shulaghna,

### 1)Shuddha Hingul (Cinnabar)

Therapeutic Utility of *Shuddha Hingula* <sup>[15,16,17]</sup> - *Shuddha Hingula* (*cinnabar*) when judiciously used in the form of suitable compound formulation and in proper dosage is beneficial in all types of eye diseases (*Netra Roga Hara*), it mitigates all the three vitiated *Doshas*. It is good appetizer, rejuvenator and aphrodisiac. It is the best remedy for the disorders of liver, pancreas, rheumatoid (arthritis *Aamavata*), diabetes mellitus (*Prameha*) and fever, is nutritive, It enhances body strength,

memory, facial glow and power of digestion. *Cinnabar* is used as sedative for its neuroactvity <sup>[18]</sup>. HgS adjust the imbalance of Pro-oxidant and Antioxidant, provides a protective effect in oxidative stress which is induced by Hypoxia<sup>[19]</sup>.

### 2)Vatsanabh

*Vatsanabh* is having properties like *Rasayan(rejuvenating) Balavardhanam(* improve strength and immunity), *jwarahara*<sup>[20]</sup> (useful in fever), *Shirashool*<sup>[21]</sup> *Vatsanabh* acts as *Yogavahi* –a catalyst for other medicine *Vatsanabh* used with equal quantity of *tankan* (purified Borax) and double quantity of black paper (*Marich*)<sup>[22]</sup> will not

have any toxic effects. It is also *Rasayan*, *Sukhaprada*, *Balya*, *Shwas Kasa Bhagandar Gulma*, *Pandu*, *Aarsha*.<sup>[23]</sup>

### 3)Tankana(Borax)

*Tankan* contain Na2B4O7 10H2O which is composed of boric acid and soda<sup>[24]</sup>.

### As antidote-

Tankan is might be to minimize toxic effects of *Vatsanabh*. This concept highlights the antidote property of Tankan in *Vatsanabh* toxicity.<sup>[25]</sup>

### Wound healing -

Tankan is used in the process of repair that follows injury to the skin and other soft tissues. The objective in wound management is to heal the wound in the shortest time possible, with minimal pain, discomfort, and scarring to the patient.<sup>[26]</sup>

### **Another Uses-**

-It is used in the treatment of cough, bronchitis.

-It is also used in treating food poisoning.

-It improves digestion power, relieves bloating.

-It induces menstruation in women suffering with amenorrhea or oligomenorrhea (Scanty menstrual flow).

-It is useful in dandruff Tankan is applied on hair and keeps for 5 to 10 min and washes out.

-It is useful ulceration of mouth and cracks and fissures of tongue.

-Dose varying from 10-30 grains are given in prolonged labour.

-Useful in other uterine infection.

-Useful in chronic tonsillitis.

The gargling with *Tankan bhasma* dissolved water gives significant result in relieving the tonsillitis <sup>[27]</sup>.

### 4)Marich

 $\label{eq:pharmacological Activities of $P$. Nigrum - Anti-diarrheal^{[28]}$, Antimicrobial^{[29]}$, Antioxidant^{[30]}$,}$ 

Anticancer<sup>[31]</sup> and tumour reduction activity<sup>[32]</sup>, Antihypertensive<sup>[33]</sup>, Anti-asthmatic, Antiinflammatory<sup>[34]</sup>, Anti-obesity<sup>[35]</sup>, Antidiabetic<sup>[36]</sup>, Hepatoprotective activity <sup>[37]</sup>, Digestive activity<sup>[38]</sup>, Antidepressant<sup>[39]</sup>, Analgesic and Antipyretic activity <sup>[40]</sup>, Anti-adipogenesis activity<sup>[41]</sup>, Effects in metabolism<sup>[42]</sup>, Effects in neurodegeneration and cognitive impairment <sup>[43]</sup>, Effect in Bioavailability<sup>[44]</sup>, Toxicity activity<sup>[45]</sup>, Effects in stomach<sup>[46]</sup>, Effect in bile secretion<sup>[47]</sup>, Effect in pharmacokinetic of drugs<sup>[48]</sup>.

#### 5)Pimpali

Pharmacological Activity of Piper longum :-Insecticidal and acaricidal activity<sup>[49]</sup>:, Antifungal activity<sup>[50]</sup> activity<sup>[51]</sup>. Antiamoebic . Antimicrobial activity<sup>[52]</sup>, Effect on respiratory system<sup>[53]</sup>, Antiasthmatic activity<sup>[54]</sup>, Effect on cardiovascular system<sup>[55]</sup>, Antidiabetic activity<sup>[56]</sup>, Hypochoesterolaemic activity<sup>[57]</sup>, Antioxidant activity<sup>[58]</sup> , Analgesic activity <sup>[59]</sup> , Antiinflammatory activity <sup>[60]</sup>, Immunomodulatory activity<sup>[62]</sup>, Anti-cancer activity<sup>[62]</sup>, Antidepressant activity<sup>[63]</sup>, Antiulcer activity<sup>[64]</sup>, Effect on Reproductive system<sup>[65]</sup>, Bioavailability enhancement<sup>[66]</sup>, Hepatoprotective activity<sup>[67]</sup>.

### 6) Javitri.

Pharmacological Activity- Anti-bacterial, Antimicrobial and Anti-fungal property [68] – Effective against Gram-positive and Gram-negative microbes . Hypoglycemic and antidiabetic activities [69] – It is potential anti-diabetic agent for the treatment of type 2 diabetes study done in rats. Hypolipidaemic and platelets antiaggregatory activity [70]- Reducescholesterol in heart and liverLDL and VLDL levels were also reduced in albino significantly rat study.Hepatoprotective activity<sup>[71]</sup> – due to the inhibition of Tubour Necrosis Factor(TNF)-alpha release from macrophages in mice ,Antiinflammatory activity [72] – The anti-inflamatory property of myristicin might be due to inhibition of chemokines, cytokines, nitrous oxide and

growth factors in double stranded RNA stimulated macrophages via the calcium pathway, Anticancer activity<sup>[73]</sup>, Memory enhancing activity<sup>[74]</sup>, Aphrodisiac activity<sup>[75]</sup>, Anti-diarrhoeal activity<sup>[76]</sup>, Antidepressant activity<sup>[77]</sup>, Anti-oxidant activity<sup>[78]</sup>, Pesticide activity: insecticidal<sup>[79]</sup>

### 7)Jambir

Anticancer activity <sup>[80]</sup> – Inhibition of the proliferation of cancer cells . Activation of "TRAIL" apoptotic cell death .Inhibition of tumour growth in chronic erogenous leukaemia (CML)

Antioxident activity<sup>[81]</sup> – Augmentation of antioxidant cellular defences via ERK/Nrf2 signalling pathway.

Anti-inflammatory activity <sup>[82]</sup>Antibacterial activity <sup>[83]</sup> – Inhibiting activity against Gram –positive bacteria ,Enterococcus faecalis, Bacillus subtitles, Inhibiting activity against Gram – negative bacteria Salmonela typhimurium, Shigella sonnei , Helicobacter pylori.

Antifungal activity <sup>[84]</sup> – Inhibition activity against Candida glabrata strains.

Antiviral activity <sup>[85]</sup> – Inhibition of replication of herpase simplex

Anti-allergic activity <sup>[86]</sup> – Inhibition of histamine secretion in peretonial cell of rats.

Hepatogenerative activity<sup>[87]</sup> – Normalization of alanine aminotraneferase, alkaline phospatase and bilirubine.

Prevention of diabetes and treatment of its symptoms <sup>[88]</sup>– Inhibition of Gluconeogenesis, Reducing wound healing time,Increasing tissue growth rate , collagen synthesis and protein and hydroxyproline concentration.

Anti obesity activity <sup>[89]</sup> – Lowering blood lipids, Reducing the level of insulin, leptin and adiponectin in the blood

**Effect on cardiovascular system**<sup>[90]</sup> – Limiting myocardial damage, Decreasing blood fibrinogen, Lowering blood pressure in people with hypertension.

**Effects on nervous system** <sup>[91]</sup> – Strengthen short term memory.

**Effects on the respiratory system**<sup>[92]</sup> – Treatment in chronic pneumonia

Effects on skeletal system <sup>[93]</sup> – Increases bone density, Decreases osteoclast activity, Decreasing bone resorption activity (nomilin)

Treatment on menstrual disorder <sup>[94]</sup> – Period induction in case of irregular menstrual cycles.

### **DISCUSSION-**

COVID-19 Which is caused by droplet infection of corona virus and enters in to body through Nasal and Buccal mucosa and increases in number. it primarily acts on respiratory system and patient may develop Acute Respiratory Distress Syndrome.

Amrutmanjiri is usefl in Aamashaya udbhavjanya vyadhi such as,Sannipataj jwarw Shwas, Kasa Jwara Aamavata. Main cause of sannipataj jwara is aama and Aam is nothing but the Endogenous toxins. Formed due to digestive error , metabolic error ,immunological reaction and hypersensitivity reaction. Amrutmanjiri is having Krumighna property due to which it acts as Antiviral, Antibacterial, Antifungal, Anticancer and Antimicrobial activity.

*Amrutmanjiri* is having immunomodulatory activity which is useful to avoil the disease also having the *swedakar* property which is responsible to reduce the *jwarw* (hyper pyrexia) and act on all type of *vyadhi*. Due to these properties of *Amrutmanjiri* we can use it in COVID-19 disease.

#### **CONCLUSION:**

As the *Amrutmanjiri ras* is indicated in *shwas*, *kaas*, *jwar*, *sarvanggrah*, *kshay*, etc. And same symptoms were found in COVID -19, so we canbe used *amrutmanjiri ras* in COVID-19 symptomatically. This is my small efforts, how this medicine will act by their ingredients *doshaghnata* as well as by their qualities. But there is a need of further preclinical study.
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## Conflicts of interest

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## Shadangpaniya: A systematic review with special context to COVID-19.

Shravan Sheth¹, Ashvini Deshmukh², Meenakshi Amrutkar³, Sandeep Rajput⁴
1.(PG scholar,RSBK) ,2. (PG guide, Associate Professor, RSBK),3. (Associate Professor, RSBK),
4. Associate Professor, Balrog

#### Dr. G D Pol Fondation's YMTAMC, Kharghar, Navi Mumbai., Maharashtra

#### **Abstract:**

The novel corona virus has emerged as a pandemic disease globally. WHO has declared this outbreak as global public health crisis.COVID-19 is a disease caused by new strain of corona virus. It is viral infection which spreads primarily through droplets of saliva from an infected person. The best way to avoid transmission of this virus is prevention and isolation. Symptomatic treatment can get better relief and increase the chances of recovery. Symptoms such as fever, cough etc. can be treated including boosting of the immunity of patients. *Shadangpaniya* is an herbal formulation used mainly in management of fever. It contains decoction of six medicinal herbs. It is mentioned in different *ayurvedic* texts with its therapeutic uses. Contents of *Shadangpaniya* show anti-viral, antibacterial and antioxidant properties. Also they are used in diarrhea and skin problems. Taking this in consideration *Shadangpaniya* is being reviewed and can be used to cure symptoms in such epidemic burst.

Keywords: Shadangpaniya, COVID-19, Fever.

#### **Corresponding Author:**

Dr. Shravan Sheth Sector 4, Kharghar, Navi Mumbai. Email id – <u>shravan12344321@gmail.com</u> Mob no – 7485404581, 7498646645



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**INTRODUCTION:** The word CORONA VIRUS itself has made a huge impact on every aspect of human life all over the world. This disease (COVID 19) is highly transmittable and pathogenic viral infection. The first case was initially observed in the Wuhan province of China and now it is rapidly spreading globally. This viral infection is caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2).<sup>[1]</sup> Corona Viruses are minute in size (65-125 nm in diameter) and contain a single stranded RNA as a nucleic material. Lot of researches are been carried out on SARS, CoV-2, and COVID-19 on the basis of immunology and virology.<sup>[1]</sup> It has been observed that the spread of virus from human to human occurs due to close contact with infected persons, exposed to coughing, sneezing respiratory droplets and aerosols.<sup>[1]</sup> This virus causes lower Respiratory tract infections. The most common symptoms of COVID-19 are Fever, dry cough and tiredness. While the other symptoms include, body pain, headache, breathlessness, sore throat and skin rashes.<sup>[2]</sup> COVID-19 can cause mild to severe illness. Older persons and patients having complicationslike diabetes, heart problems, hypertension, lung diseases and cancer are likely to develop serious illness.<sup>[2]</sup> Recent studies have also stated diarrhea as a symptom of this virus.<sup>[3]</sup>

Many researchers are seeking for the treatment of this pandemic. There is no specific treatment protocol even in all medically advanced countries, which has led to increase in mortality rate. Clinical trials are been carried out for study of cure of this disease. Till then the treatment followed is symptomatic. As the pandemic is new and was unexpected it is tough for medical faculties to overcome it. But it has been observed that immunity plays important role in recovery of COVID-19. So in this outbreak of corona virus traditional medicines are gaining more importance.

Ayurveda is being practiced as a healthcare system of medicine since thousands of years. Many of the herbo-mineral preparations in ayurved a act as great immune boosters. Plants are natural resources important for human health and has many medicinal properties. Shadanqpaniya is also a Polyherbal preparation, containing aqueous decoction of six herbs in equal amount. It is used mainly in fever and symptoms associated with it. Its constituents are mentioned in ancient texts of effective Avurveda. Shadanqpaniya is in management of fever, loss of appetite, excessive thirst and distaste.Jwara (Fever).<sup>[4]</sup> is mentioned in our *ayurvedic* classics prior to all other diseases. And fever being the major symptom of COVID-19 Shadangpaniya<sup>[5]</sup> has been taken for review in this Article.

#### Materials and Methods<sup>[5]</sup>

This formulation contains Ushir (Veteveria Zizanioides), Parpatak (Fumaria indica), Udeecha (Andropogan Veteveria), Musta (Cyperusrotundus), Nagar (Zingiber officinale), and Chandan(Santalum album). It is a decoction prepared of these six ingredients and herbal hence known asShadangpaniya<sup>[5][6]</sup> It consists of water soluble active principles and is widely used by ayurvedic practitioners particularly in management of Jwara(Fever)

**Dose** – There is no specification of dose in *ayurvedic* classics. It should be consumed sip by sip frequently in fever.

#### *Rasa* (taste)- *Tikta rasa* Indications.<sup>[6]</sup>-

- Fever
- □ Loss of appetite
- □ Excessive thirst
- □ Distaste, and other complications of fever.

#### Ayurvedic properties.<sup>[7]</sup> -

**Rogkarma**–Jwara(fever)and*Trishna*(thirst) (Decreases *kapha* and *vaatadoshas* in the body). **Dosha karma**–Kaphvaatahara **Guna**–Deepan Pachana

#### Table no :1 showing properties of ingredients of Shadangpaniya-

Content	Quantity	Rasa (taste)	<i>Virya</i> (potency)	Vipaka	Doshaghnta	Indications
<i>Musta<sup>[8][9]</sup></i> (Cyperus rotundus)	1 part	Katu Tikta Kashaya	Sheeta	Katu	Kaphaghna Pittaghna	Jwarghna Kaasshwashar Twakdoshahar Raktavikar
<i>Pittapapda<sup>[8][10]</sup></i> (Fumaria indica)	1 part	Tikta	Sheeta	Katu	Kaphapitta Nashak	Jwara Trishna Daha Yakrut and Vrukkavikar
<i>Ushira<sup>[8][11]</sup></i> (Veteveria Zizanioides)	1 part	Tikta Madhur	Sheeta	Katu	Kaphapitta Shamak	Jwaraghna Swedajanan Deepanapachana Vishaghna
<i>Chandan</i> <sup>[8][12]</sup> (Santalum album)	1 part	Tikta Madhur	Sheeta	Katu	Kaphapitta Shamak	Jwaraghna Dahaprashaman Swedajanan Vishaghna Hridya
Shunthi <sup>[8][13]</sup> (Zingiber oficinale)	1 part	Katu	Ushna	Madhur	Kaphvaat Nashak	Shwasahar Jwaraghna Aampachan Sheeta- prashaman Deepan pachan
<i>Udichha</i> <sup>[8]</sup> (Andropogan veteveria)	1 part	Tikta	Sheeta	Katu	Kaph- pitaghna	Jwara Swedaupanayan Deepan Pachan

#### Preparation method of Shadangpaniya.<sup>[14]</sup>

The procedure to prepare *Shadnangpaniya* is simple and can be easily made with very less houseoldequipments. Used by *Vaidyas* in day to day practice.

#### Ingredients

<ol> <li>Ushira (VeteveriaZizanioides)</li> <li>2. Parpatak</li> <li>(Sumaria Indias)</li> </ol>	Khas grass
(Fumaria inaica)	Fumaria indica
3. Udeecha (AndropoganVetiveria)	ANTROPOGAN
4. Musta (CyperusRotundus)	NUTBRASS
5. Nagar (Zingiber Oficinale)	DRIEDGINGER
6. Chandan (Santalum album)	REDSANDALWOOD

#### **Equipment's-**

- Stainless steel vessel
- □ Filter cloth
- Gas burner
- □ Drinking water
- □ Stirrer
- □ Measuring cylinder
- □ Coarse powder of above mentioned herbs.

#### **Procedure-**

□ Take coarse powder of all herbs in equal quantity.

□ Mix the powders properly

□ Then take 40 gm (1*pal*) of this mixture and add it to the vessel.

□ Then pour 2560 ml (64 *pal*) of water in it.

□ Then switch on the gas and simmer it until it reduces to half.

□ Thereafter switch off the gas and allow the mixture to cool down.

□ Then filter it with clean cloth and is ready to use. (**Note** – Vessel should not be covered with lid during the procedure)

## Preparation method varies according to different classical texts.

□ As per *Sharngdhar Samhita4 Pal* (apporx. 40gms) *Churna* of all herbs should be taken and is mixed in 64 *pal*(aprrox. 2560ml) of water and should simmer it until it reduces to half.

□ As per *Vangasen* 1 *tola* (approx.10gms) *churna* should be boiled in 1 *prastha*(approx. 640ml) of water.

Pharmacological action and therapeutic uses of contents of *Shadangpaniya*-

#### 1) Ushira (Veteveriazizanioides) -

□ It is known as khas grass and hasAnti-oxidant, anti-fungal, antibacterial properties<sup>[15]</sup>.

□ It contains higher amount of phenolic acid which has anti-fungal and antimicrobial properties.<sup>[15]</sup>

□ It is used in Fever, Mouth ulcers, Boils, epilepsy, rheumatism, head ache.<sup>[16]</sup>

 $\hfill\square$  The decoction of roots is used as tonic for weakness.  $\ensuremath{^{[16]}}$ 

□ Also used in sprains and UTI.<sup>[16]</sup>

□ The detection of anti-oxidant property of Veteveriazizanioides indicates that it can be used in food supplements and nutraceuticals.<sup>[16]</sup>

#### 2) Pittapapda (Fumaria indica) -

□ In *Charak*and *Sushrutsamhita* Fumaria indica is used in fever and blood disorders.

□ Fumaria indica is an important constituent of *Amrutaristha*<sup>[17]</sup> mentioned in*bhaishajyaratnavali* and it is prescribed as antipyretic compound.

□ It has antibacterial, antifungal, neuropharmacological, Hepatoprotective and antioxidant properties.<sup>[18]</sup>

□ It shows spasmogenic effect in vitro study which may explain the use of F.indica in constipation and diarrhea.<sup>[19]</sup>

□ It is also used as antihelmintic, blood purifier, diuretic, sedative tonic and also laxative.<sup>[20]</sup>

□ It is beneficial in lowering fever, liver complaints, dyspepsia, Jaundice, leprosy and tuberculosis.<sup>[21]</sup>

#### 3) Udiccha(Andropoganveteveria)

□ *Udiccha* is also recommended in fever as it has *Deepan* and *Pachan* properties.

□ It is used in *ayurveda* for dysentery, intestinal infections and inflammation.<sup>[22]</sup>

□ Used for skin problems and rheumatism.

□ It has antimicrobial, cooling, demulcent diuretic and antispasmodic activities.

□ Besides this it is used in cosmetics, massage oils, shampoos.

#### 4) Musta(Cyperousrotundus) -

□ The study of *cyperousrotundus* has shown reduction in symptoms of breathlessness, laziness and tiredness.<sup>[23]</sup>. It also decreases excessive thirst as well as hunger.

□ Besides this it has anti-allergic, anti-arthritic, anti-carcinogenic, anti-diarrheal.<sup>[24]</sup>

□ Musta has antioxidant and antibacterial<sup>[25]</sup> properties. It is used in patients of obesity because of its *laghuguna* 

□ It is also useful in wound healing activity.<sup>[25]</sup>

□ Numerous studies proved that it acts as analgesic. anti-emetic, anti-helmintic, anti-hyperglycemic properties.<sup>[26]</sup>

#### 5) Shunti(Zingiber officinale) -

□ It has antibacterial activity. It also has anticoughforming property.<sup>[27]</sup>

□ Antibacterial activity of zingiber officinale extract against Streptococcus aures, Proteus mirabilis and Klebsiella pneumonia is proved.<sup>[27]</sup>

□ It contains nearly a dozen of antiviral compounds. There are several chemicals in gingerthat have specific effects against family of cold viruses.<sup>[28]</sup>

□ Other constituents in ginger helps to reducepain and fever, relieves cold, and suppresses cough.<sup>[28]</sup>

□ It is consider asimmune stimulant. It increases antibodies production, raises WBC count and stimulate its activity.

□ It is traditionally used to aid digestion, diarrhea, and nausea.

□ It also has antioxidant, anti-inflammatory properties and can acts in prevention of cancer.<sup>[29][30]</sup>

#### 6) Chandan (Santalum album) -

□ Sandalwood showsantipyretic effect. It has antiviral activity against herpes simplex virus-1and 2 (HSV – 1and 2)<sup>[31]</sup>

□ It is used incommon cold, general weakness, fever andskin disorders<sup>.[32]</sup>

□ It is beneficial in diseases such as; Fever, tension, gastric irritability.<sup>[33]</sup>

□ It is also beneficial in chronic diseases as, chronic bronchitis, chronic mucous diarrhea, chronic inflammation of bladder and pyelitis.<sup>[33]</sup>

□ It is good tonic for heart, liver, memory, and used as blood purifier.

□ In *ayurvedic*classics it is used in diarrhea with bleeding, hemorrhage, piles, vomiting, poisoning.<sup>[33]</sup>

□ Santalm album is known as sandalwood and is used widely in cosmetics and medicines.

□ Besides this it is extensively used in Perfumery, cosmetics, aromatherapy, and pharmaceutical industries.<sup>[33]</sup>

□ It shows anti-inflammatory, antifungal, and antibacterial properties.<sup>[34]</sup>

#### **DISCUSSION-**

Corona virus causes respiratory tract infections in human along with fever breathlessness and other complications. As there is no treatment protocol found yet the only way to recover from it is isolation, wearing of mask, sanitization<sup>[35]</sup>Along with it symptomatic treatment is necessary for faster recovery. While the disease is almost controlled in China, it is still widespread in Europe and US which have emerged as the new epicentres of the COVID-19<sup>[36]</sup> The main purpose is to stop the progression of virus in human body and make it ineffective, so it can reduce the mortality rate and improve the recovery rate.

Shadangpaniya is used for management of Jwara which is one of the main symptoms of COVID-19. Due to its *Deepan* and *Pachan* properties it is helpful in

*Aampachan*which is constant cause of *jwara*. While studying of individual constituents of *shadangpaniya* it has been seen that almost all drugs have antipyretic, antioxidant, antibacterial and anti-inflammatory properties. Some of the drugs also show immuno stimulant and antiviral Shunti. WHO activity eg: has recently acknowledged Diarrhea as new symptom of COVID-19. So Antidiarrheal drugs asMusta and Shunti can show better results. Even these drugs can be useful in symptoms like general weakness, Bronchitis and Skin rashes which are seen in that of corona virus. So looking at the review of Shadanqpaniya and its properties it can be considered as a better option in this pandemic.

#### **CONCLUSION-**

Corona virus is disease which is preventable and may be cured by vaccination.But, at present as there no development of vaccines, patients are seeking for alternative medicines. And hence there is exponential growth in herbal therapy. Centuries ago in absence of any modern science the only defence against infection was our immune system. So these herbs support our defense mechanism of the body naturally. *Shadanpaniya* simple herbal decoction of six herbs has a great importance. In current scenario for the treatment of COVID-19 this poly-herbal formulation can show satisfactory results. Accordingly this compilation can propose future research suggestions for researchers.

