

DEERGHAYU

International

The Peer Reviewed Quarterly journal for Ayurveda & Health Sciences since 1984



Ashwagandha
(*Withania Somnifera*)



Bramhi
(*Bacopa Monneri*)



Kumari
(*Aloe Barbedendis*)

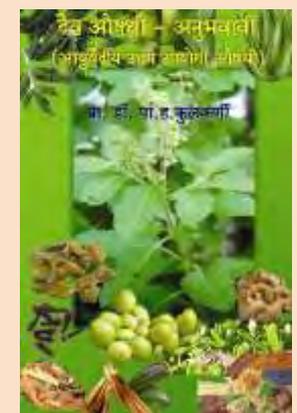
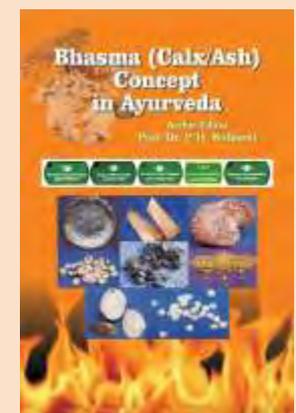
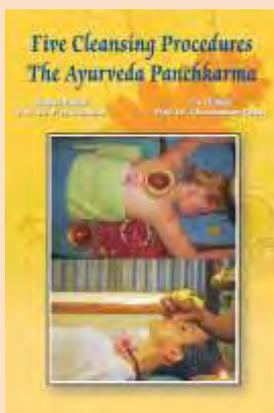
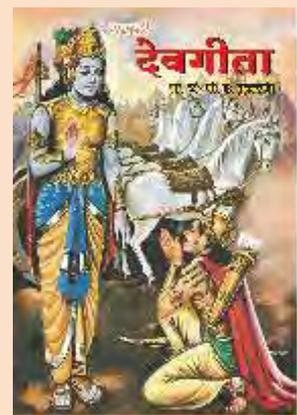
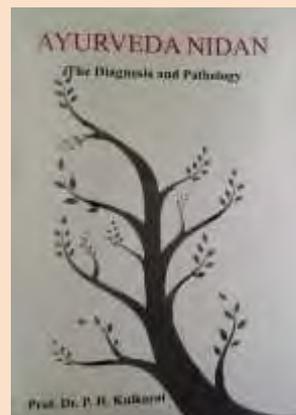
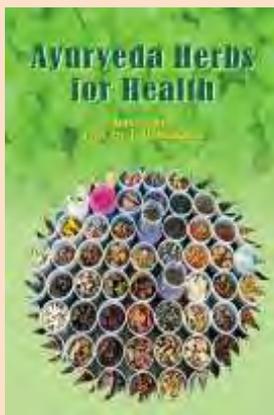
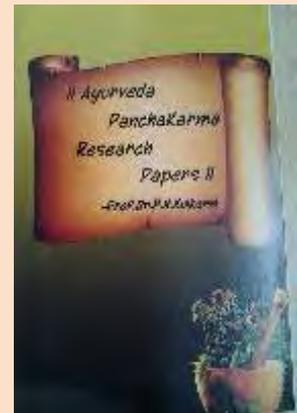
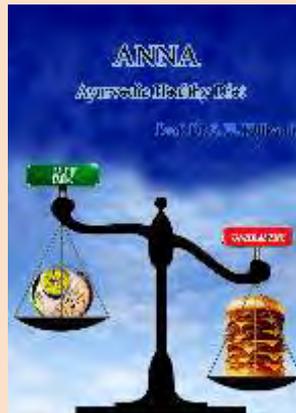
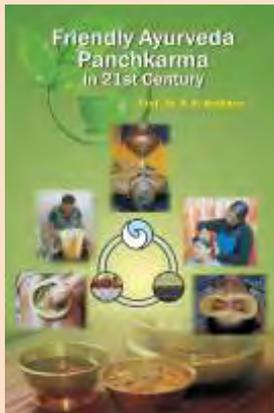


Arjuna (*Terminalia Arjuna*)



Gokshurah (*Tribulus Terrestris*)