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तमक श्वास



विषयानुप्रवेश : एक २२ वर्षीय तरूण रूग्ण अधिक धाप लागत असल्यामुळे Allopathic hospital मध्ये जाऊन आला असता, Admit व्हावे लागेल असे सांगून त्यांनी रक्ततपासणीची भलीमोठी यादी, CT-chest असे महागडे प्रयोगशालेय परीक्षण लिहून दिले. परंतु सदर रूग्णाकडे पैसे नसल्यामुळे तसेच admit न होण्याच्या इच्छेमुळे पुढील उपचारासाठी तो माझ्याकडे आला. सदर रूग्णाला पाहिले असता, stethoscope न लावता कळत होते की, छातीत खूप कफ आहे व अतिशय कष्टतेने तो श्वास घेत होता, बोलताना मध्ये मध्ये थांबत होता. लहानपणापासून 'Haemophilia' या आजाराने मी ग्रस्त आहे असेही सांगितले. सदर लेखात रूग्ण इतिहास, आयुर्वेदोक्त व्याधी निदान, चिकित्सा विवेचन आदिचा ऊहापोह केला आहे. तो सविस्तर पाह.

रूग्णानुभव

रूग्ण माहिती : नाव – अबक वय – २२ वर्षे लिंग – पुरूष व्यवसाय – रिक्षा ड्रायव्हर व्यसन – कोणतेही नाही पूर्व व्याधीवृत्त - k/c/o Haemophilia आहार :– शाकाहारी, अल्प आहार, अधिक शीताम्बु पान, बाहेर अधिक खाणे. विहार :– रिक्षा ड्रायव्हर असल्यामुळे अधिक वायू सेवन दिवास्वाप

रूग्ण परीक्षण :– प्रकृती – वातप्रधान कफ निद्रा – खंडित – (वेग आला असता रात्री समयी उठून बसणे)

नाडी – पित्तवात, जिव्हा – साम, मल – विबंध, अल्प क्षुधा – मांद्य, मूत्र – प्रा., रक्तदाब – 110/80mmHg

वजन - ४५ kg, Rs-Crepts++ Rhonchi++

प्रयोगशालेय परीक्षण :- Not Done

रूग्ण बल – हीन, वर्तमान व्याधी लक्षणे – श्वास कृच्छूता, अरूचि, आध्मान – १५ – २० दिवसांपासून श्वासवेग – निशाकाली अधिक तमःप्रवेश – श्वास वेग असताना जीव घाबरणे ही लक्षणे (रात्रीच्या वेळी अधूनमधून), क्षुधामांद्य, आलस्य

वर्तमान व्याधी वृत्तांत – सदर रूग्ण 'Haemophilia' या आजाराने ग्रस्त आहे, ज्यामध्ये clotting factor defficiency असते ज्यामुळे रक्तस्राव बाह्य किंवा आभ्यंतर झालाच तर



वैद्य प्रियंका राठोड

रक्तस्राव थांबत नाही आणि गेल्या १५-२० दिवसापासून त्याला श्वास घेण्यास त्रास होऊ लागल्यामुळे Allopathic doctor कडे जाऊन Admit व्हायचे नाही म्हणून तो माझ्याकडे आयुर्वेदिक चिकित्सेसाठी आला. त्याला पाहिल्यावर उपरोक्त लक्षणे त्याने सांगितले, त्यांच्या लक्षणानुसार, चिकित्सा करण्याचे ठरवले.

व्याधी व्यवच्छेदक निदान – १) शुष्क तमक श्वास (वातोल्बण)२) आर्द्र तमक श्वास (कफोल्बण)

३) हृदयदौर्बल्यजनित तमक श्वास

व्याधी विनिश्चयः तमक श्वास (कफानुबंधी)

## साध्यासाध्यत्व – याप्य व्याधी

चिकित्सा विवेचन – सदर रूग्ण अधिक कष्टतेने श्वसन घेत होता. त्यामुळे त्याला 'सदय वमन' द्यायचे ठरवले. सद्य वमनासाठी – उष्णोदक +लवण + हरिद्रा सिध्द, ३-५ ग्लास उष्णोदक घेतल्यानंतर त्यास वमनाचे वेग येऊ लागले. त्यात स्त्यान कफ, पित्तान्त असे बाहेर पडले ते परत उष्णोदक देऊन वमन करून घेतले. त्यानंतर रूग्णास ५० टक्के उपशय मिळाला. त्या रात्री त्याला कडकडीत लंघन करावयास सांगितले. त्या लंघनादरम्यानच पुढील औषधी चिकित्सा सुरू केली.

१) तालिसादि चूर्ण ५०० mg + यष्टीमधु २५० mg + टंकण १२५ mg + हरिद्रा चिमूटभर

१ पुडी ४ थेंब आर्द्रक स्वरस + मधासोबत दिवसातून – ३ वेळा

२) त्रिभुवनकीर्ति रस २५० mg २ - २ - २

३) अविपत्तिकर चूर्ण ० – ० – १ चमचा रात्री गरम पाण्यासोबत X १० दिवस

सदर रूग्णास ही चिकित्सा १० दिवस चालू ठेवली.

कारण मीमांसा :—

१) तालिसादि चूर्ण :-

श्वासकासारूचिहरं तच्चूर्णं दीपनं परम् । चक्रदत्त

तमकश्वास हा वातकफज आहे तर तमक हे लक्षण पित्तानुबंधी आहे.

।। आयुर्वेद पत्रिका ।।



२) यष्टीमधुः - मधुर रसात्मक, मधुर विपाकी, शीत वीर्यात्मक कक्त दव करून बाहेर काढण्यासाठी तचेन 2) यहामधु . 3) यहामधु . असून कफ द्रव करून बाहेर काढण्यासाठी तसेच बल्य म्हणून असून कफ द्रव करून बाहेर काढण्यासाठी तसेच बल्य म्हणून असून कभ × असून कभ × स्तग्ध असल्यामुळे वातानुलोमन, मृदु रेचन वापर मधुर, स्निग्ध असल्यामुळे वातानुलोमन, मृदु रेचन वापर. नाउं र वापर. नाउं र भस्म :- कटु लवण रसात्मक, लघु, रूक्ष, तीक्ष्ण ३) टंकण भस्म :- कटु दिपाकी, वात काम काम 3) टकण वीर्यात्मक, कटु दिपाकी, वात कफ शमन, कफ गुणात्मक, उष्ण वीर्यात्मक, कटु दिपाकी, वात कफ शमन, कफ

, वितयनासाठी उपयोगी.

<sub>४) हरिदा</sub> - कफ लेखनासाठी १) त्रभुवनकीर्ति रस :- कफ वात प्रधान इदोष प्रकोपात २) त्रिभुवनकीर्ति रस :- कफ वात प्रधान इदोष प्रकोपात रा उपयोगी पडणारे कफ विलयन करणारे.

अभ्य मितिकर चूर्ण :- रूग्णास 'मलविबंध'हे लक्षण होते. 3) अविपत्तिकर चूर्ण :- रूग्णास 'मलविबंध'हे लक्षण होते. ३) आज असताना दोषांचा प्रकोप होतो. विशेषतः कफ वाढून मतविबंध असताना दोषांचा प्रकोप होतो. विशेषतः कफ वाढून मलापण मार्गावरोध करून श्वास उत्पन्न करतो म्हणून बाताचा मार्गावरोध करून श्वास उत्पन्न करतो म्हणून वातापा अविपत्तिकर चूर्ण दिले. १० दिवस उपरोक्त औषधे चालू ठेवली. भाषपार रुग्णास ८०% उपशय मिळाला. या १० दिवसांच्या प्राण दरम्यान रात्री २ वेळा 'जीव घाबरतो' हे लक्षण रूग्णाने सांगितले. त्यानंतर त्यास पुढील चिकित्सा केली.

9) कामदुधा रस २५० mg २ - २ - २, २) प्रवाळपंचामृत वटी २५० mg २ - २ - २, ३) अविपत्तिकर चूर्ण ० - ० -<sub>9 चमचा</sub> गरमपाण्यासोबत, ४) सारिवा ५०० mg + यष्टीमधु <sub>400 mg</sub> + आमलकी ५०० mg १पुडी वासा घृतासोबत,

५) दुग्धपान – हरिद्रा **+** शुण्ठी सिध्द

9) जीव घाबरणे हे लक्षण असल्यामुळे कामदुधा व प्रवाळ २) रूग्णास दौर्बल्य हे लक्षण पंचामृत वटी सुरू केली. असल्यामुळे पूर्ण आहार समजले जाणारे दूध हे शुण्ठी आणि हरिद्रा ने सिध्द करून दिले. ३) सारिवा :- मधुर, स्निग्ध -वातशमन, शीत – पित्त शमन, तिक्त – कफ शमन

सारिवायुगलं स्वादु स्निग्धं शुक्रकरं गुरू । अग्निमांद्यारूचिश्वासकासाम विषनाशनम् ॥ भा.प्र

दोषत्रयास्रप्रदरज्वरातिसारनाशनम् । दीपन, पाचन, रोचन, अनुलोमन तसेच, रक्तप्रसादन म्हणून उत्तम कार्य. रूग्णास 'Haemophilia' असल्यामुळे रक्तपित्तावर अधिक उपयोगी.

8) आमलकी :- आम्लप्रधान लवणवर्जित पंचरस. पित्तशमन, <sup>वीर्य</sup>-शीत, गुण – गुरू, रूक्ष, शीत, विपाक – मधुर, दीपन, पाचन, अनुलोमन, कफघन, रक्तपित्त, यक्ष्मा, श्वास, कास, दौर्बल्य, क्षयावर उत्तम कार्य.

<sup>५) यष्टीमधु</sup> – कफ द्रव करून बाहेर काढण्यासाठी बल्य म्हणून,

स्नेहन, सौम्य कफ निस्सारक गुणामुळे स्वरमंग, कास, श्वसनिका, शोध, गलशोधावर उपयोगी.

६) वासा घृत - अनुपानासाठी वापरले कारण रूग्णास 'Haemophilia' हा आजार आहे ज्यात clotting factor Absent असतो. हा आजार पित्याकडून कन्येला व कन्येकडून पुरूष संतान यांना होतो.

वासायां विद्यमानायामाशयां जीवितस्य च । रक्तपित्ति क्षयी कासी किमर्थमवसीतति ।। यो.र.

अर्थात - ज्याला जीविताची आशा आहे अशा रक्तपित्त, क्षय किंवा कास झालेल्या रूग्णाला 'वासा'' हे उत्तम औषध म्हणून कार्य करते.

वृषःसदयो जयत्यसं सह्यस्य परमौषधम् । वा.चि.२

वासा हे रक्तगामी द्रव्य आहे. रक्तपित्ताचे परमौषध म्हणून अनुपानार्थे दिले. ही औषधे १ महिना चालू ठेवली. रूग हीन बल असल्यामुळे शमन औषध चिकित्सा केली.

'तमके तु विरेचनम् ।' असे जरी असले तरी रूग्णाच्या बलाच्या आधारावर शमन चिकित्सा केली. कारण चरक म्हणतात -

### नात्यर्थ शमनेऽपायो ।

शमन उपाय केल्यावर जर एखादा उपद्रव निर्माण झालाच तर त्याने फारसा अपाय होत नाही.

अपुनर्भव चिकित्सा – वसंत ऋतुकाली वमन

रसायन चिकित्सा – वासावलेह

पुढे त्याच्या 'Haemophilia' आजारावर आपल्या आयुर्वेदात सांगितलेल्या 'रक्तपित्ताप्रमाणे' चिकित्सा करण्याचे प्रयोजन आहे. अशा प्रकारे अगदी साध्या कल्पांचा वापर करून 'तमक श्वास' रूग्णाचा बरा झाला.

पथ्य - जुने तांदूळ, गोधूम, मुद्ग, कुलत्थ, यव, पटोल, उष्णोदक, अजा दुग्ध, मधु, प्राणायाम, योग.

अपथ्य – माष (उडीद), तळलेले, आंबवलेले पदार्थ, शीत

आणि जडान्न, शीत वायू, आतप सेवन, शीताम्बू, वेगघारण. वैद्य प्रियंका राठोड (PG Scholar)

मार्गदर्शक - वैद्य मनोज जगताप प्राध्यापक (शारीररचना)

जी.डी. पोळ फाउंडेशन

फेब्रुवारी २०२० । ४१

वाय. एम्. टी. आयुर्वेद महाविद्यालय, खारघर, मुंबई

सद्यो वमन हीच तमक श्वासाची प्रधान चिकित्सा !



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**Review Article** 

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## CRITICAL REVIEW OF DIFFERENT AYURVEDIC DRUGS W.S.R. TO VISHAD (DEPRESSION)

## \*<sup>1</sup>Dr. Prajakta Shashikant Desai and <sup>2</sup>Dr. Ninad Sathe

<sup>1</sup>P.G. Scholar Rasa Shastra and <sup>2</sup>MD /Ph.D Rasa Shastra Bhaishajya Kalpana, Y.M.T Ayurvedic Medical College & Hospital, Kharghar, Navi

Mumbai.

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\*Corresponding Author Dr. Prajakta Shashikant P.G. Scholar Rasa Shastra, Bhaishajya Kalpana, Y.M.T Ayurvedic Medical College & Hospital, Kharghar, Navi Mumbai.

#### ABSTRACT

In todays globalized era depression is estimated to affect 300million people. The world mental health survey conducted in 17 countries found that on average about 1 in 20 people reported having an episode of depression in the previous year. Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Depression in *Ayurveda* can be compared with *Vishad*. Vishad is one of the *Vatananatmaja Vikaras*. The symptoms of *Vishad* which are found in various references in Indian science when compared to depression almost appear similar, so we can correlate *Vishad* with depression. There are some common side

effects of modern anti-depressant drugs such as nausea, loss of sexual desire, fatigue and drowsiness, insomnia, blurred vision, dizziness, irritability etc. Our *Ayurvedic* texts has given various drugs for treatment of Vishad. Current study focuses to gather different *Vishadhar* drugs from different *ayurvedic* literatures and various research papers. A list of ayurvedic drugs having anti-depressant and related beneficial effects in treatment of depression is compiled.

KEYWORDS: Vishad, Depression, Ayurvedic drugs, Vishadhar.

#### **INTRODUCTION**

Today depression is estimated to affect 300million people. The world mental health survey conducted in 17 countries found that on average about 1 in 20 people reported having an episode of depression in the previous year.<sup>[1]</sup> At its worst depression can lead to suicide.

Close to 800000 people die due to suicide every year. Suicide is the second leading cause of death in 15-29 year olds. The slogan for year 2017 was "Depression let"s talk".<sup>[2]</sup>

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration.

Depression in *Ayurveda* can be compared with *Vishada*. *Vishada* is one of the *Vatananatmaja Vikaras* and it is further said that *Vishada* is the main factor that increases the range of all the diseases "*Vishado Rogavardhanaanaam Shreshthah*". *Dalhana commented "Asiddhi Bhayat Vividheshu Karyasu Sado Apravrutihi*" i.e a condition originated from apprehension of failure, resulting in incapability of mind and body to function properly with significant reduction in activity. Symptomatic representation of the state of *Vishada* is explained in Shrimad Bhagvad Geeta. The symptoms of *Vishada* which are found in various references in Indian science when compared to depression almost appear similar, so we can correlate *Vishada* with depression.<sup>[3]</sup>

A man is healthy only when his body and mind is healthy. The science of Ayurveda brings out his idea by conveying the concept of *swastha*(healthy individual), where *prasanaatmeindriyamana* (pleasant mental faculty) is mentioned as one among the indicators of a healthy individual. *Shareer*(body), *indriya*(senses), *satva*(mental faculty), *atma*(soul) constitute life.

There are some common side effects of modern medicines of depression such as increased sweating, increased blood pressure, heart palpitation, fast heart rate, dry mouth, digestive problem, changes in appetite etc. Some of *ayurvedic* drugs which acts on *mana* shows very good result to treat depression.

#### Ayurvedic concept of depression

Our mind controls our body. The mind is responsible for perception, thinking, understanding, and taking the right decision at the right time.<sup>[4]</sup> If the mind is sick then the body mind apparatus is in danger. When the mind is in status of health, it contains positive feelings like love, affection, sharing and caring. Due to improper diet and action the natural state of mind is disturbed and these positive feelings are driven out. Then they give place to negative

feelings sad, anxious, empty, hopeless, worried, helpless, worthless, guilty, irritable, hurt or restless.<sup>[5]</sup>

Symptoms of depression <sup>[6]</sup>	Dosha
Sadness of mood	Vata
Lack of pleasure	Kapha
Sleep disturbances	Vata
Appetite changes	Vata
Easy fatigability	Vata
Psychomotor retardation	Kapha
Guilty feeling	Vata
Poor concentration	Vata
Suicidal ideation	Vata

#### Table No. 1: Doshic predominance of symptoms.

#### **Clinical symptoms and correlation**

Depression can be correlated as avasada, vishada, manodhukhaja unmada and kaphaja unmada according to the etiology and symptoms exhibited by the disease. Vishada and avasada are the terms used synonymously.<sup>[7]</sup> Vishada is classified under manasika bhava as well as *manasika vikara* in *Avurveda*.<sup>[8]</sup> It is particulary caused by vata *dosha*.<sup>[9]</sup> *Vishada* is caused by apprehension and result in despondency and inertia.<sup>[10]</sup> It is the prime factor for aggravation of all illnesses. So the psychoneuro immunological aspect of depression can be established here. The stress hormone, cortisol which is found elevated in depressed is known in suppressing the functions of immune system. One of the psychodynamic factors in causation of depression is loss of object. The hate and anger of the lost object is directed to self.<sup>[11]</sup> Similar condition is explained as manodhukhaja unmada. The symptoms expressed are grief, complaining or praising the lost, pallor and fainting, weeping, tearfulness, emotional withdrawal.<sup>[12]</sup> Kaphaja unmada on the other hand is characterized by sthanam eka dehse (staying in one place-catatonic features), thushni bhava (observing silence), achankramana (reduced or absence of activities), lalasinghanaka srava, sauchadwesha (discharge of saliva and nasal secretion- lack of self-care), anannabhilasha (disinclination for food), rahaskamatha (prefer to stay alone), bhibhatsyathwam (disgust feeling).<sup>[13]</sup> These features are seen in patients with major depressive disorders. So in severe conditions, the disease can be correlated with kaphajonmada.

Parameter	Treatment principle
Sharririk dosha	Vatanuloman, Vatahara
Mansik dosha	Tamodoshahara
Jannendriya	Inriya prasadak
Agni	Agni deepana, sadhakagni balanced for
Адпі	proper emotions
Dhatu	Correction of agni and metabolism
Ojus	Rasayan, medhya
Satwa	Satwavajaya

#### Table No. 2: Ayurvedic principles of treatment for depression.

#### Different ayurvedic drugs for depression

#### 1. Ashwagandha (Withania somnifera)

#### बल्यारसायनी तिक्ता कषायोष्णातिशुक्रला I (भा. प्र.गुडुच्यादिवर्गः १९०)<sup>[14]</sup>

a) Evaluation of antidepressant activity of Aques extract of *Withania somnifera* (Ashwagandha) root in albino mice.<sup>[15]</sup>

#### Dr.P.Bharathi1, Dr. V.Seshayamma2, Dr. G. Hari Jagannadharao3, Dr.N.Sivakumar41

The antidepressant activities of aqueous extract *Withania somnifera* roots (AEWS) were studied using - Forced swim test (FST). Effect of different doses of AEWS (30,40,50 mg/kg), Imipramine (15mg/kg)were studied on behavioral despair tests induced immobility time. WS produced dose dependent decrease in immobility time in FST, maximum effect being observed with WS 50 mg/kg. The findings support the use of WS as potential adjuvant in depressive disorders.

b) Anti-depressant effects of *Withania somnifera* fat (Ashwagandha ghrutha) extract in experimental mice.<sup>[16]</sup>

#### Jayanthimk, Prathima c1, HuralikuppiJC1, Suresharn and Muralidhar

The anti-depressant activity of *Withania somnifera* (AGG) was studied using 3 models, Behavioral despair tests-Forced swim test (FST), Tail suspension test (TST) and Antireserpine test. Effect of different doses of AGG (20, 40mg/kg), Imipramine (15mg/kg) and their combination (10mg/kg each) were studied on behavioral despair tests induced immobility time and reserpine antagonism. WS produced dose dependent decrease in immobility time in chronic studies in FST and TST model, maximum effect being observed with WS 40 mg/kg. On anti-reserpine models, ptosis, catatonia and sedation scores in the standard, test and combination drug groups were significantly different from the control group. The findings support the use of WS as potential adjuvant in depressive disorders. c) Effect of *Withania somnifera* on forced swimming test induced immobility in mice and its interaction with various drugs.<sup>[17]</sup>

#### P. C. Shah, N. A. Trivedi, j. D. Bhatt and k. G. Hemavathi

The objective of the study was to evaluate the antidepressant action of Withania somnifera (WS) as well as its interaction with the conventional antidepressant drugs and to delineate the possible mechanism of its antidepressant action using forced swimming model in mice. Effect of different doses of WS, fluoxetine and imipramine were studied on forced swimming test induced mean immobility time (MIT). Moreover effect of WS 100 mg/kg, i.p. was observed at different time intervals. Effect produced by combination of sub therapeutic doses of WS with imipramine (2.5 mg/kg, i.p.) as well as fluoxetine (2.5 mg/kg, i.p.) were also observed. Effect of WS (100 mg/kg, i.p.) as well as combination of WS (37.5 mg/kg, i.p.) with either impramine (2.5 mg/kg, i.p.) or fluoxetine (2.5 mg/kg, i.p.) were observed in mice pretreated with reserpine (2 mg/kg, i.p.) and clonidine (0.15 mg/kg, i.p.). Effects of prazosin (3 mg/kg, i.p.) or haloperidol (0.1 mg/kg, i.p.) pre-treatment were also observed on WS induced decrease in MIT. WS produced dose dependent decrease in MIT. Maximum effect in MIT was observed after 30 min of treatment with WS 100 mg/kg, i.p. Combination of WS (37.5 mg/kg, i.p.) with imipramine (2.5 mg/kg, i.p.) or fluoxetine (2.5 mg/kg, i.p.) also produced significant decrease in the MIT. Clonidine and reserpine induced increase in MIT, was significantly reversed by treatment with WS (100 mg/kg, i.p.) as well as combination of WS (37.5 mg/kg, i.p.) with either imipramine (2.5 mg/kg, i.p.) or fluoxetine (2.5 mg/kg, i.p.). Pre-treatment with prazosin but not haloperidol, significantly antagonized the WS (100 mg/kg, i.p.) induced decrease in MIT. It is concluded that, WS produced significant decrease in MIT in mice which could be mediated partly through a adrenoceptor as well as alteration in the level of central biogenic amines.

#### 2. Vacha (Acorus calamus)

• वचाअतिगुणाड्यामतिमेधायुः समृध्दिदा कफनुत I वृष्या च वातभूतकृमिदोषघ्नी च बल्या II (रा. नि. पिप्पलादिवर्गः ५४)<sup>[18]</sup>

• वचोग्रगन्धाकटुकातिक्तोष्णावान्तिवन्हिकृत् I विबन्धाऽऽध्मानशूलघ्नी शकृन्मुत्रविशोधिनी II अपस्मारकफोन्मादभूयजन्त्वनिलान् हरेत् II (भा. प्र. हरीतक्यादिवर्गः१०३)<sup>[19]</sup> a) Evaluation of antidepressant activity of aqueous extract of roots of *acorus calamus* in albino mice.<sup>[20]</sup>

## Dr. Shashikala GH, Dr. Prashanth D, Dr. Jyothi CH3, Dr. Imran Maniyar, Dr. Manjunath H.

A total of 72 albino mice were included in the study. Six groups of six animals in each group were taken in each of the behavior despair models [forced swimming model (FSM) and tail suspension model (TSM)]. Three groups of mice received aqueous extract of Acorus calamus (at doses 100, 150, 200 mg/ kg body weight), two groups received standard drugs (imipramine 15 mg/kg and fluoxetine 10 mg/kg) and control group received normal saline. Antidepressant activity (i.e., Immobility time) was assessed after 30 minutes of administration of drugs intraperitoneally. Data was analyzed by ANOVA statistical test (with p followed by Tukey''s Post Hoc Analysis. Results expressed as Mean ± SEM. Conclusion: The aqueous extract of roots of Acorus calamus has shown antidepressant activity when tested in FSM & TSM.

b) Antidepressant-like effects of *Acorus calamus* in forced swimming and tail suspension test in mice.<sup>[21]</sup>

#### Pawar Vinod S, Anup Akhade, Shrikrishna Baokar, Shivakumar H.

Tail suspension test (TST) and forced swimming test (FST) in mice were used to evaluate the antidepressant activity of methanolic extract of rhizomes of *A. calamus*. Methanolic extracts (50 and 100 mg/kg i.p.) were administered daily for 7 days. Imipramine 5 mg/kg was used as standard antidepressant agent throughout the study. Conclusion: Methanolic extract of *A. calamus* rhizomes shows antidepressant activity probably through interaction with adrenergic, dopaminergic serotonergic and  $\gamma$ -aminobutyric acid (GABA) nergic system. Both the models have been proved to be equally valuable for demonstration of substances with a potential antidepressant activity.

c) Effect of rhizome extract of *Acorus calamus* on depressive condition induced by forced swimming in mice.<sup>[22]</sup>

#### Ilaiyaraja N, Dongzagin Singsit, and Farhath Khanum

The study evaluated the anti-depressant properties of *A. calamus* rhizome in a forced swimming test (FST) of mice model. Three doses of methanol extract of rhizome (200,400 and 600 mg extract/kg b.wt) and imipramine (15 mg/kg b.wt), a positive control, were orally administered once a day for the consecutive period of 14 days in Balb/c mice. The effect of

extract on immobility period was measured using forced swimming test. The levels of cortisol monoamine oxidase and neurotransmitters were analyzed using standard methods. The anti-depressant effect was observed maximum at the dose of 200 mg/kg. b.wt that caused 23.82% reduction in immobility period. The extract also significantly attenuated the FST-induced elevation of plasma cortisol, monoamine oxidase activity and returned the altered levels of neurotransmitters near to the normal levels in brain. These results of the present study suggest that the extract of *A. calamus* rhizome has antidepressant-like activity which is mediated by modulating the central neurochemical as well as HPA (hypothalamic-pituitary-adrenal) axis in response to stress induced by FST. Therefore, *A. calamus* rhizome may be used as a valuable herbal supplement for the treatment of depression related conditions.

#### 3. Khurasani ova (Hyoscyamus niger)

ख्रासनीयवानीत्यवानीसदृशीग्णैः I

विशेषात पाचनी रुक्षा ग्राहिणी मादिनी गुरुः II (भा. प्र.हरीतक्यादिवर्गः ८०)<sup>[23]</sup> Antidepressant like Property of *Hyoscyamus niger* Linn. in Mouse Model of Depression.<sup>[24]</sup>

#### Amit D. Patil, Atul Y. Patil and Amol A. Raje

Antidepressant activity was studied in forced swim test (FST) and tail suspension test (TST) in mice. Locomotor and anxiolytic activity was also studied. *Hyoscyamus niger* ethanolic extract was administered to mice by oral route at dose of 25, 50, 100, 200 and 400 mg/kg for 14 days. Further an interaction of *Hyoscyamus niger* ethanolic extract with conventional antidepressant drugs were also studied at sub-effective doses. Results: The ethanolic extract (50, 100, 200 and 400 mg/kg) significantly reduced immobility duration of mice in FST and TST. The same doses did not change the motor activity in mice. However, high dose of extract has shown anxiolytic activity. Interaction study with conventional antidepressant drugs reduced the duration of immobility count suggests, possible involvement of biogenic amine in antidepressant action. Conclusion: These data suggests that *Hyoscyamus niger* possesses antidepressant like action in mouse model of depression.

#### 4. Tagar (Valeriana wallichi)

तगरव्दयमुष्णंस्यातस्वादुस्निग्धंलघुस्मृतम І
 विषापस्मारमूर्धाक्षिरोग्दोषत्रयापहम II (भा. प्रकर्पूरादिवर्गः २९)<sup>[25]</sup>

## • तगरंशीतलंतिक्तंद्यष्टिदोषविनाशनम् I

## विषार्त्तिशमनं पथ्यं भूतोन्माद भयापहम् II(रा. नि. करवीरादिवर्गः १४३)<sup>[26]</sup>

a) *Valeriana wallichii* root extract improves sleep quality and modulates brain monoamine level in rat.<sup>[27]</sup>

## Surajit Sahu, Koushik Ray, M.S. Yogendra Kumar, Shilpa Gupta Hina Kauser, Sanjeev Kumar, Kshipra Mishra, Usha Panjwani

The study was performed to investigate the effects of Valeriana wallichi (VW) aqueous root extract on sleep-wake profile and level of brain monoamines on Sprague-Dawley rats. Electrodes and transmitters were implanted to record EEG and EMG in freely moving condition and the changes were recorded telemetrically after oral administration of VW in the doses of 100, 200 and 300 mg/kg body weight. Sleep latency was decreased and duration of non-rapid eye movement (NREM) sleep was increased in a dose dependent manner. A significant decrease of sleep latency and duration of wakefulness were observed with VW at doses of 200 and 300 mg/kg. Duration of NREM sleep as well as duration of total sleep was increased significantly after treatment with VW at the doses of 200 and 300 mg/kg. VW also increased EEG slow wave activity during NREM sleep at the doses of 200 and 300 mg/kg. Level of norepinephrine (NE), dopamine (DA), dihydroxyphenylacetic acid (DOPAC), serotonin (5-HT) and hydroxy indole acetic acid (HIAA) were measured in frontal cortex and brain stem after VW treatment at the dose of 200mg/kg. NE and 5HT level were decreased significantly in both frontal cortex and brain stem. DA and HIAA level significantly decreased only in cortex. DOPAC level was not changed in any brain region studied. In conclusion it can be said that VW water extract has a sleep quality improving effect which may be dependent upon levels of monoamines in cortex and brainstem.

b) Antidepressant effect of *Valeriana wallichii* patchouli alcohol chemotype in mice: Behavioural and biochemical evidence.<sup>[28]</sup>

#### Sangeeta Pilkhwalsah, Chandra S. Mathela

Antidepressant effect of dichloromethane extract of *Valeriana wallichii* (10, 20 and 40mg/kg, p.o.) using forced swim test, was determined in both acute and chronic study. The neurotransmitter levels were estimated in mouse forebrain after two weeks of dosing. RESULTS: Single administration of extract (40mg/kg) significantly inhibited the immobility period in mice (p<0.05). Similarly, chronic administration of extract (20 and 40mg/kg) significantly increased the levels of

norepinephrine and dopamine in mouse forebrain (p<0.05). CONCLUSIONS: The extract demonstrated antidepressant effect and significantly increased the norepinephrine and dopamine levels in forebrain.

c) Terpenoid Content of *Valeriana wallichii* Extracts and Antidepressant-like Response Profiles.<sup>[29]</sup>

#### FazalSubhan, Nasiara Karim, Anwarul Hassan Gilani and Robert D. E. Sewell

Three extracts of *Valeriana wallichii DC* (Valerianaceae) rhizome and fluoxetine were studied for antidepressant-like activity in two behavioral models, namely the forced swim test (FST) and the tail suspension test (TST). Fluoxetine as well as methanolic and aqueous extracts of V. wallichii induced monophasic dose-related decrements in immobility times in both tests. However, the aqueous-ethanolic fraction induced a biphasic dose-response profile since it produced a graded effect up to 200 mg/kg but the highest dose (250 mg/kg) was inactive in the FST. This extract also exhibited significantly reduced activity at 200 mg/kg compared to lower doses in the TST. The highest doses of aqueous-ethanolic extract also reduced locomotor activity which will have led to a negative functional interaction with antidepressant-like effects. Qualitative phytochemical analysis revealed that the aqueous-ethanolic extract of V. wallichii was the only separated rhizome fraction containing terpenoids. Furthermore, since the methanolic and aqueous extracts were active in the tests, it is suggested that the antidepressant-like action of this herbal plant is not contingent upon its terpenoid constituents.

#### 5. Akkalkara (Anacyclus pyrethrum)

## ब्ध्दितीव्र,बैचेनि नाशक, उत्तेजक (निघण्टू आदर्शसहदेव्यादि वर्गः)<sup>[30]</sup>

a) Scopolamine-Induced Impairment in Conditioning and Exploratory Behaviours is enhanced by *Anacyclus Pyrethrum* in Rats.<sup>[31]</sup>

## Aboufatima Rachida, Mountassir Maryam, Khalki Hanane, Ferehan Hind, Farouk Loubna, Chiguer Fatiha, Najimi Mohamed, Zyad Abdelmajid, Chait Abderrahman

Wistar rats were used in the study. APE was administered in doses of 100 and 200 mg. Learning and exploratory deficits were produced by acute administration of scopolamine (1mg/Kg). The electric shock avoidance and the T. labyrinth tests are used to assess learning and exploration Conclusion: The combination of scopolamine and "APE" show that the APE reverses the power of SCO to decrease the number of conditioned responses and to

disrupt exploration in the rat. These findings indicate that roots of *Anacyclus Pyrethrum* may contain effective compounds that stimulate learning and exploratory activities in rat. b) Evaluations of antidepressant activity of *Anacyclus pyrethrum* root extract.<sup>[32]</sup>

#### S. R. Badhe, R. V. Badhe, M. M. Ghaisas1, V. V. Chopade, A. D. Deshpande

The study was designed to screen antidepressant activity of *Anacyclus pyrethrum* (AP) root extract. An experiment was designed by different method such as Locomotor activity, Haloperidol-induced catalepsy, Forced swim test (FST), Tail suspension test (TST), Clonidine-induced hypothermia and Reserpine-induced hypothermia on Swiss male albino mice. Standard root extract of *Anacyclus pyrethrum* (AP root extract) showed an increase in ambulatory behavior indicating a stimulant effect of the photoactometer. AP root extract produces a significant antidepressant effect in both FST and TST as they reduced the immobility. AP root extract was found to be effective in reversing hypothermia produced by clonidine and reserpine. In study, it is found that AP root extract inhibited haloperidol-induced catalepsy. These study suggest that AP root extract might produce antidepressant effect by interaction with adrenergic and dopamine receptor thereby increasing the level of noradrenaline and dopamine in brains of mice.

#### 6. Shatavari (Asparagus racemoces)

• शतावरीग्रुःशीतातिक्तास्वाद्वी रसायनी I

मेद्याग्निपुष्टिदा स्निग्धा नेत्र्या गुल्मातिसारजित II (भा. प्र. गुडुच्यादिवर्गः १८६)<sup>[33]</sup>

 शतावरीहिमातिक्तारसेस्वादुःक्षयास्नजित् I वातपित्तहरी वृष्या रसायनवरा स्मृता II (ध. नि. ग्इ्च्यादिवर्गः २९१)<sup>[34]</sup>

a) Antidepressant and antioxidant activity of Methenolic extract of *Asparagus Racemosus* seeds.<sup>[35]</sup>

#### K.Sravani, K.Sivarama Krishna

Methanolic extracts of complex product prepared from dried seeds of plant *Asparagus Racemosus*. In the present study, the antidepressant effect of *Asparagus Racemosus* was examined using two behavioural models, the forced swim test (FST) in rats and tail suspension test (TST) in mice and one invitro model such as estimation of Dopamine levels in rat brain. DPPH & Nitric oxide radical scavenging activity models were selected for antioxidant activity. Conclusion: The effect of 200mg/kg of Asparagus Racemosus was wasbetterthan20 mg/kg Imipramine. The effect of 100mg/kg of Asparagus Racemosus was

significant when compare to vehicle treated group. In in-vitro study, *Asparagus Racemosusin* the doses of 100mg/kg and 200mg/kg showed increased levels of Dopamine when compared to that of normal. Plant extract at dose of 200 mg/kg showed increased levels of Dopamine, which is nearly equal to that of Standard.

b) A Phytopharmacological Review on Asparagus racemosus.<sup>[36]</sup>

#### Deepika Choudhary, Dimple Sharma2

Methanolic extract of *Asparagus racemoces* involve the adrenergic system and enhances the serotonergic mediated behavior indicating the involvement of serotonergic pathway in the antidepressant activity.

c) Antidepressant activity of Asparagus racemosus in rodent models.<sup>[37]</sup>

#### Singh GK, Garabadu D., Muruganandam AV, Joshi VK, Krishnamurthy S.

Asparagus racemosus Linn. (AR) is an Ayurvedic rasayana used as an adaptogen. Adaptogenic drugs are those which are useful as anti-stress agents by promoting non-specific resistance of the body. Although, the adaptogenic effect of AR is well documented, its use in psychological disorders like depression is not scientifically evaluated. Hence, the present investigation evaluates the antidepressant effect of methanolic extract of roots of AR (MAR) standardized to saponins (62.2% w/w). Rats were given MAR in the doses of 100, 200 and 400 mg/kg daily for 7 days and then subjected to forced swim test (FST) and learned helplessness test (LH). The results show that MAR decreases immobility in FST and increases avoidance response in LH indicating antidepressant activity. In behavioral experiments, MAR increased the number of head twitches produced by 5-HTP and increased clonidine-induced aggressive behavior indicating facilitatory effect on both serotonergic and adrenergic systems respectively. However, MAR had insignificant effect on I-DOPA-induced aggressive behavior indicating absence of activity on dopaminergic system. MAR also reversed changes to the endogenous antioxidant system induced by FST. Thus, MAR has significant antidepressant activity and this effect is probably mediated through the serotonergic and the noradrenergic systems and augmentation of antioxidant defenses.

#### 7. Shankhapushpi (Convolvulus pluricaulis)

शंखपुष्पी हिमा तिक्ता मेधाकृत स्वरकारिणी I ग्रहभुतादिदोषघ्नी वशीकरणासिध्दिदा II (रा नि गुडुच्यादिवर्ग १३३)<sup>[44]</sup> a) Evaluation of the antidepressant-like activity of *Convolvulus pluricaulis* choisy in the mouse forced swim and tail suspension tests.<sup>[45]</sup>

#### Dhingra D, Valecha R.

The petroleum ether (25, 50 mg/kg), chloroform (25, 50, 100 mg/kg), and ethyl acetate (25, 50, 100 mg/kg) fractions were administered orally for 10 successive days to separate groups of Swiss young male albino mice. The effects of the extracts on the mice's immobility periods were assessed in the forced swim test (FST) and tail suspension test (TST). The effects of reserpine (2 mg/kg i.p.), sulpiride (50 mg/kg i.p.), prazosin (62.5 microg/kg i.p.), and p-chlorophenylalanine (100 mg/kg i.p.) on the extracts' antidepressant-like effect in TST was also studied. The extracts' antidepressant-like effect was compared with that of imipramine (15 mg/kg p.o.) and fluoxetine (20 mg/kg p.o.) administered for 10 successive days. The chloroform fraction of the total ethanolic extract of *Convolvulus pluricaulis* elicited a significant antidepressant-like effect in mice by interaction with the adrenergic, dopaminergic, and serotonergic systems.

#### 8. Bramhi (Bacopa moneria)

ब्राम्ही हिमा कषाया च तिक्ता वातास्त्रपित्तजित् I

## बुध्दि प्रज्ञां च मेधां क्र्य्यादाय्ष्यवर्ध्दनी II ( रा नि पर्पटादिवर्ग ६६)^{[38]}

Antidepressant Activity of Brahmi in Albino Mice.<sup>[39]</sup>

#### SLDV Ramana Murty Kadali, Das M.C., and Karuna Sri G

The antidepressant activity was studied in albino mice using forced swimming test (FST), tail suspension test (TST) and shock induced depression (SID). Imipramine (10mg/kg), fluoxetine (30mg/kg) were used as standard drugs and brahmi (10, 20, 30mg/kg) was used as test drug. Brahmi has shown antidepressant activity in FST and SID.

#### 9. Jyotishmati (Celastrus paniculatus)

कटु ज्योतिष्मतीतैलं तिक्तोष्णं वातनाशनम् I

## पित्तसंतापनं मेधाप्रज्ञाब्ध्दि विवर्ध्दनम् II (भा.प्र.)<sup>[40]</sup>

Behavioral and Biochemical Evidences for Antidepressant-Like Activity of *Celastrus Paniculatus* Seed Oil in Mice.<sup>[41]</sup>

#### **Rekha Valecha and Dinesh Dhingra**

The seed oil (50, 100, and 200 mg/kg, PO) and fluoxetine per se were administered for 14 successive days to Swiss young albino mice. On the 14<sup>th</sup> day, 60 min after drug administration, animals were subjected to Tail Suspension Test (TST) and Forced Swim Test (FST). The mechanism of action was also studied. *Celastrus paniculatus* seed oil produced significant antidepressant-like effect in mice possibly through interaction with dopamine D<sub>2</sub>, serotonergic, and GABA<sub>B</sub>receptors; as well as inhibition of MAO–A activity and decrease in plasma corticosterone levels.

#### 10. Jatamansi (Nardostachys jatamansi DC)

गन्धमासीं तिक्तशीता कफकण्ठामयापहा I रक्तपित्तहरा वर्ण्या विषभुतज्वरापहा II अभ्रमासीं हिमा शोफव्रणनाडिरुजापहा I लूतागर्दभजालादिहारिणी वर्णकारिणी II (रा नि चन्दनादिवर्ग ९७,९९)<sup>[42]</sup>

Comparative study of antidepressant activity of methanolic extract of Nardostachys Jatamansi DC Rhizome on normal and sleep deprived mice.<sup>[43]</sup>

#### Habibur Rahman, P. Muralidharan

The study was undertaken to evaluate the antidepressant activity of methanolic extract of Nardostachys jatamansi DC by forced swim test, tail suspension test and locomotor activity in inbred male Swiss Albino mice weighing 25-30g. The efficacy of the extract (200 and 400 mg/kg, p.o) was compared with the standard drug imipramine (10mg/kg, p.o) on normal and sleep deprived mice. Drugs were administered for 10 days in normal mice groups and the other groups were subjected to 24 hours sleep deprivation by using multiple platforms on 9th day and last dose was given 1 hour before experiment on 10th day. Duration of immobility was noted in both the models. MENJ (200 and 400 mg/kg, p.o) produced significant antidepressant like effect in normal and sleep deprived mice in both TST and FST and their efficacies were found to be comparable to imipramine (10 mg/kg, p.o). It did not show any significant change in locomotor functions of mice as compared to normal control. However, it significantly improves the locomotor activity in case of sleep deprivation which is comparable to normal control. This finding suggests that MENJ has dose dependent antidepressant activity and can also be used in patients suffering from depression due to sleep disturbances.

#### DISCUSSION

According to world health report, about 450 million people suffer from a mental or behavioral disorder. By the year 2020, depression is expected to constitute the second largest source of global burden of disease after heart disease. Depression is whole body illness which involves not only mood or emotion but also the physical body and thought process. The symptoms of depression are intense feelings of sadness, hopelessness, and despair, as well as the inability to experience pleasure in usual activities, changes in sleep patterns and appetite, loss of energy, and suicidal thoughts.

There are two types of mental depression, namely unipolar depression, in which mood swings are always in the same direction and is common (about 75% of cases) non familial, clearly associated with stressful life events and accompanied by symptoms of anxiety and agitation. The second type is bipolar depression (about 25% of cases) sometimes also called as endogenous depression, shows a familiar pattern, unrelated to external stresses and usually appears in early adult life, results in oscillating depression and mania over a period of a few weeks . Patients with depression have symptoms that reflect decrease in brain monoamine neurotransmitters, specifically norepinephrine, serotonin and dopamine. 500,000/year is diagnosed as suffering from depression.

Although a number of synthetic drugs are being used as the standard treatment for clinically depressed patients, they have adverse effects that can compromise the therapeutic treatment, these common adverse effect include dry mouth, fatigue, gastrointestinal or respiratory problems, anxiety, agitation, drowsiness, and cardiac arrhythmias. Several drug-drug interactions can also occur. These conditions create an opportunity for alternative treatment of depression by used of medicinal plant.

 Table 3: Summarizes the various medicinal plants used for their anti-depressant activity.

Sr.No	Plant name	Ayurvedic action	Proven activity
1	Ashwagandha (Withania somnifera)	बल्या रसायनी	Potential adjuvant in depressive disorders.
2	Vacha (Acorus calamus)	वृष्या,वातभूतदोषघ्नी, बल्या	Antidepressant-like activity which is mediated by modulating the central neurochemical as well as HPA
3	Khurasani ova (Hyoscyamus niger)	ग्राहिणी मादिनी	Involvement of biogenic amine in antidepressant action.

4	Tagar (Valeriana wallichi)	भूतोन्माद भयापहम्	The extract demonstrated antidepressant effect and significantly increased the norepinephrine and dopamine levels in forebrain.
5	Akkalkara (Anacyclus pyrethrum)	बुध्दितीव्र,बैचेनि नाशक, उत्तेजक	Root extract might produce antidepressant effect by interaction with adrenergic and dopamine receptor thereby increasing the level of noradrenaline and dopamine in brains of mice.
6	Shatavari (Asparagus racemoces)	रसायनी , वृष्या	Anti-depressant activity. Plant extract at dose of 200 mg/kg showed increased levels of Dopamine, which is nearly equal to that of Standard.
7	Shankhapushpi (Convolvulus pluricaulis)	ग्रहभुतादिदोषघ्नी	Anti-depressant-like effect in mice by interaction with the adrenergic, dopaminergic, and serotonergic systems
8	Bramhi (Bacopa moneria)	बुध्दि प्रज्ञां च मेधां कुर्य्यादायुष्यवर्ध्दनी	antidepressant activity
9	Jyotishmati (Celastrus paniculatus)	वातनाशनम् , मेधाप्रज्ञाबुध्दि विवर्ध्दनम्	antidepressant-like effect in mice possibly through interaction with dopamin
10	Jatamansi (Nardostachys jatamansi DC)	नाडिरुजापहा, भुतपहा	Ant-idepressant activity (depression due to sleep disturbances.)

## CONCLUSION

Depression affects people of all ages, from all walks of life in all countries. It causes mental torment and impacts on people's ability to carry out even the routine tasks, sometimes with distressing consequences in relationships within family and society. At worst, depression can lead to suicide. According to etiology and pathogenesis the disease can be correlated to avasada, vishada, manodhukhaja unmada and kaphaja unmada and can be treated accordingly seeing all factors. Unlike a physical illness, the reluctance of a person to realize within as having a psychological illness prevents them from approaching a doctor. But once diagnosed, our science of ayurveda offers enough medicines to support them. Plants have always been an important source for finding new remedies for human diseases. Among hundreds of plants that have been studied for diabetes, only a small fraction has been tested in animal studies and is under clinical trials. The observed result may be helpful in planning further scientific

studies about the efficacy of these drugs on prevention as well as management of Depression (Vishad).

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## An International Journal of Research in AYUSH and Allied Systems

**Case Study** 

## AYURVEDIC MANAGEMENT OF CERVICAL EROSION THROUGH *YONIDHAVAN* WITH TRIPHALA AND *DARUHARIDRA KWATH, APAMARGA KSHAR PRATISARAN* WITH *JATYADI TAILPICHU* – A CASE STUDY

## Akanksha Mahesh Naik<sup>1\*</sup>, Seema Chandrakant Mehere<sup>2</sup>

\*13rd Year PG Scholar, <sup>2</sup>Professor and HOD Dept. of Prasuti Tantra & Stri-roga, Y.M.T Ayurveda Medical College and Hospital, Kharghar, Navi Mumbai.

**KEYWORDS:** Cervical Erosion, Triphala, Daruharidra Kwath, Apamarga Kshar Pratisaran, Jatyadi Tailpichu.

\*Address for correspondence Dr Akanksha Mahesh Naik 3rd Year PG Scholar, Dept. of Prasuti Tantra & Striroga, Y.M.T Ayurveda Medical college and Hospital, Kharghar, Navi Mumbai. Email:

akankshavishe1992@gmail.com

#### ABSTRACT

In chronic cervicitis, there is marked thickening of the cervical mucosa with underlying tissue oedema. These thickened tissues tend to push out through the external os along the direction of least resistance. The entity is most marked where the cervix has already been lacerated. In such conditions, the longitudinal muscle fibres are free to act unopposed. As a result, the lips of cervix curl upwards. Now a days number of females has developed cervicitis very fast and symptoms are like per vaginal white discharge with foul smell, and dyspareunia. This cervical erosion further leads to dyspareunia and then to infertility also. There is no disease given in Ayurveda classics which can directly correlate with cervical erosion. But in some aspect of symptoms and signs this can correlate with Karnini *vonivvapad* and hence treatment can be according to that. In this article case study of cervical erosion described which was treated with Ayurvedic Sthanik chikitsa- Yonidhavan by Triphala and Daruharidra kwath, Apamarga kshar pratisaran and Jatyadi tail pichu for 7 days for 3 conjugative cycles. With this combined therapy of Sthanik chikitsa cervical erosion has been completely cured. Hence clinical trial can be done in large number of patients to see further results.