Books of Prof. Dr. P. H. Kulkarni



DEERGHAYU INTERNATIONAL

ISSN 0970 - 3381

VOL. THIRTY - 01

ISSUE NO. 117

Jan.-Mar. - 2014

CHIEF EDITOR

Prof. Dr. P. H. Kulkarni

ISSUE EDITOR

Prof. Dr. Mugdha Bothare

EDITORIAL CORRESPONDENCE

Prof. Dr. P. H. Kulkarni

Kothrud Ayurveda Clinic,

Opp. Mhatoba Temple, Bodhi Vruksha, Navagraha Maruti,

36, Kothrud, Gaonthan, Pune - 411 038. (INDIA)

Telefax : +91 - 20 - 25382130 Tel. : 91 - 20 - 65207073, Mob. : 9822037665

Email : deerghayuinational@gmail.com, profdrphk@gmail.com, drph_l@yahoo.com

Website : www.ayurvedalokguru.com, www.orientalayurveda.com

Blog : <http://drphk.blogspot.in>

INDEX

Page No.

- | | |
|--|----|
| 1) Research : Experiment
Role and Scope of Herbal wines Today and Tomorrow
Vedang Sagar Kulkarni | 3 |
| 2) Research : Clinical
Evaluation The Role of Shatavari Granules Compound with Milk in Management of Protein Energy Malnutrition in Child
Dr. Vikas C. Kathane | 25 |
| 3) Review Article
ANALYTICAL STUDY OF JALAUKÂVACÂRAN INDICATIONS
Vd. Smitarani A Nalawade | 35 |

**Available as
print book or e-book**

An Appeal

New Features - Wider Coverage

The widened horizons of Deerghayu International, now covers everything that is concerned with Ayurveda, other Health Sciences and related Sciences Disciplines.

The rigorous Research Works, the authentic reviews, the case reports, the Company and Product Profiles, the Celebrities, the Happenings in India and Abroad.... everything! What's more! There will be special pages highlighting the openings in Pharmaceutical and Medical Fields.

And then every issue is planned to give you something more, something that matters to you!

There are more than 25 eminent scholars both Indian and Foreign as consulting Advisors of our Journal.

Reaching Right to your Target Audience.

Deerghayu International reaches right to the class that is targeted by you in India and Abroad.

It acts as a ready reckoner to the Family physicians, Specialist and super Specialist Medical Doctors, Chemists, Pharmacists, Research Scholars and Institutions.

Kindly release and advertisement and oblige.

Chief Editor : Prof. Dr. P. H. Kulkarni

Subscription Rates

Details	Institutional Rs.	Individual Rs.
1 Year	500/-	300/-
Advertisement Tariff		Per Insertion
Full page B & W		Rs. 2000/-
Half page B & W		Rs. 1200/-
Quarter page		Rs. 700/-
Full page 2/3 colour		Rs. 10000/-
Cover page 4 colour		Rs. 12000/-
Front Cover		Rs. 15000/-
Sponsoring one page		Rs. 200/-
Sponsoring one article		Rs. 2000/-
Discount for Annual contract		

Send subscription/donations/gifts in favour of "Deerghayu International"
UCO BANK, Kothrud Branch, near Post Office.
Bank Account No. 14690200000611.
IF SC (India Financial System Code)
of the bank UCBA 0001469.
MICR (Magnetic character recognition)
Code of the Bank - 411028011.
Tel. No. of Bank - 91-20-25380076

Research : Experiment

Role and Scope of Herbal wines Today and Tomorrow

Vedang Sagar Kulkarni, B.Sc. (Hospitality and Hotel Administration)
Indira Gandhi National open University

Definition :

Herbal wine is a fortified wine which consists of maceration of herbs in wine. (Maceration is a procedure of separating constituents by soaking into liquid.) and then fortifying it with brandy spirit. The concept of combining wine and herbs makes good sense. Wines are, technically speaking, hydro-alcoholic liquids, with which the water based principles, mix easily. In this way, the wines become carriers of active principles from the plant species they are prepared with.