#### **INTRODUCTION**

Chronic Cervicitis is variously estimated to be present some degree in 35-85% of women. Now a days number of females has developed cervicitis very fast and symptoms are like per vaginal white discharge with foul smell, and dyspareunia. This cervical erosion further leads to dyspareunia and then to infertility. Allopathic medicines such as a antibiotics and pessaries gave relief for temporarily but patient again developed the same symptoms after cessation of treatment. There is no disease given in Ayurveda classics which can directly correlate with cervical erosion. But in some aspect of symptoms and signs this can be correlated with Karnini yonivyapad and hence treatment can be given according to that. In this article case study of cervical erosion described which was treated with Ayurvedic sthanik chikitsa- Yonidhavan by Triphala and Daruharidra kwath, Apamarga kshar pratisaran and Jatyadi tail pichu for 7 days for 3 conjugative

cycles. With this combined therapy of *Sthanik chikitsa* cervical erosion has been completely cured. Hence clinical trial can be done in large number of patients to see further results.

#### **Aim and Objective**

**Aim–** To study the effect of *Sthanik chikitsa* in cervical erosion.

#### **Objective**

- 1. To study the efficacy of Yonidhavan, Triphala with Daruhariidra, Apamarga kshar pratisaran and Jatyadi Tail Pichu.
- 2. To study *Karnini yonivyapad* in detail and cervical erosion.

# Material and method

## **Case description**

A 30 years old female patient, visited with complaints of p/v white discharge with foul smell,

Dysparunia, itching around the vulva and generalized weakness since 4 months.

Patient had taken allopathy treatment for 3 months but got temporary relief from the symptoms and faced number of side effects such as nausea, weakness due to the treatment. Then patient came to YMT Ayurvedic hospital for further management.

**Past medical history:** No H/O DM/HTN/Bronchial asthma/hypothyroidism.

**Pat surgical history:** No h/o any past surgical illness.

Past H/O allergy: No h/o any past allergy Family history: Nil

Menstrual history: 2-3 days bleeding/each menstrual cycle. The regular cycle was of 28-32 days with painful, moderate bleeding (3-4 pads/day). The patient was married in 2016.

Coital history- 2 times/ week (painful/ Dysparunia) Contraception history - male partner using Condom **General examination findings**:

#### General examination linui

G.C.- stable Temperature- afebrile Pulse- 76/ min BP- 120/70 mm hg Height- 5ft Weight- 54kg **Systemic Examination** RS - Aebe Clear CVS - S1S2 Normal CNS - conscious, oriented P/S -

Cervix – erosion + + + + Curdy white discharge + +

Result

Foul smell present

P/V- uterus anti-verted, anti-flexed

Normal sized

Fornix- tenderness ++++

#### **Treatment given**

- 1) Yonidhavan with Triphala + Daruharidra kwath
- 2) Apamarga kshara pratisarana

3) Jatyadi taila pichu

These three *Karmas* were done as combined therapy in patient and this treatment done for 3 conjugative cycles after menses.

## Pathya

Patient was instructed to avoid extra oily food items, outside snacks, salty food etc.

And also advised to maintain her personal hygine and avoid common toilets.

## DISCUSSION

This cervical erosion has correlated with *Karnini yoniwyapad* and different Acharyas gave that the treatment of *Karnini yonivyapad* should be *Shodhan, Shleshmahar*.

According to allopathy treatment for cervical erosion or cervicitis is cauterisation which is not affordable to all the patients and hence above treatment was given. *Triphala* is *Kaphapittashamak* properties; *Daruharidra* is *Kaphapittaghna* property, *Apamarga kshar* acts as *Lekhan dravya* as well as *Ropan*. And *Jatyadi tail Pichu*– will heal the erosion with *Snighndha guna* and *Ropan* property. After giving this treatment patient got complete relief from the symptoms and dyspareunia also cured.

	Before treatment	During the treatment	After treatment
P/S -			
Signs	Cervix – erosion ++++	<b>Redness Reduced</b>	Cervical erosion completely
	White discharge present		healed

Akanksha Mahesh Naik *et al.* Ayurvedic management of cervical erosion through Yonidhavan with Triphala and Daruharidra kwath, Apamarga kshar pratisaran with Jatyadi tailpichu

## CONCLUSION

*Yonidhavan* with *Triphala kwath* and *Daruharridra* and *Apamarga kshar pratisaran* Along with *Jatyadi taila pichu* for 7 days for 3 conjugative cycles is effective in above case.

This treatment had no side effects and also treatment is cost effective also.

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# "To study the efficacy of Bhumyamalaki Mula Choorna on Raktapradara (Menorrhagia)."

Ankita Ashok Thakur\*<sup>1</sup>, Seema Mehere<sup>2</sup>

- 1. P.G. Scholar,
- 2. HOD & Guide Of Prasutitantra & Streeroga.

YMTAyurvedic Medical College, Kharghar, Navi Mumbai., Maharashtra.

\*Correspondence author: ankitathakur0201@gmail.com

## ABSTRACT: -

Pradara due to pradirna (excessive excretion) of raja (menstrual blood) it is called as pradara & since ,there is *dirana*( excessive excretion) of asrk (menstrual blood) hence, it is known as *asrgdara*. Menorrhagia, one of the most frequently encountered symptoms in gynecology, is defined as menstruation periods at regular cycle but with excessive flow which may last more than 7 days. Menorrhagia can cause menstrual bleeding of more than 80 mL in each cycle. Raktapradara is commonest problem encountered by gynecologist in todays practice & incidence becomes higher with degree of civilization. Blood tissue is considered as one among 7 dhatu as per Avurveda. Blood is related with pitta dosha. Hence, bleeding disorders are

usually influenced by pitta imbalance. rakta pradara covers all types of menorrhagia. The *vayu* after getting vitiated. of increases quantity rakta(blood), takes rakta to rajovaha siras & increases the quantity of *rajah* that comes out through rajovaha siras & causes *raktapradara*. The purpose of this study is to identify menstruation characteristics of the women & the effect of menorrhagia on womens quality of life. So many preparation have been mentioned in avurvedic classic for the treatment of raktapradara. All these medication have certain fundamental principles Avurvedic drug, bhumyamalaki mula choorna with tandulodak (rice water) combination was selected for the study.

In this "TO STUDY THE EFFICACY OF BHUMYAMALAKI MULA CHOORNA ON RAKTPRADAR(MENORRHAGIA) " we will be used choorna (powdered) of bhumyamalaki mula with tandulodak (rice water) orally.

**KEYWORDS:** *Raktpradar* ,*vata&pitta dosh*, *bhumyamalaki mula*,

#### **INTRODUCTION:-**

PRADAR due pradirna to (excessive excretion) of raja (menstrual blood) , it is called as pradara & since ,there is *dirana*( excessive excretion) of asrk (menstrual blood) hence, it is known as asrgdara. This conditions may arise due to the imbalance of the hormones which is caused by the aggravation of vat &pitta dosha. Blood tissue is considered as one among 7 dhatu as per Ayurveda. Blood is related with *pitta dosha*. Hence, bleeding disorders are usually influenced by pitta imbalance.

A normal menstrual cycle is 21–35 days in duration, with bleeding lasting an average of 5 days and total blood flow between 25 and 80 mL. Heavy menstrual bleeding is defined as total menstrual flow >80ml per Bleeding in between menses is also abnormal uterine bleeding and thus requires further evaluation.

The start of menstruation during puberty and the length and

regularity of the menstrual cycle is controlled by hormones produced in an area of the brain called the hypothalamus, as well as by the pituitary and adrenal glands.

Heavy periods, menstrual bleeding are due to many physiological & pathological causes. Many factors such as hormonal imbalance, mental condition, diet, lifestyle contribute to these menstrual problems. Menorrhagia is the technical term for the prolonged uterine bleeding. Uncontrolled uterine bleeding or excessive menstrual bleeding is also termed by this name in few of the instances.

Complications of heavy menstrual bleeding could also be the initial symptoms. Excessive bleeding can lead to anemia which presents as fatigue, shortness of breath, and weakness. In pathogenesis of raktapradara rasa ,rakta & vata dosha are main responsible factors. with Bhumvamalakimula choorna tandulodak plays an important role to alleviate this pathology & effectively controls the bleeding. It is also help to cure the complication which occur due to heavy uterine bleeding. we have to study the combination of bhumyamalakimula choorna( powder) with tandulodak (rice water) orally as per mentioned in Bhavprakash Samhita .

## AIMS AND OBJECTIVES:-

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#### Aim:-

To study the effect of *bhumyamalakimula choorna* on *raktapradara*( menorrhagia).

#### **Objectives :-**

To study efficacy of *bhumyamalakimula choorna* on *raktapradara*. (menorrhagia).

## **MATERIALS AND METHODS :-**

1. Literary information about the study has compiled from *ayurvedic* texts.

- Various publication, text books, research papers has considered to collect the literary material.
- 3. For all the procedures various *ayurvedic* text are referred

Choorna of root of bhumyamalaki with tandulodak (rice water) prepared according to Bhavprakash Samhita, concept of preparation choorna take from sharangdhar Samhita.

Sr. No	Content	Latin Name	Family	Part Used
1.	Bhumyamalaki	Phyllanthy Niruri	Euphorbiaceae	Root
2	Rice			
3	Water			

## **PREPARATION OF DRUG:-**

The powdered of root of *bhumyamalaki* with *tandulodak* (rice water) will be prepared according *sharangdhar Samhita*.

Sr.	Content	Rasa	Virya	Vipaka	Guna	Karma
No						
1.	Bhumyamalaki	Tikta,	Sheet	Madhura	Laghu	Kaphapitta
		Kashaya			Ruksha	Shamaka
		Madhura				
2.	Rice					
3.	Water					

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#### **DISCUSSION:-**

*Ayurvedic* medicine are designed to balance energetic, emotional, mental, physiological and immune responses of the individual to ensure long-lasting and permanent relief. *Ayurvedic* medicine stabilize hormonal imbalance and improve the uterine tonicity. *Ayurvedic* medicine not only reduce profuse menstruation, but also help the body to restore its normal physiological cyclical rhythm of menstruation.

Powder of root of Bhumyamalaki with tandulodak (rice water) should be orally given in the raktapradara. Due to bhumyamalaki rasa-Tikta Kashaya & madhura its acts on pitta dosha, guna-laghu, ruksha and its raktagami & kaphapittashamak properties bhumyamalaki acts on raktapradara.

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## An International Journal of Research in AYUSH and Allied Systems

**Case Study** 

# AYURVEDIC MANAGEMENT OF OBESE POLYCYSTIC OVARIAN SYNDROME WITH *TRISHNYADILOHAM* – A CASE STUDY

## Neha Pilankar<sup>1\*</sup>, Seema Mehere<sup>2</sup>

\*13rd Year PG Scholar, <sup>2</sup>Professor and HOD, Dept. of Stri-rogaPrasuti Tantra, Y.M.T Ayurveda Medical college and Hospital, Kharghar, Navi Mumbai.

ABSTRACT KEYWORDS: Artavkshay, Obese PCOD, Pushpaghni According to Ayurveda Polycystic ovarian syndrome is a disorder involving imbalance of Vata, Pitta and mainly Kaphadosha. Change in iaatharini. Trishnvadiloham. lifestyle and diet is the important part of the treatment. There are many references found in Ayurveda which coincides with PCOS. Out of Artavkshay, Arajaska yonivyapad, Vaataj artavdushti, Kshinartav, Shandhi Yonivyapad, Pushpaghni Jaatharini, Pushpaghani Jaatharini coincides with PCOS in terms of Lakshnas and Hetu. Polycystic ovarian syndrome is a Medojroga, Santarpanjanyavyadhi as per Ayurveda. Trishnyadi loham kalpa is described under Medorog chikitsa in Yogratnakar. As it has all Kapha nashak dravya, it will help to reduce fat thereby reduction in other metabolic markers of PCOS. In today's era due change in lifestyle \*Address for correspondence incidence of PCOD has risen. It is very common endocrinopathy in Dr Neha Pilankar women with reproductive age. There are four compartments involved in 3<sup>rd</sup> vear PG Scholar. Polycystic ovarian syndrome. Out of that Obesity is found over 50% of Dept. of Stri-roga Prasuti Tantra, patients with PCOS. A reduction in body weight of 5-10% will cause a Y.M.T Ayurveda Medical college 30% reduction in visceral fat, which is often sufficient to restore and Hospital, Kharghar, Navi ovulation and reduce metabolic markers. So to restore normal Mumbai. Email: pilankarneha@gmail.com menstruation Kaphanashak chikitsa is equally important. Along with Contact No: 9821570732 proper diet, exercise and Trishnyadi loham will definitely help to reduce

body weight and restore normal menstrual function.

#### **INTRODUCTION**

One of the major contributing factors in pathophysiology of Polycystic ovarian syndrome is Obesity. The prevalence rate of PCOS is 2.2% - 26%. In today's era rate of infertility increasing due to unhealthy lifestyle, stress and workload. The PCOS is the major cause of infertility as it causes anovulation. Management of PCOS is the important aspect of fertility treatment. The signs of PCOS are irregular menstruation, Hirsutism, weight gain, acne, acanthosis nigricans. Insulin resistance is one of the underlying disorder of PCOS. A reduction in body weight of 5-10% and 30% reduction in visceral fat are sufficient to restore ovulation and reduce metabolic markers. Obesity has shown to be an important risk factor for endometrial cancer. There are many modern medicines available for PCOS but it has got some side effects. PCOD can be classified Medojroga, Santarpanjanya vvadhi. Trishnyadiloham kalpa described under Medorog

chikitsa in Yogratnakar. As it has all Kaphnashak *dravva* it will help to reduce fat thereby reduction in other metabolic markers of PCOS. The features of PCOS are 1. Oligomenorrhea/anovulation Hyperandrogenism 3. Polycystic ovaries. In PCOS there are endocrinological abnormalities in four compartments. 1. The Ovaries 2. The adrenal glands 3. The periphery 4. The hypothalamus- pitutary The compartment. peripheral compartment includes skin and the adipose tissue. Obesity is found over 50% cases in PCOS. The body fat is usually deposited centrally (android obesity) and higher waist to hip ratio increased risk of diabetes mellitus and cardiovascular disease in later life. Insulin resistance and hyper-Insulinemia commonly exhibited in PCOS. About 1/3<sup>rd</sup> of obese patients have impaired glucose tolerance (IGT). Obesity is the one of the major cause of the anovulation. In are only modern medical science there

symptomatic treatments are available which gives unsatisfactory results. These days weight loss in obese patient is a big challenge because of work culture and improper eating habits. Weight loss is the first step to restore ovulation in obese PCOS patient. Keeping all these factors in mind, *Trisnyadiloham kalpa* described by *Yogratnakara* under *Medorog chikitsa* as the ideal drug to achieve multiple factors by using single *Kalpa*. As major contents of *Trishnyadi loham* are *Ushna viryatmak*, *Trishnyadiloham* acts on *Artavkshay* (oligomenorrhea) i.e., one of the symptom of PCOS.

#### Pathophysiology

Menstruation is a cyclic phenomena, as per modern science it should be at regular interval of 28-35 days. Irregularity is the important clinical sign of the PCOS. As per Ayurveda Ashtang Hridayam "maasi maasi rajah strinam rasajam stravati tryaham"<sup>[1]</sup> Ashtang Hridayam sharirsthanam 1/7, "Rasadev raktam rajah sanya pravartate"<sup>[2]</sup> Sushrut Sutrasthanam 14/6. i.e., Rajah is Upadhatu of Rasa dhatu menstruation said to be a normal when it is at regular interval and each and every month. Absence or failure to occurrence of menses at regular interval or every month is the sign of disturbance of *Dhatu* formation. There is description of Yonivyapada and Ashtartav dushti. The term Nashtartava means loss of menses i.e., scanty/ infrequent menses or anovulation. There are four major factors which are responsible for *Yonivvapad*<sup>[3]</sup> are unhealthy lifestyle, *Beejdushti* i.e., genetic disorder, Artavdushti i.e., menstrual disturbance and Daiva i.e., divine factors. Out of Artavkshay, Arajaska yonivyapad, Vaataj artavdushti, Kshinartav, Shandhi Yonivyapad, Pushpaghni Jaatharini<sup>[4]</sup>, Pushpaghani Jaatharini coincides with PCOS in terms of *Lakshnas* and *Hetu*. Pushpaghni Jaatharini "Vruttha Pushpam Tu Naari Yathakaal Prapashyati|Sthullomasha Ganda Va Pushpaghni Sa Api Revati||." Here Vrutha pushpam can be considered as a anovulatory cycle, Kaal denotes irregularity of menses, Sthula means weight gain, *Lomasha ganda* is sign of hairy growth over maxillary area. Causative factors of Jaatharini are Kalah, Ghasmara, Avyayam, Atipaan, Atibhojan,

Avvavam, Atiswapna, Swamatkarini, Ghasmara i.e., eating in excess amount, Avvavam lack of exercise, Atipaan, Atibhojan excess hunger and thirst, *Atiswapana* excess sleep all these factors also cause of Medoroga. As we have seen Rajah is Updhatu of Rasadhatu. Rasadhatu forms from Ahar rasa with Sthula and Sukshma pachan. Any imbalance in Dhatu poshan can cause vitiation of Dosha and *Dhatu*.<sup>[5]</sup> This ultimately hampers *Rajah*. Here unhealthy lifestyle can be correlated with cause of PCOS. Obesity denotes Medo dhatu, Kapha dosh dushti. According to Avurvedic view PCOS is Santarpanjanya vvadhi and it required Kaphanashak, Medonashak chikitsa primarily.

## Aims and Objectives

**Aim:** To study the Clinical Efficacy of *Trishnyadiloham* for PCOD.

## Objectives

- 1. To study probable mode of action of *Trishnyadi-Loham* in detail
- 2. To study obesity in PCOD in detail.
- 3. To provide safe, cost effective treatment.

#### **MATERIALS AND METHODS**

- **1.** Literary information about the study has compiled from Ayurvedic texts.
- 2. Various publications, textbooks, research papers have considered to collect the literary material.
- 3. For all the procedures various Ayurvedic text are referred.

#### त्र्यूषणाद्यं लोहम्-छ

त्यूषणंत्रिफलाचव्यं चित्रकं विडमौद्धिदम् । बाकुची सैन्यव चव सौवर्चलमयोरजः।।१।।

माषमावमतश्चूर्ण लिहेदाज्यमधुप्लुतम् । अतिस्थौल्यमिदं चूर्णं निहन्त्यग्निविवर्धनम्।।२।।

मेदोष्नं मेहकृष्ठघ्नं श्लेष्मव्याधिनिबर्हणम।

नाऽऽहारे नियमश्चात्र विहारे वा विधीयते । त्र्यूषणाद्यमिदं चूर्णं रसायनमनुत्तमम् ।। ३।।

## Ingredients in Trishnyadi- Loham

1. Loham 2. Shunthi 3. Marich 4. Pippali 5. Amalaki 6. Haritaki 7. Bibhitaki 8. Chavya 9. Chitrakmula 10. Bakuchi beej. 11. Saindhav 12. Saurvachal Lavan 13.Vidlavan 14. Audbhijlavan

Contents	Latin name	Rasa	Guna	Virya	Doshghnata
Pippali	Piper longum	Katu	Laghu, Tikshna, Snigdha	Anushna- Sheeta	Kaphashamak
Shunthi	Zinziber officinale	Katu	Laghu, Snigdha	Ushna	Vaatnashak
Marich	Piper nigrum	Katu	Laghu, Tikshna	Ushna	Kaphanashak
Chavya	Piper chabha	Katu	Laghu, Ruksha	Ushna	Kaphavaatnashak

#### Ingredients and Actions of Trishnyadi-Loham

Neha Pilankar, Seema Mehere. Ayurvedic management of Obese Polycystic ovarian syndrome with Trishnyadiloham

Chitrakmula	Plumbago zeylanica	Katu	Tikshana, Laghu, Ruksha	Ushna	Kaphanashak
Amalaki	Emblica officinalis	Lavanvarjit Panchrasa	Laghu, Ruksha, Sheet	Sheeta	Tridoshhar
Haritaki	Terminalia chebula	Lavanvarjit Panchrasa	Laghu, Ruksha	Ushna	Tridoshhar
Bibhitaki	Terminalia belerica	Kashay, Madhur	Laghu, Ruksha	Ushna	Tridoshnashak
Bakuchibeej	Psoralea coryfolia	Katu, Tikta	Laghu, Ruksha	Ushna	Kaphanashak
Loha Bhasma		Katu	Laghu, Snigdha	Ushna	Lekhana
Lavan		Lavan, Madhur	Singdha, Tikshna, Sukshma	Sheeta	Tridoshhara

## **Preparation of Drug**

Methods – *Trishnyadiloham* will be prepared as per *Vati Kalpana* given in *Sharangdhar Samhita*. Criteria is patient with BMI >30.

Dosage – 1 *Maash* = 960mg Tablet 250mg daily twice for 3 months before food with *Anupan Madhu* and *Ghrita* in unequal quantity for 3months.

## **Case Study**

A 28 year old female visited OPD with complaints of weight gain and irregular menses since 1 year.

**Past medical history –** No h/o HTN/DM/Kochs/ Asthma.

Past Surgical History – No any surgical illness.

**H/O Allergy** – No h/o any drug allergy.

Family History – Nil

Menstrual History—

**L.M.P** – 20/11/2019

**L.L.M.P** – 9/10/2019

## Present M/H

The periods are irregular, scanty and painless occurring at a gap of 40-60 days with flow of 1-2 days.

#### Marital Status – Unmarried General Examination:

G.C – Good Temp – Afebrile B.P -- 110/70 mmhg P – 80/min Height – 5'2'' Weight – 70kg BMI – 28, 2 Waist –95cm Hip- 104cms W/H – 0.91 **Systemic Examination** RS –Clear

CVS–S1S2 Normal

## CNS – Conscious, Oriented

#### Ultrasonography

Right ovary– 11cc volume, bulky right ovary reveals small peripherally arranged follicle. Left ovary-10cc. Polycystic ovarian changes.

#### **Treatment Given**

Tab. *Trishnyadi Loham* (250mg)– 2-0-2 (Before Food) with *Madhu* and *Ghrita* unequal quantity for 3 months.

**Duration:** 3 months f/u after every 15 days.

## Pathya- Apathya

During this period patient was advised to avoid oily food, junk food, reduce sugar Intake.

Advised exercise at least 30 minutes brisk walking, Jogging, *Suryanamaskar*.

Advised to include green vegetables, 1 fruit daily, dry fruit in routine diet.

## Observation

Patient followed drug and *Pathyapathya* strictly. Significant inch loss and weight loss was seen. Patient got her normal menstruation of 4-5 days.

## RESULT

As all contents of the *Trisnyadiloham* are *Kaphanashak*, maximum contents are *Laghu*, *Ruksha* and *Ushna viryatmak*, causes marked loss of fat. Significant inch loss was seen. Restoration of menstruation was also seen.

## DISCUSSION

PCOD is a life style disorder. A reduction in body weight 5-10% will cause a 30% reduction in visceral fat, which is often sufficient to restore ovulation and reduce metabolic markers.

Reduction in weight is the biggest challenge in PCOS patients. As PCOS is metabolic lifestyle disorder, change in life style following good diet habits and regular exercise is the key of the PCOS management, but in today's era many women are dealing with hectic work schedule. For them drug like *Trishnyadiloham* is good option. Regulating menstruation, restoration ovulation, fertility, reducing androgen levels all these factors can be achieved by *Trishnyadiloham* along with good diet habits and exercise. *Trishnyadiloham* is a *Rasayanam* which is good for fertility.

#### CONCLUSION

In *Yogaratnakar* description on *Trishnyadi loham* all contents of *Trishnyadiloham* can help in obese PCOD to reduce peripheral fat which in turn will help to restore normal menstrual function along with good diet habits and regular exercise.

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# National Journal of Research in Ayurved Science

# *"Effect of ashoka ghrita in asrigdhar (menorrhagia): A case study"* Reema Vijay Vartak<sup>1</sup>, Seema Mehere<sup>2</sup>

1. P.G. Scholar

2. HOD & Guide, Email ID: <u>seema.mehre@gmail.com</u>

Prasutitantra avum Streeroga Department, YMT Ayurvedic Medical College and

Hospital, Kharghar, Navi Mumbai, Maharashtra.

## \*Corresponding author: reemavartak6@gmail.com

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## Keywords: Asrigdhar, Menorrhagia,

Ashokaghrita Name of Publication

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## Abstract:

Aim and Background: The term Menorrhagia is from Greek word, men meaning 'menses' and 'rrhagia' meaning 'burst forth'<sup>10</sup>. It denotes cyclic bleeding which is excessive in amount or duration. It is a very common complaint among females in recent years. It has negative effects on women's quality of life with limited options available in modern medicine, following *Ayurvedic* principles of diagnosis and treatment can be useful.

Case Description: A 42 years old female Hindu patient, housewife by occupation visited our OPD with complaints of Excessive P/V bleeding during menstruation, prolonged bleeding for 7-8 days with interval of 18-20 days which was heavy with passage of big clots for first 4-5days. She changes 7-8 pads/day, next 3-4days moderate bleeding, changes 4-5pads/day was seen. Associated with fatigue patient was not able to do her normal activities. Diagnosed as *Raktapradar* according to Ayurveda.

Treatment: She was given *Ashokaghrita* 1tsf, twice a day before food daily for 6 months<sup>3</sup>.

Outcome: After three months of treatment patient showed significant relief in symptoms. Significant reduction in PV bleeding, proper intervals in between menses and reduction in passage of clots.

Conclusion: Significant relief can be achieved in patients of menorrhagia by applying principles of diagnosis and treatment of *Asrigdhar*. It's single case study and can lay down road ahead for further research.

#### **INTRODUCTION**:

The term Menorrhagia is from Greek word, 'men' meaning 'menses' and 'rrhagia' meaning 'burst forth'. It denotes cyclic bleeding which is excessive in amount or duration<sup>10</sup>. It is a very common complaint among females in recent years. It has negative effects on women's quality of life. A normal menstrual blood loss is 50 to 80 ml and does not exceed 100ml<sup>5</sup>. Despite rarely being lifethreatening, menorrhagia has significant effects on personal, social, family, and work life of women and thereby reduces their quality of life. Women describe the loss or reduction of daily activities as more important than the actual volume of bleeding. Menorrhagia is largely responsible for iron deficiency anaemia, which have negative effect on woman's health.

'Asrk' means menstrual blood and  $flow^{1,6}$ 'dirana' means excessive Therefore. Asrigdara means heavy vaginal bleeding during menstruation along with passage of clots. Though menorrhagia is not described in any Ayurveda text directly but it is quite similar to Asirgdara. The main clinical feature of both Asrigdara and menorrhagia is heavy uterine bleeding with its other complications. Asrigdara is of five types. They are classified

depending upon the dominance of particular *dosha* <sup>7</sup>. There are many Ayurvedic drugs and preparations available on menorrhagia in classic *Ayurvedic* texts. *Ayurvedic* drug *Ashokghrita* is selected for the study.

#### **Case description:**

A 42 years old female Hindu patient, housewife by occupation visited our OPD 23/02/2018 with complaint of on excessive P/V bleeding during menstruation, prolonged bleeding for 7-8 days with interval of 18-20 days. Patient was said to be apparently healthy 2 years back. She suddenly noticed excessive bleeding P/V during menstruation, which occurred at an interval of 18 to 20 days. Bleeding lasted for 7-8 days with minimal clots, changes 6-7 pads/day with lower abdominal pain and low back ache. For the same, she approached a modern clinic and was prescribed with oral medicines. Patient got relief from the symptoms for a period of 6 months with the continuation of medication. As she found relief, she discontinued her medication for 3 months. Again, she started bleeding for 7-8days, which was heavy with passage of big clots for first 4-5days and 7-8 pads/day, next 3-4days moderate bleeding 4-5pads/day changes was seen. Associated with pain in lower back and abdomen.

Pasthistory:NoH/ODM/HTN/hypothyroidismor anyothermajor medical or surgical history.

**Family history**: No history of same illness in any of the family members.

Menstrual history: Menarche - 12 yrs.

**Obstetrics history:** G2P2L2A0D0, both FTND at hospitals

Married: for 22 years

**Contraceptive history**: She underwent 0pen Tubectomy -18 years back.

**General examination:** 

Pulse: 82 b / min

**BP**: 130/80 mm of Hg

Temperature: 98.4 F

Respiratory Rate: 18 cycles / minute

Height: 155cms

Weight: 69 kg

Tongue: Uncoated

Built: Moderate

Pallor/Icterus/Cyanosis/Clubbing/Oede ma/Lymphadenopathy: Absent

Systemic examination:

•CVS: S1 S2 Normal

•CNS: Well oriented, conscious.

•RS: AEBE clear

•P/A- Soft, non-tender

Ashta Vidha Pariksha:

1)Nadi - 82 b / min

2)Mala - Once / day

3)*Mutra* - 5 - 6times/day

4) Jivha - Alipta

5)Shabda – Avishesha

6)Sparsha - Anushna Sheeta.

7)Druk - Avishesha

8) Akriti - Madhyama

#### Lab Investigations:

• Hb - 7.7gm%

• USG abdomen and pelvis (28/2/18)

Impression: Bulky uterus with ET- 14mm

**Diagnosis:** In view of modern sciences, it was clearly a case of Menorrhagia. According to Ayurveda the patient clearly showed symptoms of *Asrigdhar* such as excessive, prolonged bleeding with passage of clots <sup>1,7</sup>.

**Treatment Given:** She was given *Ashokaghrita* 1tsf, twice a day before food daily for  $6 \text{ months}^3$ .

# CONTENTS:

It contains Ashoka moola and Twak. Ajaksheera, Kakoli. Ksheera kakoli. Meda, Mahameda, Jeevaka, Rishabhak, Riddhi, Vriddhi, Mashparni, Mugdaparni, Yashtimadhu. Draksha. Shatavari, Bhringaraja, Sita, Tandulodak, Rasanjan, Parushaka, Priyala, Mridvika and Goghrita. Most of the ingredients have Kashava and Madhura rasa, Sheeta veerva, Rakta stambhaka and dravyas<sup>9</sup>. According Vatapittahara to ayurvedic classical text, chikitsa of Asrigdar is Rakta Sangrahak & Rakta  $Stambhak^{2}$ . The main ingredient is Ashoka which is a uterine tonic and haemostatic in nature and thus a cardinal herb in treating Asrigdhar<sup>4.</sup>

### **Treatment outcome:**

Date of	LMP	Medicine	Signs and symptoms
follow up			
26/03/2018	17/03/2018	Ashokaghrita 2tsf half	Duration of menses 6-7days, with
		an hour before food	clots, mild pain in lower
		twice a day	abdomen and back. 5-6pads/day
21/04/2018	13/04/2018	Ashokaghrita 2tsf half	Duration of menses 6-7days, with
		an hour before food	clots, mild pain in lower
		twice a day	abdomen and back. 5-6pads/day
16/05/2018	09/05/2018	Ashokaghrita 2tsf	Duration of menses 5-6days,
		before food twice a day	without clots, mild pain in lower
			abdomen and back. 5-6pads/day
11/05/2018	05/06/2018	Ashokaghrita 2tsf half	Duration of menses 4-5days,
		an hour before food	without clots, no pain in lower
		twice a day	abdomen and back. 4pads/day
08/07/2018	02/07/2018	Ashokaghrita 2tsf half	Duration of menses 4-5days,
		an hour before food	without clots, no pain in lower
		twice a day	abdomen and back. 4pads/day
05/08/2018	31/07/2018	Ashokaghrita 2tsf half	Duration of menses 4days,
		an hour before food	without clots, no pain in lower
		twice a day	abdomen and back. 3pads/day

N J-R A S

Rajo vruttanta	Before 6months	After 6 months
Menstrual cycle	7-8days flow every 18-20	4-5days flow every 28days
	days	
Quantity	Excessive bleeding (7-	Normal flow (3-4pads/day)
	8pads/day)	
Color	Dark reddish	Dark reddish
Odour	No foul smell	No foul smell
Consistency	With clots	Without clots
Pain	Severe lower abdomen	Mild or no pain in lower
	pain, lower backache	back or abdomen

## **DISCUSSION:**

Ashoka ghrita is a uterine tonic which improves uterine functions, modulates uterine contractions, stabilizes hormonal imbalance and is haemostatic in nature. It gives strength to the uterus which helps in easier dislodging of the uterine lining during menstruation and prevents ischemia. Thus, it reduces menstrual cramps. It also corrects the aggravated *pitta*. Its *Vipaka* acts as *vatapittahara*, *sthambana*, *raktashodhaka*. It corrects *rasa*.

The constituents of *Ashoka* include glycosides, flavonoids, tannins, saponins, and sterols. Research has shown that it

has antibacterial, anti-fungal, oxytocic, uterotonic. anticancer. antianti-estrogenic, progestational, antiinflammatory, and anti-oxidant Phytoestrogens which are also present in Ashoka bark modulate the raised levels of hormones in cases of primarv dysmenorrhoea.

*Ghrita* is prepared by *Ghrita Kalpana* described in *Sharangdhar Samhita*<sup>8</sup>. It has *Madhura rasa, Sheeta virya* having *Vata-pittahara* qualities. It is *Balya* and is beneficial for *Rasa dhatu* and does *Preenana* of *Garbhashaya*.

## **CONCLUSION:**

*Menorrhagia* is a common complaint present in the women world-wide. *Asrigdara* correlate to *menorrhagia*. As we see, patients have heavy uterine bleeding along with its complications which should be managed instantly to stop the further complications.

*Ayurveda* has number of herbal and compound drugs useful to manage this bleeding disorder. In my opinion, the Ayurvedic drugs will become a boon to treat the *menorrhagia* patients and also its complications.

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End of article



### An International Journal of Research in AYUSH and Allied Systems

**Case Study** 

# EFFECT OF SUCCESSFUL AYURVEDIC TREATMENT IN MANAGEMENT OF UTERINE FIBROID - A CASE STUDY

#### Seema Mehere<sup>1\*</sup>, Akanksha Mahesh Naik<sup>2</sup>

\*<sup>1</sup>Professor and HOD., <sup>2</sup>3rd Year PG Scholar, Dept. of Prasuti Tantra & Stri-roga, Y.M.T Ayurveda Medical College and Hospital, Kharghar, Navi Mumbai.

<b>KEYWORDS:</b>	Amavata,	ABSTRACT
REYWORDS: Amavata, Rheumatoid Arthritis, Ayurveda, Jatharagni, Aam.		Fibroid is the most common benign tumor of the uterus and also the most common benign solid tumor in the female. Histologically this tumor is composed of smooth muscle and fibrous connective tissue, so named as uterine leiomyoma, myoma, fibromyoma. It has been estimated that at least 20% of women at age of 30 have got fibroid in their wombs. These patients may be asymptomatic or may be symptomatic. <b>Case Description:</b> A 35 year old female patient came in YMT OPD of Striroga and prasutitantra with complaining of scanty menses and pain in abdomen occasionally. Diagnosed with Uterine fibroid according to Ayurveda. Treatment: She was given- Ayurvedic oral medicines along
*Address for con Dr Seema Mehe Professor and HO Dept. of Prasuti 7 roga, Y.M.T Ayur College and Hosp Navi Mumbai. Email: <u>seema.me</u>	rrespondence re )D. 'antra & Stri- veda Medical bital, Kharghar, hre@gmail.com	with panchakarrma. <b>Outcome:</b> After six months of treatment patient showed significant relief in symptoms. Significant reduction in symptoms like scanty menses, proper intervals in between menses. Conclusion: Significant relief can be achieved in patients of Uterine fibroid by applying Ayurvedic treatment. It's single case study and Clinical trial should done in large number of patients to see the result. <b>Aim:</b> To Study effect of ayurvedic chikitsa in management of uterine fibroid. <b>Objective:</b> To Assess te effect of Ayurvedic Treatment in management of Uterine fibroid. <b>Methodology:</b> It is a single case study of uterine fibroid.

#### **INTRODUCTION**

Uterine enlargement is common in reproductive life of female. In some cases other than the pregnancy, it is seen in the result of leiomyomas. They may be identified in asymptomatic women during the routine pelvic examination or may cause symptoms. In the age of reproductive life it may be the cause of infertility or may lead to various menstrual difficulties such as hypo menorrhea, Menorrhagia, metrorrhgia etc. In this article there is case of small sized uterine fibroid presented with symptom of scanty menses which is successfully treated with ayurvedic management. Case Discription: A 35 year old female patient came in YMT OPD of Striroga and prasutitantra with complaining of scanty menses and pain in abdomen occasionally. Diagnosed with Uterine fibroid according to Ayurveda. Treatment: She was given-Ayurvedic oral medicines along with Panchakarrma

.Outcome: After six months of treatment patient showed significant relief in symptoms. Significant reduction in symptoms like scanty menses, proper intervals in between menses .Conclusion: Significant relief can be achieved in patients of Uterine fibroid by applying Ayurvedic treatment. It's single case study and Clinical trial should done in large number of patients to see the result.

#### **Case description**

A 35 years old female patient came in a YMT OPD of Streeroga and Prasutitantra complaining of scanty menses and pain in the abdomen occasionally and diagnosed with uterine fibroid by usg done on June 2014. She had taken symptomatic allopathic treatment for the same. Since she had no relief she came for Ayurvedic treatment.

	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Past medical history: No H/ODM/HTN/ Hypo-	Tongue – uncoated
thyroidism	Built- moderate
Diagnosed with uterine fibroid in June 2014. C/O	Systemic Examination
Hypo menorrhea and pain in abdomen.	RS : AEBE clear
Past surgical History - Rt. Oopherectomy 3 years	CVS : S1S2 normal
back (due to rt ovarian dermoidcyst)	CNS : conscious, well oriented
History of allergy – allergic to sulpha drugs.	P/A- Soft, nontender
Family history: No history of same illness in any of the family members	Lab Investigation
Monstrual history, 2 days blooding / monstrual	Hb-10.7gm %
cycle	USG Abdo-Pelvis -
Cycle of 28- 30 days	14 <sup>th</sup> june2014 showing tiny subcm sized anterior
Regular, Mild pain	wall myometrial lesion measuring $6 \ge 5$ mm and $ET = 59$ mm
Scanty (1-2 pad / day)	Diagnosis: Tiny uterine fibroid
Married in 2005.	Subsequent congraphics showed slight variation in
Contraceptive history - CU- T- inserted in 2008 and	the size till 5-1-2015. (0.46 cm x0.29 cm)
it was removed in 2010.	However by 14-04-2015 the fibroid was not seen.
Then condoms used my male partner	Treatment Given
O/H-G3P1L1A2D0	1) Chandrapraphavati 2 TDS
General examination:	2) Gokshuradi Guagul 2 TDS
Pulse :-82 b/min	3) Shatayariyati 2 TDS
BP- 130/80mmhg	4) Haridrakhanda Vati 2TDS
Temperature – 98.4 F	5) Kumariasay 20 ml turico a day hoforo food
RR- 18/min // 68 Sec. 2010	1 Uttark acti for E down (2 down Kaning ditails and 2)
Height- 155 cm	days Ksharataila)
Weight- 65 kg	2 Yoga Basti

8 8		L. Togu Dusti	
USG pelvis, Before Treatment	Treatment	Outcome	USG scan after Treatment
14 <sup>th</sup> June 2014 showing tiny subcm sized anterior wall myometrial lesion measuring 6 x 5 mm and E.T. 5.9 mm.	Patient had taken allopathic treatment for 6 months	Temporary got relief from the symptoms.	USG done on 2 <sup>nd</sup> November 2014 showing Tiny anterior wall intramural fibroid lesion measuring 0.38 x 0.33 cm and E.T. 6.3 mm.
USG done on 2 <sup>nd</sup> November 2014 showing Tiny anterior wall intramural fibroid lesion measuring 0.38 x 0.33 cm and E.T. 6.3 mm.	Patient has advised Ayurvedic Treatment For 6 months Ayurvedic treatment started 1. <i>Chandraprabhavati2</i> tds 2. <i>Gokshuradi Guggul</i> 2 tds 3. <i>Kumariasava</i> 4 tsp BD 4. <i>Haridrakhandavati</i> 2 tds 5. <i>Shatavarivati</i> 2 tds	Got complete relief form symptoms like Hypomenorrhia and pain in Abdomen.	USG done on 5 <sup>th</sup> Jan 2015 showing Tiny anterior wall intramural fibroid lesion measuring 0.46 x 0.29 cm and E.T. 6.0 mm.
	<ul> <li>Patient has advised</li> <li>Panchakarma TT along with</li> <li>oral Ayrvedic medicines for</li> <li>3 months.</li> <li>1. Uttarbasti for 5 days (2</li> <li>days Kasisaditaila and 3</li> <li>days Ksharataila)</li> </ul>	Got complete relief form symptoms like oligomenorrhia and pain in abdomen. There is no recurrence of any complaints.	USG done on 14 <sup>th</sup> April 2015 suggestive of no any significant abnormality detected.

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2. Yoga Basti		
Panchakarma TT along with oral Aurvedic medicines for 3 months Yogabasti for 3 moths advised.	There is no recurrence of any complaints	USG pelvis - scan repeated on 14th September 2016 Shows no significant abnormalities.
No any kind of medicines	There is no recurrence of any complaints.	Then after 2 years scan repeated for recurrence of fibroid. USG pelvis - scan repeated on 14th December 2018 Shows no significant abnormalities.

#### DISCUSSION

Patient has diagnosed with Uterine fibroid by scan done on 14<sup>th</sup>june 2014 showing tiny subcm sized anterior wall myometrial lesion measuring 6 x 5 mm and E.T. 5.9 mm. taken treatment for the same for 6 months and scan repeated -USG done on  $2^{ND}$  November 2014 showing Tiny anterior wall intramural fibroid lesion measuring 0.38 x 0.33 cm and E.T. 6.3 mm.

Came to YMT Streeroga and Prasutitantra OPD

Patient has advised Ayurvedic Treatment.

1) Chandrapraphavati 2 TDS

2) Gokshuradi Guggule 2 TDS

3) Shatavarivati 2 TDS

4) Haridrakhanda Vati 2TDS

5) Kumari Asav 20 ml twice a day before food.

Patient had taken treatment for 6 months and scan repeated after 6 months.

After taking this TT for a 6 months patient got relief form symptoms like oligomenorrhia and pain in abdomen.

 $1^{st}USG$  done on  $5^{th}$  Jan 2015 showing Tiny anterior wall intramural fibroid lesion measuring 0.46 x 0.29 cm and E.T. 6.0 mm.

Usg was repeated every 3 months and showed no significant change.

USG done on 14-04-2015 showed no evidence of any fibroid or growth.

Patient has advised Panchakarma TT along with oral Ayurvedic medicines for 3 months.

1. *Uttarbasti* for 5 days (2 days *Kasisaditaila* and 3 days *Ksharataila*)

2. Yoga Basti

Scan repeated after 3 months *Panchakarma* and Ayurvedic oral medicines.

USG done on 14<sup>th</sup> April 2015 suggestive of no any significant abnormality detected.

*Panchakarma* TT along with oral Aurvedic medicines for 3 months *Yogabasti* for 3 months advised.

Then after 2 years scan repeated for recurrence of fibroid.

USG pelvis - scan repeated on 14<sup>th</sup> December 2018 Shows no significant abnormalities.

Here patient has got relief from sypmtoms like *Artavkshaya* and also pain in abdomen and uterine fibroid also successfully cured with Ayurvedic treatment.

## Ingredients and mode of action Chandraprabhavati

32 parts of *Guggul* – (*Commiphora mukul*)

32 parts of Shilajit-Asphaltum

16 parts of Sharkara- Sugar1 part of Karpoor (Cinnamomum camphora), Ativisha (Aconitum heterophyllium), Haridra (Curcuma longa), Vacha (Corus calamu), Mustak (Cyprus rotundus), Amalki Officinalis), (Emblica Haritaki (Terminalia (fruit rind), Bibhitaki (Terminalia bellirica) Chavva (Piper chaba), Bhunimba chebula), (Andrographis paniculata), Vidanga (Embelia ribes), Devdaru (Cedrus deodara), Dhania Guduchi (Tinospora (Coriander sativum), cordifolia), Chitraka bark (Plumbago zeylanica), Shunthi (Zingiber officinalis), Darvi (Berberis aristata), Maricha (Piper nigrum), Pippali (Piper longum), Pippalimool (Piper longum), Gajapippali (Piper chaba), Sarjikshaar (Sodium carbonate), Yavkshaar (Potassium carbonate), Saindhav Lavan (Rock salt), Suvarchal Lavan (Sodium sulphate), Vida Lavan (Black salt), Swarnamakshika bhashma.

4 parts of Trivrit (Operculina turpethum), Dantimool (Baliospermum montanum), Dalchini (Cinnamomum zeylanicum), Tejpatta-(Cinnamomum tamala), Ela (Elettaria cardamomum, Vankshalochana Bambusa arundinacea) 8 parts of Lauha Bhashma.

#### Gokshuradiguggul

Gokshura (Tribulus terrestris), Shuddha guggulu (Commiphora mukul), Black Pepper, Ginger (Zingibero fficinale), Pippali (Piper longum), Amla (Embblica Officinalis), Bibhitaki (Terminalia belerica), Haritaki (Terminalia chebula), Mustak (Cyperus rotundus).

- 1. *Haridrakhandaati* being anti-inflammatory in nature, turmeric reduces inflammation within the body.
- 2. It also acts as a natural detoxifier and purifies the blood and is helpful in treating liver and cholesterol problems.
- 3. *Kumariasav* As here is the main ingredient is *Kumari* Aloe Vera which act as *Rajpravartak*.
- 4. Shatavari act as Rasayandravaya.

Ayurvedic cleansing or *Panchakarma* is very effective in regulating hormones and correcting the pathology. *Uttarbasti* and *Yogabasti* acted as a *Shodhanchikitsa*.

#### CONCLUSION

In today's era uterine firoid very big issue and is very common. which may result in various menstrual problems such as dysmenorrhea, meorrhagia and irregular periods, by disturbing anatomical as well as physiological integrity. In allopathy there are few treatments mentioned to treat the fibrod. But here in this case. Hence, Medical management of small size uterine fibroid on the basis of Ayurvedic Fundamental principles. *Vata –Kapha Shamaka, Rakta- Shodhaka, Lekhana, Shothagna* and *Kledaghna* medicines such as *Chandraprabha vati, Gokshuradi Guggulu* and

Haridra Khanda, Kumara asava were found to be very effective in relieving uterine fibroid in this case. Utreine fibroid is completely cured. Uterine fibroid is similar to Garbhashayagata Granthi (Intrauterine encapsulated growth) but if large sample clinical study done then the hypothesis can be establish and may help to contribute to avoid uterine fibroid surgery in initial stage. In 7 % cases fibroids do resolve on their own. However considering the relief in hypomenorrhea and pain in abdomen and the continuous appearance of the fibroid till Jan 15 and then its disappearance in April 15 scan indicates that the patient has responded to Ayurvedic therapy only. Also there has been no recurrence even after 2 years in follow up sonoscan.

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## "Mantras in pregnancy- month wise"

Seema C. Mehere

Professor & Hod Of Stri-Roga Prasuti Tantra,

Dr. G.D. Pol Foundation , YMTAMCH, Kharghar, Navi Mumbai, Maharashtra

Author correspondence: seema.mehre@gmail.com

## **ABSTRACT:**

In today world different forms of Supraja sanskar, garbha sanskar, some thing additional to the regular ANC care have become very popular amongst the People as well as Healthcare providers Along with Yoga, Diet and medicines Mantra and music are an integral part of all these programmes. Mantra-shakti is proven to be very powerful for pregnant women even in this materialistic world. It creates a high vibration, a sacred sound, and a deep, loving peace for yourself and your growing baby. Chanting mantras can uplift your soul and you may feel a close connection to specific mantras during pregnancy. This process is also known as 'Garbha Sanskar' as per ancient Indian tradition. In Garbhini Paricharya also, our texts have advised mangal swasti vachan for the garbhini to create positivity and ward off evil forces. Mantras generate positive energy and all the mantras have

specific purposes. Chanting mantras provide peace of mind and purity at heart. Mantra is a powerful tool for peace and joy during these days of tremendous changes of pregnancy and motherhood and you must chant them throughout your pregnancy for an easy delivery and a healthy you and a healthy baby. Month wise mantras have also been described in our ancient texts. For eg. During the first month the fertilized ovum is in the liquid state and this process takes place through intercourse for the purpose of the birth of life this month is ruled by planet Venus. Hence Om Shukrav Namah mantra should be chanted.

Use of *mantra* chanting has positive effects and calming effects on the mother and the baby. The purpose of this article is to describe the different *mantras* and their effects in pregnancy. using *mantra* in pregnancy and in birth can create a healthy mother and baby and hence *Supraja*.

#### Keywords: mantra, pregnancy, month

#### **INTRODUCTION:-**

Garbh sanskar is an ancient Indian Ayurvedic practice that helps to shape the personality and character of the fetus inside the mother's womb. Various practices like yoga, meditation, chanting mantras, listening to music etc are done by the expecting mother. These practices are responsible for shaping physical, mental, emotional and spiritual health of the unborn child. Mantras generate positive energy and all the mantras have specific purposes. Chanting mantras provide peace of mind and purity at heart. The unborn baby will also get this quality along with the mother to be. Chanting mantra is a very old practice and it creates powerful vibrations that help to create a positive environment.

In the human race a child is born approximately (nearly) after 280 days of conception. In fact, this calculation is related to the menstruation cycle. Generally, a women gets menstruation after 28 days, this is called (known as) monthly menstruation cycle (periods). A child is born after completion of 10 cycles of 28 days each, i.e. 280 days. In the present analysis, discussion has been done with regard these very 10 months. Chanting *mantra* during pregnancy is an ancient Indian method known as '*Garbha Sanskar*' which helps to have a positive effect on the growth and development of babies in the womb. Read on to find more about the benefits of chanting *mantras* during pregnancy.

*Mantra-shakti* is proven to be very powerful for pregnant women even in this materialistic world. It creates a high vibration, a sacred sound, and a deep, loving peace for yourself and your growing baby. Chanting *mantras* can uplift your soul and you may feel a close connection to specific *mantras* during pregnancy. This process is also known as *'Garbha Sanskar'* as per ancient Indian tradition.

*Mantra* is a powerful tool for peace and joy during these days of tremendous changes of pregnancy and motherhood and you must chant them throughout your pregnancy for an easy delivery and a healthy you and a healthy baby.

## AIMS AND OBJECTIVES:-

**Aim:-** To study the different mantras and their effects in pregnancy.

**Objectives:-** To study the effect of mantras in pregnancy.

#### Methodology-

Month wise mantras have also been described in our ancient texts.

For e. g. During the first month the fertilized ovum is in the liquid state and this process takes place through intercourse for the purpose of the birth of life , this month is ruled by planet Venus. Hence *Om Shukray Namah mantra* should be chanted.

During **the first month** from conception the mixture of the semen and ova remains in liquid form hence Venus is called the master of this month. This process takes place thru intercourse for the purpose of the birth of a life. Planet Venus is the doer of (for) the combination of the ova and the Semen. During this one month a pregnant woman should worship planet Venus. Special care should be taken during this period if the planet Venus is combust, retrograde or infested in the woman's horoscope.

For the purpose of worshipping Venus, the *Mantra* **'Om Su Sukray** *Namah* **'** should be (read out) recited. Problem can come (arise) if planet Venus is bad position in transit during this one month.

In the second month the liquid condition changes into a solid one hence the master of this month is the plant Mars. This planet (Mars) is regarded as the son of planet Earth, (and) is one (a planet) with (of) the earth element and Mars only is the cause (doer) of the conversion of the liquid bubble in the womb into the mortal form. When the liquid matter solidifies, flesh is produced in the womb. Mars is the doer (cause) of (time) flesh, solid state etc. During this month this mixture in the liquid state begins to take the shape of a mortal in which stiffness is imbibed. A problem can arise if the planet Mars is in bad position in transit the woman's horoscope becomes retrograde bad position in transit, combust, affected. The worship of Planet Mars during this month proves to be beneficial.

For the purpose of worshipping Planet Mars a pregnant woman should chant the following *Mantra*, i.e. **'Om Bho Bhomay Namah'.** 

In the third month, hands and legs etc. begin to protrude (shoot out). In the third month, hands and legs etc. begin to protrude (shoot out). The sex of the embryo is also determined during this month. The master of this month is planet. Jupiter infusion of life in that mortal embryo begins now. Blessing one with (a) life is the of Jupiter, hence the saving Jeevo Jeev Pradata. Jupiter is the significant of prosperity significance / growth and is called life giver. According modern perceptions to (thinking), development of body organs and activity in the womb foetus begins (starts) only in the third month. The worship of lord Jupiter during the third month is beneficial. If Jupiter is in Bad Position in the horoscope of the woman then special precautions should be taken during this month and if Jupiter is retrograde, combust or in Bad position in transit in any other way (form) then problems can arise. One should chant the mantra 'Om Bra Brahspatay Namah' in order to please Jupiter.

During the fourth month of the pregnancy bone formation starts in the body. Bones are the symbols of strength a born points towards sturdiness (strength). Strength and sturdiness full under the ambit of the Sun God. Sun God, the master of this month is the doer of the bones. Problems arise in this month if the Sun is in bad position in the horoscope of the lady. If during this month the Sun is bad position in transit (either from Rahu or Ketu) that is an eclipse occurs on the sun then problems can arise for the foetus. During this period the lady should worship the Sun God. She should chant the *Mantra* of the Sun God, i.e. '*Om Gharri Suryai Namah.*'

In the fifth month, blood begins to form in the foetus nestled in the womb. Blood is a liquid form, moon is the significant of all matters in the liquid form and happens to be the master of the fifth month.The Moon is also the (doer) of the mind, emotions are also attributed to the Moon. Circulation of blood comes under the ambit of the Moon. Blood, Venus, Slum etc. are formed in this month. If the moon is in the Bad position, in debilitate sign or is combust then problems arise.

During this month, if bad position, the moon is in the Bad position in through from eclipse etc then problems await the foetus. If the lady worships the Moon in the fifth month then it proves beneficial For the purpose of worshipping the Moon the *Mantra* **'Om So Somai Namah'** should be chanted.

During the sixth month, nails and superficial hair develop (come out/emerge) in the child. The master of this month is lord Saturn. Nails, (\*\*\*) superficial hair, hair etc. Are subjects attributed to lord Saturn, Nails and hair are inert, they do not have any life in them (they are lifeless). The proper development of these superficial organs the child. If Saturn is retrograde, in debilitate sign or is in Bad position after being combust then the child in the womb can have problems. Worship of lord Saturn during this month (period) (can prove) proves to be extremely beneficial. If Saturn is in Bad position combust or retrograde even when it is in transit then there are possibilities of problems arising (coming up) at such a time the lady should chant lord Saturn's Mantra'Om Sa Sanachrai Namah'.

In the seventh month, intelligence enter the foetus, awareness comes in this month and feelings of comfort and pain are master of this month and is also considered the doer of intelligence and wisdom. It enables the entry of intelligence and wisdom. It enables the entry of intelligence and arouses awareness. This inert being becomes active (full of life) on infusion of intelligence and wisdom. If Mercury is (infested) in the woman's horoscope then problems are possible in this month. Entry of values in the foetus takes place in this month. However, of Mercury is afflicted (because of transition) during the month then the values in the child are definitely (surely) affected. For preventing these problems, the worship of lord Mercury is done by chanting the mantra 'Om Bu Budhai Namah' all through the month.

Swami lagnesh, himself, has been regarded as master of the eight month. Here two meanings have been given for Lagnesh. Firstly, the Janm Lagnesh of a pregnant woman (an expectant mother) and secondly *aadhan lagnesh* the master of the aadhankatin The lagna. auspiciousness of this month is decided by the position of *janma lagnesh* in the absence of (knowledge) information regarding the aadhan Lagna. If a woman delivers during this month then a lot of problems are caused to the child. Hence, a pregnant woman extremely needs to take complete rest during this month and the also experienced (felt). Mercury is the movement of the moveme worship of *lagnesh* (or *aadhan lagnesh*, if point of view of the safety of the mother to be. That is why the holding of Seemantoonyan Sanskar has been recommended in the Indian religious texts, so that the foetus remains safe (secure).

> Moon is the master of the 9th month and Sun is the master of the 10th a pregnant woman remains healthy in the months pertaining to those planets which are in a favourable position in the *aadhan* Lagna or in the horoscope of the woman, but there is a possibility of problems arising in the months in which the planets related to the particular month are either afflicted, in debilitate or rival (adverse) birth sign or are in Bad position moreover

rituals like *Pushban Sanskar* in the 4th month and *Seemantoonayan Sanskar* in the 6th or the 8th *Sanskar*.

In the 6th or the 8th month which have been recommended in various religious scriptures with a view to ensure the safety of the baby foetus should be duly observed. Any woman who has become pregnant for the first time should observe the above mentioned rituals. In the event of the lady (women) getting pregnant for the second time or more, then the worship of only those planets is considered auspicious which have been proclaimed to be (regarded as) masters of (beneficial) the pregnancy period.



#### **Results-**

Use of *mantra* chanting has positive effects and calming effects on the mother and the baby

## **Conclusion:**

Using *mantra* in pregnancy and in birth can create a healthy mother and baby and hence *Supraja*.

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**<u>Review Article</u>** 

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# HYPERLIPIDEMIA: A CAUSATIVE FACTOR OF DHAMANIPRATICHAYA W.S.R. TO ATHEROSCLEROSIS

## Dr. Kanchan D. Raut<sup>\*1</sup> and Dr. Ninad Sathe<sup>2</sup>

\*<sup>1</sup>MD Scholar, Rasashastra and Bhaishajya Kalpana Department.

<sup>2</sup>Professor, Rasashastra and Bhaishajya kalpana Department.

Dr.G.D.Pol Foundation's Ayurvedic Medical College and P.G. Institute, Kharghar, New

Mumbai.

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\*Corresponding Author Dr. Kanchan D. Raut MD Scholar, Rasashastra and Bhaishajya Kalpana Department, Dr.G.D.Pol Foundation's Ayurvedic Medical College and P.G. Institute, Kharghar, New Mumbai. kanchanraut97@gmail.com

## ABSTRACT

With the evolution in human society, occurring lifestyle diseases are more related with heart disease, stroke, obesity, type II diabetes and diseases associated with smoking, alcohol and drug abuse. Hyperlipidemia is a metabolic syndrome characterized by diverse lipid profiles like hypercholesterolemia, hypertriglyceridemia, and familial combined hyperlipidemia. There is a well established association between lipid concentrations and the risk of CVD. Globally, a third of ischemic heart disease is attributable to high cholesterol. This change in the vessel wall is referred as *dhamanipratichaya* (atherosclerosis). As per involvement of *Dosha-dushya* the disease can be considered among 'Santarpana Janya Vikaras'. Ayurveda has mentioned several medicines which are mentioned as *lekhaniya*, doing the scrapping action of excessive fat. Also various researches carried out on ayurvedic medicines have proved promising effect in lowering the low

density lipoprotein, and certain medicines even have helped in increasing high density lipoprotein. This article gives us a review about modern concept of hyperlipidemia and its correlation with *dhamanipratichaya*, along with its treatment.

KEYWORDS: Hyperlipidemia, cholesterol, dhamanipratichaya.

## INTRODUCTION

Hyperlipidemia is a medical condition characterized by an increase in one or more of the plasma lipids, including triglycerides, cholesterol, cholesterol esters, phospholipids and or

plasma lipoproteins including very low-density lipoprotein and low-density lipoprotein along with reduced high-density lipoprotein levels. Hypercholesterolemia and hypertriglyceridemia are the main cause of atherosclerosis which is strongly related to ischemic heart disease (IHD).<sup>[1]</sup>

Hyperlipoproteinemia is the lipid disturbance of major relevance clinically because of its association with an increased risk of atherosclerotic cardiovascular disease. Multiple epidemiologic studies have demonstrated that increased levels of plasma total cholesterol and low-density lipoproteins are strongly and directly related to a greater incidence of coronary heart disease. Elevated plasma triglycerides and very-low-density lipoproteins are directly associated with the risk of atherosclerotic heart disease, although not as independent risk factors. In contrast, high levels of high-density lipoprotein cholesterol have been found to be a protective factor for the development of that disease, so that decreased levels constitute a risk factor.<sup>[2]</sup>

In Ayurveda, Hyperlipidemia is described under various nomenclatures such as *Medodushti*, *Atisnigdhadhatu, Dushit kleda* etc. There is no precise term for hyperlipidemia in the Ayurvedic classics. Literature shows that scholars have tried to use distinct nomenclature for hyperlipidemia, e.g., *Rasagata Sneha Vriddhi* (increase in lipids in plasma), *Rasa Raktagata Sneha Vriddhi* (increase in the lipids in plasma and blood), *Medovriddhi* (generalized lipid increase), *Medoroga* or *Medodosha* (obesity), *Aama Medo Dhatu* (abnormally formed adipose tissue). A detailed study of hyperlipidemia reveals its similarity to *Asthayi Medo Dhatu Vriddhi* (abnormal increase in circulating lipids) with regard to the pathophysiology. This excessively increased circulating lipid is *aama* in nature, resulting in further complications.<sup>[3]</sup>

Hyperlipidemia is a form of *Kaphavikara* specifically may be *Medodushti* in the form of *AbaddhaMeda*.<sup>[4]</sup> As per involvement of *Dosha-dushya* the disease can be considered among *SantarpanaJanyaVikaras'*. The major pathological factors behind the disease basically include *Kapha vriddhi*, *Jathargni dushti*, *Medo dhatvagnimandya & Avarana* of *Vata* which all finally leads to *Amarupa Medovridhi*.<sup>[4]</sup> It is worth mentioning here that this morbid accumulation of *kapha* and *medas* with the vessels of rasa and *raktadhatu* is termed as *shonitabhishyandana (hyperlipidemia)*. It is said that *dhamani pratichaya* and *margavarana* are the sequel of this *shonitabhishyandana*.<sup>[5]</sup>

>60 mg/dl <130 mg/dl

<30 mg/dl

## **CONCEPT OF HYPERLIPIDEMIA**

#### Lipoproteins

Lipoproteins are macro molecules aggregate composed of lipids and proteins. This structure facilitates lipids compatibility with the aqueous body fluids. Chylomicrons (CM),very low density lipoproteins (VLDL), low-density lipoproteins(LDL), intermediate-density lipoproteins (IDL) and high-density lipoproteins (HDL) are the five main classes of lipoproteins present in plasma. These classes are heterogeneous and have different composition, size, and density.<sup>[6][1]</sup>

Terrormar Range of the hpoproteins.					
	Variables assessed (mg/dl)	Normal Range			
	Serum cholesterol	<200 mg/dl			
	Serum triglyceride (TG)	<150 mg/dl			

## Table no 1: Normal Range of the lipoproteins.<sup>[7]</sup>

Serum HDL

Serum LDL Serum VLDL

## Cholesterol

Cholesterol is a waxy substance present in blood plasma and is a primary component of the membrane that surrounds each human cell. In its pure state it is a white, crystalline substance being odorless and tasteless. Cholesterol It is the starting material or an intermediate compound from which the body synthesizes bile acids, steroid hormones, and vitamin D. Cholesterol circulates in the bloodstream and is synthesized by the liver and several other organs. Dietary food also contributes in cholesterol formation.<sup>[8]</sup>

## PATHOGENESIS OF HYPERLIPIDEMIA

During the early stages of hyperlipidemia, blood monocytes and platelets attach to a vessel wall at the sites of endothelial damage. The release of the mediators such as platelet derived growth factors leads to a proliferation of smooth cells in the intimal and medial lining of the vessel, collagen synthesis, cholesterol uptake and the beginning of the hyperlipidemic plaque results. Cholesterol deposits and other fatty substances circulating in the blood accumulate in the interior walls of the blood vessels. These fatty deposits build up, thicken, and become calcified, eventually converting the vessel walls to scar tissue. Ruptured plaque results in the acute syndromes of unstable angina, myocardial infarction and sudden cardiac death.<sup>[8][9]</sup>

#### **CLASSIFICATION OF HYPERLIPIDEMIA**

i) **Primary hyperlipidemia -** is familial and can occur due to single gene defect (monogenic), multiple gene defects (polygenic), dietary and physical activity related causes, polygenic or multifactorial.

**ii)** Secondary hyperlipidemia - is acquired because it is caused by another disorder like Diabetes, Myxoedema, Nephritic Syndrome, Chronic Alcoholism, Drugs like corticosteroids, beta blockers and oral contraceptives. HIV is an important consideration both because the infection and the use of protease inhibitors can contribute to lipid abnormalities.<sup>[1][9][10][11]</sup>

#### On the basis of lipid type

- Hypercholesterolemia- In this the level of cholesterol is elevated.
- Hypertriglyceridemia- It is defined as an elevated level of triglycerides<sup>[9]</sup>

## DRUG THERAPY USED IN DIFFERENT TYPES OF HYPERLIPDEMIA

**Hypercholesterolaemia:** The statins, pravastatin and simvastatin are first choice. Alternatives are bile acid resins such as cholecystyramine.

**Mixed hyperlipidaemia:** The statins or alternatively fibrates such as (elevated cholesterol and TG) gemfibrozil.

**Hypertriglyceridaemia:** Fibrates such as gemfibrozil are used as first line therapy, (elevated TG) alternatively use the statins.<sup>[12]</sup>

## Side effects

Statins are said to have the adverse effects of depression, anxiety, indigestion, headache, rashes, gastrointestinal symptoms, alopecia, memory loss, dyspenea. Recent clinical trials showed that statin use has been linked to an increase in type 2 diabetes.<sup>[1][9]</sup>

## **CONCEPT OF LIPIDS IN AYURVEDA**

## • Formation of *Meda dhatu*

According to *Charaka*, the *meda dhatu* is produced from *mansa dhatu*. During *paka* of *mansa dhatu*, from its *Prasad bhag, medodhatu* formation and *mansa dhatu poshan* occurs, and *medodhatu* is formed.<sup>[13]</sup>

There are three theories about the modes of *dhatu* formation (Nourishment)

- Ksheer-dadhi-nyaya.
- Kedar-kulya-nyaya.
- Khale-kapot-nyaya.<sup>[14]</sup>

#### • Sthana and Swarupa of Meda dhatu

Human body consists of many tissues which are rich in lipids having *Sneha* (oiliness) as common feature. They are *Medo Dhatu*, *Vasa* and *Majja Dhatu*. Having *Snehatwa* as common feature, all the three are different in their site and function.

#### There are two types of Medo Dhatu

**1.** *Poshaka* (Nutrients) – it is mobile in nature which is circulated in the whole body along with the *Rasa-Rakta Dhatu*, giving nutrition to *Poshya Medo Dhatu*. It can be correlated with lipids along with the cholesterol, being circulated with the blood.

**2.** *Poshya*(Nourish)- it is immobile in nature, and stored in *Medodhara kala* i.e. *Udara, Sphika, Stana, Gala, etc. and Vasa (Mamsavaha sneha).* It can be correlated with adipose tissues / fat.<sup>[14][15]</sup>

#### • Pramana of Meda dhatu

The total quantity of *Meda* is two *Anjali* and the *Vasa* (Muscle's fat) is three *Anjali*. Thus, total *Meda* content of body is enumerated as 5 *Anjali* and total measurable body elements are counted as 56.5 *Anjali*, from this proportion, it is evident that total *Meda* content of body is 11 to 12% approximately. Modern physiology also mentioned the same amount of fat. This quantity may vary from person to person and exact measurement of body humorals is not possible due to unpredictable and ever changing nature of body.<sup>[14][16]</sup>

## PATHOGENESIS ACCORDING TO AYURVEDA

*Hetusevana* is the first & foremost important event in initiation of *Samprapti. Hetusevana* leads to *Jathargni dushti & Kaphavriddhi*. When *Jatharagni* is impaired, the *Bhutagni* and *Dhatwagni* would also get impairment. This further leads in the formation of *Ama Annarasa* and subsequent *Ama Rasa Dhatu*. The *Ama Rasa Dhatu* leads to *Medodhatvagnimandya* leading to *Amarupa Medovridhi* which causes *Sthaulya* and *Medoroga*.

On other aspect, *Kaphavridhi* and this *Ama Meda Dhatu* formation leads to *Avarana* of *Vata* and *Sroto avarodha* which ultimately leads to *Vata Dosha* vitiation. Due to, *Sanga* in

*Medovaha Srotas* the nutrients cannot be carried by *Vyana Vayu* to their respective *Dhatus* (The process of circulation, digestion and proper distribution of *Dhatus* are controlled by *Samana* and *Vyana Vayu*). In this disease *Vata* has been mentioned in the state of *Aavrita* which provocates the Agni ultimately increasing the demand for the food (*Abhyavaharana Shakti*). Thus, vitiated cycle of pathogenesis starts.

But in case of *anya Nidanas* like *Beejadosha & Avarana* direct *Medovaha Srotodushti* occurs which results in the *Vriddhi* of *Ama Asthayi Medo Dhatu* or *Ama Sthayi Medo Dhatu* or both. The increase in *Ama Sthayi Medo Dhatu* results in *Atisthaulya* or Obesity whereas an increase in the *Ama Asthayi Medo Dhatu* would lead to conditions like *Ama Asthayi medodhatu Vriddhi* (Hyperlipidemia) or *Prameha* (Diabetes Mellitus).

The *Ama Asthayi Medo Dhatu* if untreated, on further progression causes *Margavarana* to *Vata* leading to the *Shoshana* and *Kathinya* of the *Sthanika Medo Dhatu*. This results in a condition termed as *Dhamani Pratichaya*. *Dhamani Pratichaya* or Atherosclerosis causes lesions in all the three *Maha Marmas Hridaya*, Shira and Basti which is evident as coronary heart disease, cerebrovascular diseases and renal insufficiency.<sup>[4][17]</sup>

## AYURVEDIC MEDICINE IN HYPERCHOLESTEROLEMIA

The main concept to treat hyperlipidemia is *aama pachan* and increasing the agni. There are several plants and herbs mentioned in Ayurveda that are reported to be beneficial for hyperlipidemia. A list of drugs occurring in different *samhitas* having *medoghna* and *medohara* property is enlisted below.<sup>[18]</sup>

Table no 2: Lekhaniya dravya mentioned by Acharya Charaka.<sup>[13]</sup>

Charaka's Gana	Contents
Lekhaniya gana	Musta, Kushta, Haridra, Daruharidra, Vacha, Ativisha, Katurohini, Chitraka, Chirabilva, Haimavati

## Table no 3: Lekhaniya dravya mentioned by Acharya Susruta.<sup>[16]</sup>

Sushruta samhita	Contents
I akhanina duama	Shilajatu, <u>Guggulu</u> , Go-Mutram, <u>Triphala</u> , Loha raja, Rasanjana,
Leknaniya aravya	Madhu, <u>Yava, Mudga, Koradusha, Shyamaka</u> <u>Uddalaka</u>

Table	no	4:	Lekhaniya	dravya	mentioned	by	Acharya	Sushruta	in	different
ganas.[	16][19]	[20]								

Sushruta's Gana	Contents
	Saalasaara, Ajakarna (Sarja), Khadira Kadara (Swetasaara), Kaalaskandha,
	Kramuka (Pooga), Bhoorja, Meshasringa (Karkatasringi), Tinisa (Syandana),
Salasaradi gana	Chandana, Kuchandana, Simsapaa, Sireesha, Asana (Beejaka). Dhava (Sakata),
	Arjuna (Kakubha), Taala, Saaka, Naktamaala, Pooteeka, Aswakarna, Agaru and
	Kaaleeyakam (Malendree chandanam).
	Varuna, Aartagala (Kakubha), Sigru, Madhu Sigru, Tarkaaree, Mesha Sringee
	(karkatasringee), Pooteeka (Chirabilva), Naktamaala (Brihat Karanja), Morata
Varunadi gana	(Ankolapushpa), Agnimandha, two kinds of Saireyaka 9of red and blue flowers),
	Bimbee, Vasuka (Buka), Vasira (Markatapippalee), Chitraka, Sataavari, Bilwa,
	Ajasringee (Chagalavishanikaa), Darbha (Kusa), Brihatee and Kantakaari
Rodhradi gana	Rodhra, Saavaralodhra, Palaasa, Kutannata, Asoka, Phanjee (Bhaarngee),
	Katphala, Elaavaalukam, Sallakee, Jinginee, Kadamba, Saala and Kadalee
Ankadi cana	Arka, Alarka (Sweta Arka), Karanja, Vitapakaranja, Naagadantee, Mayooraka
	(Apaamaarga), Bhaargee, Raasnaa, Indrapushpee, Kshudra Swetaa (Sephanda),
Arnuui gunu	Mahaaswetaa, Vrischikaalee, Alavanaa (Jyotishmatee), and Taapasa Vriksha
	(Induda)
Mushkakadi	Mushkaka (Kshaaravriksha), Palaasa (Kinsuka), Dhava, Chitraka, Madana,
mushkukuul gana	Vrikshaka (Kutaja), Simsapaa, Vajravriksha and Thriphala (Hareetaki, Vibheetaki
gunu	and Aamalaki)
Ushakadi Gana	Ooshaka (Kshaaramrittika), Saindhavalavana, Silaajathu. Kaaseesadwaya
Usnakaai Gaha	(Vaalukaaseesam and Pushpukaaseesam), Hingu and Tuththtaka
	Nyagrodha (Vata), Udumbara, Aswaththa, Plaksha, Madhuka, Kapeethana
	(Aamraataka), Kakubha, Aamra, Kosaamra, Chorakapatra (Laakshaavrikshaa),
Nyagrodadhi	Jamboodwaya (Raajajamboo and Kaakajamboo – Swalpaphala), Piyaala
gana	(Saaradruma), Madhooka (Gudapushpa), Rohinee (Katphala), Vanjula (Vetasa),
	Kadamba, Badaree, Tindukee (Tinduka Vriksha), Sallakee, Rodhra,
	Saavararodhra, Bhallaataka, Palaasa and Nandeevriksha.
Tryushana	Pippalee, Maricha and Sringabera (Sunthee)

# Table no 5: Lekhaniya dravya mentioned by Acharya Vaghbhat.<sup>[19][21]</sup>

Ashtang Hrudaya's Gana	Contents
Asanadi gana	Asana, Tinisha, Bhurja, Swetavaha(Arjuna), Prakiya (Chirabilva), Khadira, Kadara, Bhandi, Simshipa, Meshasrungi, the three Hima (shweta Chandan, rakta Chandan, Kaliyak), taala, Palasha, Jongaka (Agaru), Shaaka, Shaal, Kramuka, Dhava, Kalinga, Chaagakarna, Ashvakarna
Surasadi gana	The two Surasa (lrushna tulsi, shweta tulsi), Phanijja, Kalamala, Vidanga, Kharabusa, Vrsakarni (Mushkakarni), Katphala, Kasamarda, Ksavaka, Sarasi, Bharngi, Karmuka, Kakamachi, Kulahala (mundi), Visamusti, Bhutrna, Bhutakeshi
Vatsakadi gana	Vatsaka (Kutaja), Murva, Bharangi, Katuka, Maricha, Ghunapriya (Ativisha), Gandira, Ela, Patha, Ajaji (krushna jeerak), Katvanga phala, Ajamoda, Siddhartha (Sarshapa), Vacha, Jiraka, Hingu, Vidanga, Pasugandja (ajagandha), Panchakola
Vachadi gana	Vacha, Jalada (Mustaka), Devahva (Devdaru), Nagara, Ativisa, Abhaya (Haritaki)
Haridradi gana	the two Haridra(Haridra, Daruharidra), Yastimadhu, Kalasi (Prushnaparni), KutaJodbhava (Indrayava)

Various proprietary formulations including these drugs can be formulated and studied for treating hyperlipidemia.

Some of the researches showing effect on hyperlipidemia are

- *Arogyavardhini vati* is one of the proven drug for reducing hypercholesterolemia and related oxidative stress.<sup>[22]</sup>
- Triphala has been reported to reduce total cholesterol, triglyceride, free fatty acids and LDL-C significantly.<sup>[23]</sup>
- The *Kaishora Guggulu* formula acts as good blood purifier. It stimulates the *agni* and will help to digest the *aama*, while dealing with hypercholesterolemia.<sup>[3]</sup>
- Shilajit (Asphaltum) along with other drugs used in combination in a formulation, has been reported to reduce plasma cholesterol and lipid peroxidation in mice.<sup>[24]</sup>
- *Arjuna* possesses the potent properties of being antioxidant and hypolipidemic and has therapeutic potential for the prevention of coronary arterial disease.<sup>[25]</sup>
- *Withania somnifera* (Ashwagandha) and *Terminalia arjuna* (*Arjuna*) has been reported to reduce total and LDL-C and beneficial in cardiovascular diseases.<sup>[26][27]</sup>
- Ayurveda has discovered many more herbs and plant products such as garlic,<sup>[28]</sup> gum resin of the mukul myrrh tree,<sup>[29]</sup> ginger,<sup>[30]</sup> cinnamon,<sup>[31]</sup> *Azadirachta indica* (neem),<sup>[32]</sup>*Atasi*,<sup>[33]</sup> and turmeric,<sup>[34]</sup> that have been claimed to be beneficial for hyperlipidemia and cardiovascular disease.

Further research is needed to reveal the underlying mechanisms of single drugs as well as the new combinations.

### DISCUSSION

Hyperlipidemia is a lifestyle disorder with increasing incidence and poses grave threat to health as it has no symptoms but leads to life threatening complications. As according to modern concept hyperlipidemia is a disease of disturbed the lipoprotein metabolism and liver is the main stay of the lipoprotein metabolism.

Dhamani Pratichaya is a Santarpanjanya condition as stated earlier. Hence its Samanya Chikitsa comprises of Apatarpana. Dhamani pratichaya and margavarana are the sequel of shonitabhishyandana (hyperlipidemia). The main concept to treat hyperlipidemia is aama pachan and increasing the agni.

Ayurveda focuses on the root cause of the disease i.e *Agnimandya* and related Dosha vitiation. The main aim of *Medoroga Chikitsa* is to alleviate main factors involved in the *Samprapti* of *Medoroga* which are *Nidana Parivarjana*, Restoration of *Medodhatvagni* to its normal state, balancing vitiated doshas, *i.e. kapha* and *vata* and correct the vitiated *Medovahasrota & Medodhatu*.

Measures like Ullekhana, Raktamokshana, Vyayama, Upavasa, Dhuma, Swedana, Sakshaudra Ahara, Abhayaprasha, Rukshanna Sevana, different types of Churnas and Pradehas can all be employed as Aptarpana Chikitsa.

The Dravya which are having *Katu, Kashaya Rasa, Ushna, Teekshna Guna and Lekhana, Deepana, Pachana* properties reduce *Kapha, Meda, Ama* and increase power of Agni are choice of drugs for treatment of hyperlipidemia.

*Vamana*, *Virechana* and *Lekhana Basti* are the *Shodhana* procedures being used successfully in practice for the disease.

All these factors will help in controlling body lipid levels and conditions like coronary heart disease and stroke can be prevented.

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**Review Article** 

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# NANOTECHNOLOGY IN AYURVEDIC MEDICINE W.S.R. TO CLASSICAL BHASMA

# Dr. Kanchan D. Raut\*<sup>1</sup> and Dr. Ninad Sathe<sup>2</sup>

\*<sup>1</sup>MD Scholar, Rasashastra and Bhaishajya Kalpana Department
 <sup>2</sup>Professor, Rasashastra and Bhaishajya Kalpana Department

Dr. G.D. Pol Foundation's Ayurvedic Medical College and P.G. Institute, Kharghar, New

Mumbai.

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\*Corresponding Author Dr. Kanchan D. Raut MD Scholar, Rasashastra and Bhaishajya Kalpana Department, Dr. G.D. Pol Foundation's Ayurvedic Medical College and P.G. Institute, Kharghar, New Mumbai.

# ABSTRACT

Metals are used as medicine in Ayurveda since Samhita period in the fine powder form named as 'Ayaskriti'. With the development of marana technique the metals and minerals are converted into very fine and absorbable form of medicines known as *bhasma*. The process of Bhasmikaran helps converting the metal at zero valent state to a higher oxidation state and the toxic effects of the metals are not only nullified are transformed into biologically active nanoparticles. but Nanotechnology is the newly emerging science in the medical field. Nanoscale objects have at least one dimension that measures between 1 and 999 nanometers. Nano drug delivery systems can reduce the drug consumption and side-effects by lowering the deposition of the active agent in the non targeted sites. This review gives compiled discussion of classical Bhasma and Nanotechnology.

KEYWORDS: Bhasma, Ayaskriti, marana, Bhasmikaran, Nanotechnology.

# **INTRODUCTION**

Metals are used as medicine in Ayurveda since *Samhita* period in the fine powder form named as '*Ayaskriti*'. The use of *Ayaskriti* for internal use was limited as its fineness was not suitable enough to make it free from toxic effects. With the development of *Rasashastra*, many new pharmaceutical techniques like *shodhan*, *jarana* and *marana* were evolved by which metals and minerals could get converted into very fine, absorbable, therapeutically most effective and least or non toxic form of medicines known as *bhasmas*.<sup>[1]</sup> The main

concept of Rasashastra lies in the transformation of base lower metals into noble higher metals and to use them for strengthening the body tissues and to maintain them as fresh.<sup>[2]</sup> Bhasma literally meaning ash is a mineral preparation that is made from precious metals and their naturally occurring salts.<sup>[3]</sup> Bhasmikarana is a systematic and step-wise procedure that involves purification followed by repeated, controlled and prolonged heating of metals/minerals with suitable ingredients (of organic liquid media).<sup>[4]</sup> In Bhasmikarana. metals are processed with herbs, and organo-metallic/organo-mineral complexes are formed and functionality), (having improved stability that help in assimilation and selective/targeted/controlled drug delivery into the human body.<sup>[4]</sup>

# BHASMA PARIKSHA

The good quality of *Bhasma* is assessed by tests like *Visishta Varnotpatti*(Specific colour), *Rekhapurnatva/Mrutaloha* (Fineness to enter finger ridges), *Varitaratva* (Lightness to float in water), *Unam* (*Dhaanya* floats over *varitara* bhasma), *Gatarasatva* (Tasteless), *Nischandratva* (Lustreless), *Anjanabhatva* (Smoothness), *Apunarbhavatva* (Permanence), *Niruthatva* (Irreversibility).<sup>[3][5][6][7]</sup>

# ADVANTAGES OF BHASMA

- ✓ Potent in small dose
- ✓ Does not have any specific taste
- $\checkmark$  They can act quickly
- ✓ Available as very fine particles (nano size)
- ✓ Have good stability as compared to other dosage forms.<sup>[2]</sup>

# **COMMON PROPERTIES OF BHASMA**

All *Bhasma* have some common properties such as *Rasayana* (immunomodulation and antiaging quality), *Yogavahi* (target drug delivery), *Alpamatra* (prescribed in minute doses), *Rasibhava* (readily absorbable, adaptable, assimilable, and nontoxic), *Shigravyapi* (spreads quickly and fast acting), and *Agnideepana* (increases metabolism at cellular level and acts as catalyst). Bhasma can be employed for selective/targeted/controlled drug delivery as they are biocompatible, nontoxic, and nonantigenic in nature.<sup>[8]</sup>

# NANOTECHNOLOGY

Nanotechnology is the study of extremely small structures. The prefix "nano" is a Greek word which means "dwarf". The word "nano" means very small or miniature size.

Nanotechnology deals with materials in the size of 0.1 to 100 nm.<sup>[9]</sup> The Nanoscale is the place where the properties of most common things are determined just above the scale of an atom. Nanoscale objects have at least one dimension that measures between 1 and 999 nanometers.<sup>[9]</sup> When the dimension of any type of material is reduced below approximately 100 nm its mechanical, thermal, optical, magnetic and other properties change at some size. Thus within the same material one can get different properties. As the size of sphere changes from 1m to 1nm the surface area to volume ratio increases by a factor of  $10^{-9}$  which will again act as a key for catalyzing the medicine.<sup>[2][1]</sup> The two major approaches to get nano materials are –

- $\succ$  bottom up
- $\succ$  top down

Bottom up produce components which are made of single molecules, and covalent forces hold them together that are far stronger than the forces that hold together macro-scale components. Enormous amount of information could be stored in devices built from the bottom up. Top manufacturing involves the construction of parts through methods such as cutting, carving and molding and due to limitations in these processes highly advanced nano devices are yet to be manufactured.<sup>[9]</sup>

The development of nanotechnology is made possible through the marked development in analysis techniques with the help of specialized microscopes like Scanning Electron Microscope (SEM), Atomic Force Microscope (AFM),Transmission Electron Microscope (TEM), Cryo TEM, Fast-freeze fracture, Fluorescence optical Microscopy, Quasi-elastic light scattering, Energy dispersive X-ray Analysis (EDAX), Inductively Coupled Plasma (ICP), Atomic absorption Spectroscopy (AAS), X-ray induced photoelectron spectroscopy (XPS), etc.<sup>[10][11]</sup>

# **APPLICATIONS OF NANOTECHNOLOGY**

The different fields that find potential applications of nanotechnology are – Health and medicine, Electronics, Transportation, Energy and environment and Space exploration.<sup>[9]</sup>

In Health and medicine, nano drug delivery systems can reduce the drug consumption and side-effects by lowering the deposition of the active agent in the non targeted sites. By interacting with biological molecules at nano scale, nanotechnology broadens the field of research and application. Interactions of nano devices with bio molecules can be understood

both in extracellular medium and inside the human cells.<sup>[9]</sup> These nanoparticles are having diagnostic and therapeutic application in Cancer.<sup>[1]</sup> It also have important role in tuberculosis treatment, operative dentistry, ophthalmology, surgery, tissue engineering, antibiotic resistance, immune response and nano pharmaceuticals. For the delivery of CNS therapeutics, various nano carriers such as dendrimers, nano gels, nano emulsions, liposomes, polymeric nano particles, solid lipid nano particles and nano suspensions have been studied.<sup>[9]</sup>

# CLASSICAL BHASMA AND NANOTECHNOLOGY CORRELATION

*Bhasmas* are obtained by repeated calcinations and incineration of liquid products by special process. During incineration metals are converted into its mixed oxides. Zero valiant metal state is converted to metal oxides of higher oxidation state, by this *Bhasmikarana* process. Toxic nature of the resulting metal oxide is completely destroyed while medicinal properties are introduced in this process.<sup>[2]</sup> Since *Bhasmas* are nanoparticles, they have large surface area, smaller size and uniform shape. So their internalization to the cell and consequent effects is occurring quickly. Thus the pharmacological efficiency of *bhasma* lies in the reduced particle size which is achieved by increasing the number of *puta* process (incineration).<sup>[2]</sup> The increase in the surface area to volume ratio increases the dominance of interior. Thus high surface area is the key for catalyzing the medicine.<sup>[1]</sup>

Swarna bhasma and gold nanoparticles prepared by modern method are quite comparable with respect to TEM analysis. A further study has shown Swarna bhasma principally constituted of globular gold particle of 56-57 nm and devoid of any other heavy metal or organic material by its screening through AAS and Infrared Spectroscopy (IS). Nanosized gold particles (27±3nm) have been proven to be effective in ameliorating symptoms of mycobacterial, collagen and pristine-induced arthritis models. It put to rest, the concerns about presence of heavy metals in Ayurvedic preparations, which otherwise clouds popular abroad.<sup>[10]</sup> medicines Observations of Ayurvedic of few tests like use Rekhapurnatva, Varitaratva for the engineered nanoparticles of ZnO, and TiO<sub>2</sub> indicated that the engineered nanoparticles yielded similar results like *Bhasma* (unpublished data).<sup>[3]</sup> Bhasma in accordance of classical expectation having nanometer dimension are Muktashukti bhasma, Abhrak bhasma, Tamra bhasma, Louha bhasma, Yashad bhasma, Vanga bhasma, Swarna makshik bhasma.<sup>[1][4][8]</sup> The elements like Gold, Silver, Copper have been engineered into nanoparticles.<sup>[12][13][14][15]</sup>

### DISCUSSION

*Bhasmikarana* converts a compound into ashes. It is distinct from the approaches used for manufacturing engineered nanoparticles. It is an elaborate process, which converts the metal into its specifically desired chemical compound eliminating the toxicity of the metal, making it compatible for human medicinal purpose.<sup>[3]</sup> The process is also aimed to reduce the particle size and thus converting metals to *bhasma* nanoparticles, which are biocompatible, bio-assimilable, absorbable and suitable form for the human body.<sup>[4]</sup>

It has been reported that manufacturing methods of *bhasma* are in tune with nanotechnology of modern era and *Bhasmas* are nearer to the nano crystalline materials, similar in physicochemical properties except that *Bhasma* is prepared in the presence of various plant products like juices, concoctions, etc. A majority of biomolecules have electrostatic charge due to the presence of acidic and basic function group. The engineered nanoparticles are found to be highly reactive due to the free electrons present on their surface, hence these can be very sensitive to the environmental factors such as pH, temperature, electrolytes, and solvent, and have tendency to aggregate. The use of plant extracts may provide capping of reactive nanoparticles and thus make *bhasma* biocompatible, safe, and effective when manufacturing norms are properly followed.<sup>[3][1][16]</sup>

It is also noteworthy that Ayurvedic *Bhasma* is considered very safe and economical in comparison to contemporary metal based nano medicines.<sup>[8]</sup> Ayurvedic pharmaceutics are receiving a new thrust through a reappraisal of *bhasma* preparations as novel nanotechnological applications.<sup>[10]</sup> The method of manufacturing of *bhasma* can be modified or improved for better quality and nano property. Official guidelines have to be set regarding: standardization, toxicity, and safety studies, mass productive issues, labeling rules, clinical studies and others.<sup>[17]</sup>

# CONCLUSION

All the engineered nanoparticles are not meant for human use the way *bhasma* preparations were meant. *Bhasma* are biologically produced nanoparticles with quick and targeted action. The benefits of nano medicines are indubitable and unstoppable, nevertheless, and safety-related studies should also be carried out rigorously and planned in order to provide guidelines for safer manufacturing practices, keeping care of ecology, and environment.

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# Study of stana as matruja bhava with special reference to kulaja vritta in cases of breast cancer

# Shekatkar V. Pashmina<sup>1</sup>, Jagtap Manoj<sup>2</sup>, Metkar Kranti<sup>3</sup>

1. P.G. Scholor, Sharir Rachana Department

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- 2. Associate Professor, Sharir Rachana Department
- 3. HOD, Associate Professor, Sharir Rachana Department.

Dr. G.D. Pol Foundation's Yerla Medical Trust College and Hospital, Kharghar, Navi Mumbai, Maharashtra, India, 410210.

\*Corresponding author: Email - vd.pashmina@gmail.com Mobile no: 9920469960

# **ABSTRACT**:

Garbha is the union of shukra and shonita. it also called is as shadbhavatmak garbha, i.e made up of matruja, pitruja, rasaja, satmyja, aatmyaja and satvaja Bhava. All soft organs are included in matruja bhava, hence we can consider Stana as matruja bhava. In this study,316 cases of breast cancer were staudied with respect to maternal and paternal history of breast cancer in which 81.8% cases have positive maternal history. Therefore with this it can be said that Stana is considered as matruja bhava.

**Keywords:** Matruja Bhava, Stana, Breast, Metastasis, Cancer.

# **INTRODUCTION –**

Garbha is made up of shadbhava i.e basic six elements i.e pitruja, matruja ,rasaja , aatyamja, satvaja, satmyaja. Matruja and pitruja bhava include various entity of body i.e organ and structure of body and they are said to be inherited by mother and father respectively. Mamsa. shonita, meda, majja, hrudya ,nabhi, vakrut, pleeha, antra, guda are matruja bhava. This shows all mrudu (soft ) organs are included in matruja bhava. With this we can say all those organs who are soft in nature are matruja bhava. All the organ stated in sholk are matruja, but this does not include 'stana' into it. Stana is soft structure and secondly important organ of human body, which is important and active in females after puberty but rudimentary (not developed) in male. follow kulajavrutta/vyadhi Ayurved which shows passing of characteristic or diseases from one generation to another. The above stated can be applicable to (stana) breast cancer which will be found in next generation if stana is considered as matruja bhava. With the study of breast cancer patient it is found that kulaja vritta can be seen in cases of breast cancer. If anybody from maternal or paternal side are affected by breast cancer then next generation is likely to be proved. If this get proved, then it will be easy for next

generation to keep a watch over their health and especially over breast cancer.

# MATERIAL AND METHOD -

### A) STUDY DESIGN :

A cross sectional study to prove stana as a matrujabhava.

**B) SAMPLE SIZE :** 316 Patients

C) DURATION OF STUDY : 1.5 years

### **D) LOCATION OF STUDY :**

Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute, Andheri,

Mumbai.

# **E) ETHICAL CLEARANCE :**

Ethical clearance from the ethical committee of institute.

# **F)SELECTION OF CASES :**

Cases were taken from O.P.D of the sudy institute. They were selected randomly for this study, those who were fulfilling the inclusive and exclusive criteria.

# **G) INCLUSIVE CRITERIA :**

1. All Breast cancer cases who is knowing proper family history.

2. Primary in nature.

### **H) EXCLUSIVE CRITERIA :**

1. Case of Metastasis to breast from other part of cancer.

2. Secondary Carcinoma.

3. One not knowing proper kulajavritta

# **B**-Literature reviewed :

 Literature study done regarding matrujabhava from ayurvedicsamhitas.

- Literature study done regarding stana from ayurvedic samhitas.
- Literature study done regarding arbuda from ayurvedic samhitas.
- Literature study done regarding breast from different text, journals, papers, and internet.
- Literature study done regarding cancer from different text, journals, papers, and internet.

# **OBSERVATION:**

For this study total 316 sample size was taken. Questionnaire was carried out.

After screening 316 patients of breast cancer mainly kulaja vritta and other criteria was checked.

All screened patient were primary in nature.

- 110 patients showed kulajavritta.
- Out of 110 patients, 90 showed maternal history, that counts to 81.8%.
- Out of 110 patients , 16 showed paternal history, that's count to 14.5%
- And 4 patients showed both maternal as well as paternal history.
- And including 4 patients in maternal it count to 85.45%, and when included in paternal it counts to 18.18%.

# STATITICAL ANALYSIS Maternal/ Paternal / both Kulaja Vritta

	Kulaja vritta	Total
	Yes	
Both count	04	04
Maternal count	90	90
Paternal count	16	16

Almost 90/110 i.e. 81.8% of cases are associated with maternal side when compared to 16/110 i.e. 14.5% to Paternal side (z value = 9.984, p=0.001), hence a statistically highly significant difference was seen.

Also considering "both" cases to both parents side 94 / 110 i.e. 85.45% cases are attributed towards maternal side v/s

20/110 i.e 18.18% cases are associated with Paternal Side ( z value = 9.984, p = 0.001) hence a statistically highly significant difference was seen.

AGE : All the patients screened were from minimum 23age to maximum 83age.

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	N	Minimum	Maximum	Mean	Std. Deviation
Age	316	23	83	53.91	12.542

# **DISCUSSION:**

Ayurveda explains the formation of garbha in Sharirsthana. Formation of garbha does streebeeja only include and not purushbeeja, it also involves other some main/major factors in the formation of garbha. Even though garbha is primarily formed from stree-purush i.e matruja and pitruja respectively, but the garbha itself have some main and special bhava's (feature). Acharyas who were having deep knowledge about Ayurveda describe six basic elements which are important in formation as well as development of garbha. As garbha of human is made up basic six elements/ entites. That means, human body is made up of basic six elements. Therefore, garbha is also referred as shadbhavatmakgarbha.

Shad+bhava = six entities.

The shadbhava includes; matruja, pituja, rasaja, aatmyaja, satvaja and satmyaja. These six entities play a very important role in human body structure, because out of them some are related to physical and some are related to psycology. So this clearly shows that our human body is made up of six basic elements i.e shadbhava which is mixture of both physical and psychological qualities. Entity coming from maternal side is called matrujabhava, that coming from paternal side is called pitrujabhava, nutrition of garbha is due to rasadhatu from which rasajabhava is formed, ahara-vihara (i.e dietary and behavioural changes) forms satmyajabhava, while mansik (mental) state of garbha describe the satvajabhava, while aatma it is formed describing bv aatmyajabhava..Out of which matruja and pitruja Bhava are one which shows anatomical characteristics while rest shows psychological characteristics. Archarva Charak and archarya Sushrut both have given details about these shadbhava. The matrujaBhava given by charak are twacha(skin), lohita(blood) Mamsa (muscles), meda(fats), nabhi (umbilicus), hruday (heart), kloma , yakrut (liver) , pleeha(spleen) vrukka(kidney) . basti(bladder), purishdhana, aamashaya (stomach), pakvashaya, utarguda(rectum), adharguda(anus) skudrantra (small intestine), sthulaantra( large intestine) vapavahan(omentum) . And that of Acharya Sushrut are, Mamsa(muscle), shonita(blood), meda( fats), majja, hruday(heart) , nabhi(umbilicus), yakrut (liver), pleeha (spleen), antra(intestine), guda(anus). Seeing both the list it can be said that all organ enlisted are soft in nature. Even though all the soft organ were being listed by archaryas in matrujaBhava, still they said "ityadi" which creates room to say that this might be because archarya must have given the liberty to include those organ which were not included by them. Stana(breast) being the important organ of human body still it was not included in matruja Bhava. Seeing structure of Stana, it's development and importance, it should have being include into matrujaBhava. Post delivery stana is useful for production of milk, and this milk is useful for breast feeding. According to Ayurveda, stanya is considered upadhatu of rasadhatu. Both stanya and artava are important upadhatu of rasadhatu.thisaslo shows that stana is important part/ organ of female body, therefore can it be included in matrujabhava. Directly no where it is stated that stana is matrujabhava. The whole aim of this study is to state/ prove / put-forth that stana is a matruja bhava. A survey study of breast cancer patients was carried out ,in which the kulaja vritta of all primary diagnosed breast cancer patients were evaluated/ screened. Out of total 316 that was screened , 110 showed positive kulajavritta, in which 90 showed Maternal while 16 showed paternal origin, while 4 of them showed both maternal as well as paternal origin. When statistically it was put forth, it showed significant as p = 0.001. To this study Z test was applied. The age factor involved in this study showed minimum 23 yrs age and maximum 83 yrs age.

Mean value 53.91 + S.D = 12.543Therefore age range 41 to 67 years On further studing about the occupation involved in this study of 316 patients, it was seen that majority of them were homemaker, with this it can be said that, stress, tension, irregular eating habits etc are highly involved in females who are homemaker. According to ayurved ,stress tension etc all these factors lead to chinta this leading to rasdusti and rasa is directly and indirectly relate to breast. Breast Cancer Genes (BRCA) are of two type BRCA1 and BRCA2. These genes are known as tumor suppressor gene. These genes do not cause cancer infact they play big role on preventing, but in this study number of patients who underwent with this test/investigation were comparatively very less. This study was carried out for 316 patients which accordingly showed positive record of 110 patient, but if this data had more, it would have given more concrete base. If big sample size was to be achieved the time duration utilized for this would have be more, same way access to these institute / hospital having specific cases are limited and reaching to them would be a long time taking procedure.

# **CONCLUSION :**

- 1. Stana can be considered as matruja Bhava.
- 2. Cases of breast cancer showed significant hereditary involvement.
- 3. This hereditary involvement was higher on maternal side.
- 4. Age group of 41 to 67 years showed maximum breast cancer patients.
- 5. Occupation showed variations, still number of homemaker were highest.

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# **RESAERCH ARTICLE**



### PREPARATION AND PRELIMINARY QUALITY CONTROL OF VAITARANA BASTI: A BASTI FORMULATION FOR AMAVATA

#### Madhuri Bhogan<sup>1\*,</sup> Ninad Sathe<sup>2</sup>

### ABSTRACT:

\*Corresponding Author

Madhuri Bhogan MD Scholar, Dept of Rasashastra and BhaishajyaKalpana, Dr. G.D.Pol Foundation's Y.M.T Ayurvedic Medical College and Hospital Institutional Area, Sector-4, Kharghar, Navi Mumbai 410210 Email madhuribhogan@gmail.com Contact no.- 9821209736

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Purpose: Bastiis one of the procedures carried out in Panchakarma therapy. It is described as 'Ardhachikitsa' in managing any disease by the Acharyas in classical texts. Vaitaranabasti is commonly being used as a therapeutic procedure in treatment of Amavata. It is a type of Niruhabasti. In API there is no mention of standard parameters for basti formulation thus the current study has tried to establish a standard manufacturing procedure and quality control parameters for Vaitaranabasti. Method: Saindhav(10g), guda(20g), amlikakalka(40g),tilataila(30ml)&Gomutraarka(160ml) were mixed together in the order described by classical texts. This mixture was churned well till it had acquired a homogenous consistency with the help of a blender. This was filtered through a cloth and was subjected to testing. Results/Discussion: In API no standard quality control parameter for enema was found, Standardization test of raw material & that of final product performed were; pH, loss on drying, refractive index, specific gravity, density, relative viscosity, total ash and acid insoluble ash. The mean was obtained from the respective analysis. **Conclusion:** The *basti* prepared appeared pale brown in colour. Vaitaranabasti, due to its contents acts as vata-shamak&stroto-shodhak& when administered along with proper regimen in Amavata it definitely gives better symptomatic relief. Clinical studies conducted on vaitaranabasti provide ample amount of evidence supporting its efficacy in amavata. While preparing the bastigomutraarka was used as it has more bio-enhancing properties than cow urine & won't lose its potency immediately. Since there are no standard quality control parameters mentioned in pharmacopoeia an attempt was made to establish preliminary control standards.

Key Words: vaitaranabasti, standardization, amavata, preliminary study

### **INTRODUCTION:**

The preparations/medications used for *basti karma* are called as *basti kalpas*. *Basti* therapy plays a specific part in *vataja* disorders at the same time being effective in *kaphaj-pittaja* disorders<sup>[1]</sup>.*Amavata* is mostly *vata* predominant disorder. *Amavata chikitsasutra* indicates administration of *shodhan basti*, along with *agnideepak* and *tikta aushadhi* & *ahar*<sup>[2]</sup>. *Vaitaran basti* is one such *shodhan* type of *niurhabasti*. The selected formulation for the study was from the classic *Chakradutta*<sup>[3]</sup> and efforts have been taken to develop its standard.

AIM: Preparation & preliminary quality control standardization of VaitaranBasti.

### **OBJECTIVES:**

1] Prepare vaitaran basti formulation.

2] Test the preliminary quality control parameters and attempt to establish a standard.

### **MATERIAL:**

Sanskrit name	English name	Latin name	Part used	Qty
Amlika	Tamarind	Tamarindusindica L.	Fruit pulp	40 gm
Guda	Jaggery	-	-	20gm
Saindhav	Rock salt	-	-	10gm
Tilataila	Seasame oil	Sesamumindicum	Seed oil	30gm
Gomutraarka	Cow's urine distillate	-	-	160ml

### **METHOD:**

The ingredients were taken in the quantity as mentioned above. As per the order given in the literature they were mixed till homogeneous consistency was obtained. Initially *amlika kalka* was obtained. *Guda, saindhav, amlikakalka, tilataila and gomutraarka* were added in the order as mentioned in classical texts<sup>[4]</sup>. A thick, brownish colored, semisolid consistency *dravya* was obtained. This was further subjected to quality control testing.

### **RESULTS:**

-	Table 1:Raw Material <sup>[5, 6, 7, 8]</sup>									
			R	оор	Rasa	Rasa		virya		
	Amlika		B	rownish	amla		usr	na		
	Guda		Y	ellow-brown	madhur		usr	na		
	Saindha	IV V		hite crystals	lavan		sheeta			
	Tilataila	a Y		ellow	tikta-kashay		usna			
	Gomutra	aarka Y		ellow	Katu-tikta-kashay		usr	na		
	Гable 2: S	howing	Re	sults of Quality	/ Control Param	ieter A	sses	sment		
	рН	LOD%		ASE	WSE	TA		AIA		
Amlika	2.86	13.401		67.5977%	108.7823%	3.5%	)	0.339	6	API
Guda	7.44	6.14		-	-	3.09	%	0.499	6	API

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	Saindhav	8.41	14%	-	-	-	-	-
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### Table 3: Showing Results of Quality Control Parameter Assessment

	рН	R.I	S.G	Wt/ml	Viscosity	Density	
Tilataila	-	1.466	0.9190	0.9153	-	-	API
Gomutraarka	9.97	1.3307	0.9907	0.9867	1.0401cps	1.0384	-

Table 4:Final product:										
Sample	рН	R.I	LOD%	S.G	Density	Wt/ml	Rel.Viscosity	TA%		
1	6.10	1.3709	57.1	1.0575	0.9937	1.0532	46.3969cps	4.509		
2	6.08	1.3801	63.6	1.0814	1.0525	1.0770	49.3138cps	5.236		
3	6.36	1.3706	56.7	1.0717	1.0430	1.0674	47.9048cps	4.960		
Mean	6.18	1.3738	59.1	1.0702	1.0297	1.0658	47.8718cps	4.902		

### **DISCUSSION:**

For the purpose of this experiment, gomutraarka was used. There are many reasons for choosing gomutraarka one of the important one being that it acts as a bio-enhancer <sup>[9]</sup> for the other medicinal drugs. It increases the bio-availability of the drugs which are administered along with it. It increases the effectiveness of drugs. Safety assessment of gomutraarka was conducted and proven to be safe and non-toxic [10]. Since there are active constituents in gomutraarka, its immuno-modulating property is also enhanced<sup>[11]</sup>. Also the medicinal properties gomutra are preserved in gomutraarka<sup>[12]</sup>.In amavata, vata is predominantly the active dosha involved in samprapti, while the factor is ama. The dravya used in vaitaranbasti areusnavirya, tikta-kashayrasatmak, which are vata-shamak. Besides being *vata-shamak*, they are also share the property of being *agnideepak*, *stroto-shodhak*. The final product appeared semi-solid in consistency and pale brown in colour. The formulation maintained its homogenous state for 24 hrs, after that separation of media was noticed. From the preliminary analysis of basti formulation we saw that the pH remained slightly acidic with the mean pH of 6.18. The intra-luminalintestinal pH ranges from 5-7 depending on the part of the intestine<sup>[13]</sup>. The pH around the rectal region is around 6.7 therefore there is no injury to intestinal flora or imbalance of pH. This slightly acidic media might be the reason for evacuation reflex, as the pratyagamankala of niruhabasti is 1 muhurta i.e. 47 minutes. The mean LOD% was 59.14%, since the formulation mainly consists of water thus it readily absorbable by the body. The total ash % of the formulation was on an average 4.9%, indicating the inorganic matter present. During the analysis of raw material, there were no standard parameters to compare our analysis for saindhav.

### **CONCLUSION:**

Many clinical trials have been conducted proving the efficacy of *vaitaranbasti* in disorders like not only *amavata*<sup>[14,15,16,17,18,19]</sup>but also *pakshaghat*<sup>[20]</sup>,*katishula*<sup>[21]</sup>. The mechanism of niruhabasti i.e. has also been done <sup>[22]</sup>. But the standardization of the formulation has not been conducted. Thus an attempt was made to establish a standard manufacturing procedure along with quality control parameters. Further study may be done on *vaitaranbasti* so as to observe its interaction with intestinal flora.

#### Fig 1: Preparation of Vaitaran Basti



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एकुण पाने १ ते ६०

वर्ष ७४ वे

" यशस्वी चिकित्सेचा राजमार्ग "

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आयुर्वेदाचा ठसा मनामनावर उमटवणारी **U2** वर्षांची विश्वसनीय वाटचाल!

७४ व्या वर्षात पदार्पण

Ayurved Patrika National Journal ISSN 2278-0726 वैद्य अंबादास कुलकर्णी अध्यक्ष, आयुर्वेद सेवा संघ वैद्य आशुतोष यार्दी उपाध्यक्ष, आंयुर्वेद सेवा संघ वैद्य अभय कलकर्णी वर्ष ७४ वे - अंक : १ ला, क्रमांक- १०४५ सचिव, आयुर्वेद सेवा संघ \* अनुक्रमणिका \* वैद्य रजनी गोखले सहसचिव, आयुर्वेद सेवा संघ संपादकीय १. ų श्री. माधव परांजपे आयुर्वेद तरंग पुरवणी २. खजिनदार, आयुर्वेद सेवा संघ ξ हितोपदेश वनौषधी विश्व बोधकथा वैद्य हेमंत भंडारी चेअरमन वैद्यिकविधी विनियोग अनुभविक चिकित्सा आरोग्यरूचिरा आयुर्वेद पत्रिका विभाग स्वयंपाक घरातील औषधी द्रव्ये नवा अभ्यास नवे संशोधन औषधी भवन निर्मित विशेष उत्पादने. वैद्य एकनाथ कुलकर्णी संपादक ३. चिकित्सा :ग्रहणीदोष चिकित्सा - वैद्य मिलिंद रामपुरकर ११ वैद्य अभय कुलकर्णी निदान : पाणी – एक हेतु आणि अगणित व्याधी – वैद्य नरहर प्रभू १४ प्रकाशक ५. सिद्धान्त :आयुर्वेद व आजचे युग- वैद्य पल्लवी थोटे १६ वैद्य अमिता पिसोळकर ६. कै. वैद्य मो. य. लेले स्मृती लेख सहाय्यक संपादक रुग्णानभव :उदावर्त - वैद्य सविता अंबादास कुलकर्णी, वैद्य स्नेहल बोरसे 29 संपादक मंडळ **चिकित्सा** :मधुमेह उपद्रवजन्य वृक्करोग - आयुर्वेद चिकित्सा २१ ७. वैद्य शिवानंद तोंडे - वैद्य राजन कुलकर्णी वैद्य वर्षा साधले सिद्धान्त : सात्म्य - ओकसात्म्य - वैद्य जपा जयंत फडके ८. 28 वैद्य अभिजित सराफ ς. शारीररचना :स्तन - अनुक्त मातूज अवयव २६ छपाई : रिप्लीका प्रिंटर्स - वैद्य मनोज जगताप, वैद्य ज्योती जगताप वकीलवाडी, नाशिक १०. वैद्यविशेष :प्रा. गुरुवर्य डॉ. सुभाषचंद्र रानडे यांचे सहस्रचंद्रदर्शन २७ मुखपृष्ठ : एन्.वाय. कुलकर्णी - वैद्य एकनाथ कुलकर्णी निर्मिती ॲडव्हर्टायझिंग, नाशिक ११. संशोधन : Clinical trials on Medoroga (Obesity) with 33 वर्गणी मूल्य एक प्रत - रू. ५०/-LekhanBasti, Yoga and Diet Control वार्षिक - रू. ५००/-- Dr. Seema Naringe, Dr. Shubhangi Dighade त्रैवार्षिक - रू. १२००/-१२. **निदान** : इन्फेक्शन व आयुर्वेद<sup>ं</sup> – डॉ. ऋतेश दि. दामले 39 पंचवार्षिक - रू. २०००/-१३. संशोधन : Conceptual Study Of Ama According To Ayurved 83 And Modern Point Of View. पत्रव्यवहाराचा पत्ता - Vd. Pallavi Pimparkar, Vd. Prakash Chondikar संपादक, आयुर्वेद पत्रिका १४. डॉ. सुनंदा व सुभाष रानडे फाउंडेशन तर्फे पारितोषिक प्राप्त लेख T A आयुर्वेद सेवा संघ, गणेशवाडी, पंचवटी, नाशिक - ४२२००३ **भैषज्यकल्पना** : औषधी कल्पांच्या फलश्रुतींचे अध्ययन लोहासव भाग-३ ४६ फोन नं.: ०२५३-२५१५४१३ - वैद्य अभय कुलकर्णी, वैद्य राजश्री कुलकर्णी संपादक मो.: ७८८७८५९७९२ १५. प्रसूतीतंत्र : Imfortance of Garbhopghatkara Bhavas - A Review 48 Email-ayupatra@gmail.com - Dr. Prashant Patil, Dr. Mayuri Patwari Website १६. संशोधन : Role of Ayurveda in Lifestyle Disorders 48 www.ayurvedpatrika.org Vd. Pradnya Mehetre, Vd. Smita Dhurde, Vd. Anjali Hingane Bank Details for Subscriptions १७. आयुर्वेद वार्ता 46 Account Name - Ayurved Patrika Bank Name - IDBI Bank शब्दकोडे - वैद्य रमा खटावकर 36 Branch - M. G. Road, Nashik Account No. 45810010000869 IFSC Code - IBKL0000458 आयुर्वेद पत्रिका जुलै २०२० या अंकातील विचारांशी संपादक सहमत असतीलच असे नाही, ती मते लेखकांची समजावीत.





वैद्य मनोज जगताप



वैद्य ज्योती जगताप

# **मां**सशोणितमेदोमज्जहन्नाभियकृत्प्लीहान्त्र

**गुदप्रभृतीनि मृदूनि मातृजानि।** सु. शा. ३/३३ गर्भातील मांस, रक्त, मेद, मज्जा, हृदय, नाभी, यकृत, प्लीहा, आन्त्र, गुद इ. अवयव मातृज अवयव आहेत. मातृज, पितृज, रसज, सत्वज, सात्म्यज व आत्मज अशा सहा घटकांचा गर्भ तयार होतो त्याला षड्भावात्मक गर्भ असे म्हणतात.

चरक व सुश्रुत या दोन्ही संहितांमध्ये वर्णित मातृज अवयव/भाव यामध्ये स्तनांचा स्पष्ट उल्लेख नाही. ग्रंथोक्त इ. अवयव जे सांगितले आहे त्यामध्ये स्तनांचा समावेश होऊ शकतो का? 'मृदूनि मातृजानि' या सूत्रानुसार स्तन हा मातृज अवयव मानावा का? हा या लेखाचा विषय आहे.

**\*स्तनौ कुचौ।** अमर.द्रि मनुष्य.पृ.२९५ स्त्री स्तन शब्दादौ पयोधरौ।। अमर.तृ.नानार्थवर्ग.पृ.५९५ कुच, स्तन, पयोधर ही पर्यायी नावे आहेत.

\*चतुर्थमङ्गं वक्षस्तु तदुपांगान्यथ ब्रुवे। स्तनौ पुंसस्तथा नार्या विशेष उभयोरयम्।।

यौवनागमने नार्याः पीवरौ भवतःस्तनौ। गर्भवत्याः

प्रसूतायास्तावेव क्षीरपूरितौ।। भा.प्र.पू.३/७३–७४ स्तन हे वसाचा भाग आहे. स्त्री व पुरुष दोहोंमध्ये उपस्थित असतात. तारुण्यावस्थेत स्त्रियांमध्ये विकसित होतात. प्रसूती पश्चात क्षीरपूर्ण होतात.

\*स्तन हे शुक्रवह स्रोतसाचे मूलस्थान आहे.

स्तनांचे ठिकाणी १० पेशी अधिक असतात.

स्तनमूल व स्तनरोहित ही मर्मे स्तनांचे आश्रयाने राहतात. स्तनवाही सिरा या उर्ध्वगामी धमन्यांमध्ये वर्णित आहे स्तन्य हा रसाचा उपधातु आहे. त्याची अभिव्यक्ती स्तन या अवयवाद्वारे होते. रसधातु हा सौम्य मदु कफाप्रमाणे आहे. आधुनिक शास्त्रातील वर्णनावरुन लक्षात येते की स्तन हा रचनेनुसार मृदु अवयव आहे. यामुळे स्तन हा मातृज अवयव मानण्यामधे अडचण नाही.

षड्भावात्मक गर्भातील मातृज व पितृज हे भाव शारीरिक आहेत. रसज व सात्म्यज भाव पोषणाशी संबंधित तर सत्वज व आत्मज हे मानसिक भाव आहेत. रुग्णपरिक्षण करत असताना व्याधीचे निदान व चिकित्सा करताना षड्भावांचा विशेषत: मातृज व पितृज या भावांचा व्यवहारिक उपयोग होतो.

उदाहारणार्थ खालित्य/पालित्य इ. केश संबंधित तक्रार असताना रुग्णाच्या/रुग्णेच्या वडिलांचे केस कसे होते किंवा आहेत याचा इतिहास पाहतो कारण केश हा पितृज भाव आहे. जर वडिलांना कमी वयात टक्कल पडले असेल तर रुग्णाला टक्कल असल्यास चिकित्सेचा फारसा उपयोग होत नाही. विल्सन डिसीज या आजारात शरीरातील सर्व मृदु अवयवांमध्ये तांबे (कॉपर) साठते. हा आनुवंशिक व्याधी असून यामध्ये स्त्रिया या वाहक असतात. आयुर्वेदानुसार सर्व मातृज अवयव मृदू आहेत त्यामुळे या व्याधीची संगती लागते.

स्तन या अवयवाचा मातृज अवयव धरुन चिकित्सकीय काही विचार होऊ शकतो का? आताचे काळात स्तनार्बुद या व्याधीचे प्रमाण वाढले आहे. अनेकदा रुग्णामध्ये आधीच्या पिढीत म्हणजे मातृज/पितृज कुलात या व्याधीचा इतिहास मिळतो. स्तन मातृज अवयव आहेत हे सिद्ध करण्यासाठी आपण याचा आधार घेऊ शकतो.

या अनुषंगाने एक अध्ययन केले. कोकिलाबेन रुग्णालय अंधेरी येथे पूर्व परवानगी द्वारे स्तनार्बुद असणाऱ्या ३१६ रुग्णांचे अध्ययन केले. या सर्व रुग्णांमध्ये सदर व्याधीचा मातृज किंवा पितृज कुलात इतिहास होता का याची विचारणा केली. ३१६ रुग्णापैकी १९० रुग्णांमध्ये स्तनार्बुद व्याधीचा कुलवृत्तांत (मातृज/पितृज) मिळाला. १९० रुग्णांपैकी ९० रुग्णांमध्ये मातृज कुलात (आई/आजी/मावशी) या व्याधीचा इतिहास मिळाला. उर्वरित १६ रुग्णांमध्ये पितृज कुलात व्याधी इतिहास मिळाला तर ४ रुग्णांमध्ये दोन्ही मातृज व पितृज कुलामध्ये व्याधी इतिहास मिळाला.

सांख्ययिक अध्ययनाअंती मातृज कुलामध्ये व्याधी इतिहास असणाऱ्या रुग्णांची संख्या लक्षणीय (सिग्नीफिकंट) आढळली. Research Database चे अध्ययनानंतर ५– १०% रुग्णांमध्ये स्तनार्बुद अनुवंशिक व्याधी आढळला. जर कोणाच्या मातृज/पितृज कुलामध्ये आई/आजी/मावशी यांना स्तनार्बुद झाला असेल तर सदर रुग्णेला स्तनार्बुद होण्याची शक्यता वाढते. असे संशोधन आढळले.

(उर्वरित मजकूर पान क्र. ४२ वर)

आयुर्वेदीय शारीर विचार दैनंदिन चिकित्सेत उपयुक्त आहे.

साथीच्या काळात अशा आयुर्वेदीक प्रॉडक्ट्स चे पेव फुटले आहे. याशिवाय COVID-9९ च्या आयुर्वेदिक protocol ची अपेक्षा ठेवली जात आहे. या सर्व औषधांचा एका मर्यादित स्वरूपात चांगला उपयोग होईलही. पण ठराविक औषधे ठराविक कालवधीसाठी भिन्न आहार–विहार व भिन्न प्रकृतीच्या रोग्यांना तेवद्याच परिणामकारकपणे उपयोगी पडतील ही अपेक्षाच चुकीची आहे. वैयक्तिक रुग्ण परीक्षा, निदान व चिकित्सा (Individualisation of treatment) हाच आयुर्वेदाचा एकमेव protocol आहे.

# डॉ. ऋतेश दि. दामले

एम्.डी. आयुर्वेद (कायचिकित्सा) डी.इ.एम्.एस्(रुबी हॉल क्लिनीक) असिस्टंट प्रोफेसर, सुमतीभाई शाह आयुर्वेद महाविद्यालय,पुणे मो. नं.– ९४२३५६९२४२



# (पान क्र. २६ वरुन पुढे)

आयुर्वेदानुसार स्तन हा मातृज अवयव असण्याच्या शक्यतेला यामुळे दुजोरा मिळतो. स्तनाचा समावेश मातृज अवयवांमध्ये करु शकतो. ज्या रुग्णांना स्तनार्बुद झाला आहे त्यांना प्रबोधन करु शकतो की तुमच्या मुलीला/ बहिणीला/ भाचीला हा व्याधी होण्याची शक्यता आहे तरी त्यांची नियमित काळजी घ्यावी व तपासणी करावी. जेणेकरुन वेळेवर याचे निदान होऊ शकेल.

अर्थातच सर्व ज्येष्ठ व मान्यवर वैद्यांनी यावर आपले मत मांडावे ही विनंती. धन्यवाद.

वैद्य मनोज जगताप

सहयोगी प्राध्यापक, YMTAMC, Kharghar मो. नं.:९७६९१३२३७० वैद्य ज्योती जगताप

आयुर्वेद सेवा संघाची वैद्योपयोगी पुस्तके					
पुस्तकाचे नाव	मूल्य रू.				
* रुग्णानुभव	920				
* औषधीकरण	920				
* पंचकर्म	920				
* चिकित्सा नवनीत	300				
<ul> <li>स्वास्थ्याच्या पाऊलखुणा</li> </ul>	940				
* मलौषधी	<b>Ę</b> 0				
* क्षीणदोष व्याधी चिकित्सा	300				
* अशा कथा असे बोध	930				
* मधुसंचय	9६0				
<ul><li>श्विदेशी ते स्वदेशी</li></ul>	920				
(जगभरातील आरोग्यदायी					
औषधे भाज्या व फळे)					

संपर्क - संपादक आसुर्वेद पत्रिका गणेशवाडी, पंचवटी, नाशिक ४२२००३ दूरध्वनी : ०२५३-२५१५४१३, मोबाईल नं. ७८८७८५९७९२ E-mail : ayupatra@gmail.com

आयुर्वेदीय चिकित्सा व्यक्तीनुरूप बदलते.