The health benefits of medicinal wines used such as herbal wines have a long history of being recognized in Asian countries, and are now getting attention from all around the world. Medicinal wines refer to as a solvent to soak out the effective components from herbs. The purpose of medicinal wine is to fortify the medicinal herbal function by extracting the functional components with wine and then condensing the extract, concentrating the effective agent. Because wine itself has an effect of stimulating blood circulation and relaxing muscles and joints, it can be used to treat general asthenia (loss of strength), rheumatic pain and traumatic injury. Wines are not only used as beverages, but also as vehicles to preserve medicinal herbal activity.

History

Herbal wines have been known since antiquity. It is an ancient European method of administering herbal medicine to alleviate discomfort or illnesses. The history of Herbal Wines goes back many thousand years starting from Egyptian, Babylonian Greek and Italian traditions. It is very much also a part of the Ayurvedic medicine in the form of Asava and Arishthas. In the Middle Ages in Europe it was very much practiced and various Herbal Wines were prepared mainly in monasteries, particularly in Italy, France, Spain Netherlands etc. Besides being therapeutic the herbal wines are also very pleasant to take.

History of Herbal Wines in world

Before the rise of modern medicine and likely extending back into the Paleolithic period, humans treated disease and physical ailments by experimenting with natural products derived from plants, other animals, and minerals. Fruit-bearing trees, which appeared around 100 million years ago (Mya), offered unparalleled access to sugar and ethanol. The latter had

already established themselves as prime energy sources in the animal kingdom. The sweet liquid that oozes out of ruptured ripened fruit provides the ideal conditions of water and nutrients for yeast on their surfaces to multiply and convert the sugar into alcohol.

A close symbiosis developed between plants and animals over time, in which the plants provided nourishment and other benefits to the animals, which, in turn, pollinated the plants' flowers, dispersed their seeds, and carried out other functions. The smaller molars and canines of Proconsul and other early hominid fossils as early as 24 Mya, were well adapted to consuming soft fleshy foods like fruit. These dentitions are broadly comparable to those of modern apes, including gibbons, orangutans, and lowland gorillas, which obtain most of their calories from fruit. Modern chimpanzees, whose genome is the closest to Homo sapiens, consume over 90% plants, of which more than 75% is fruit. It can be concluded that early hominids and their descendants favored ripe, often fermented, fruit for millions of years.

In the warm tropical climate of sub-Saharan Africa, where the human species emerged, sweet fruit slurries can achieve an alcoholic content of 5% or more. If early hominids were primarily fruit eaters, at least up until about 1–2 Mya, when they began focusing more on tubers and animal fat and protein, they can be expected to have adapted biologically. One result, among many, is that about 10% of the enzymes in the human liver, including alcohol dehydrogenase, function to generate energy from alcohol. The genetic underpinnings of the presumed early human penchant for alcoholic fruit compotes, according to the so-called “drunken monkey hypothesis”, has been partly borne out by the diet of Malaysian tree shrews. These nocturnal animals, which belong to a family believed to be ancestral to all living primates from more than 55 Mya ago, spend their nights feasting yearround on a frothy strongly scented palm “wine,” with an alcoholic content as high as 3.8%.

Plant fruits, exudates (including resins and nectar), and other structures, (such as flowers, roots, and leaves), also contain many additional compounds with anesthetic, antimicrobial, and psychotropic properties that early humans likely exploited. Although some of these compounds might have been intended to protect the plants from predation, they could also have benefited host animals. By trial and error, humans might well have made use of some of these properties by preparing “medicinal wines” and external salves in which the plant products were dissolved or decocted in alcoholic media.

At present, the earliest biomolecular archaeological evidence for plant additives in fermented beverages dates from the early Neolithic period in China and the Middle East, when the first plants and animals were taken into domestication and provided the basis for complex society and permanent settlement. Possibilities for extending the evidential base back into the Paleolithic period are limited by the lack of containers, which were probably made from perishable materials, such as wood, leather, or woven textiles. Under the right environmental conditions, however, we can expect future discoveries. For example, at Monte Verde in Chile, around 13,000 B.P., the bog-like conditions of one of the first human settlements in the Americas resulted in the preservation of an incredible diversity of marsh, dune, mountain, and sea plants, which were likely exploited for their alcoholic, medicinal, and nutritional

benefits.

The dry climate of Egypt has similarly contributed to excellent preservation of ancient organic materials, in addition to providing very detailed literary and botanical evidence for medicinal wines from one of the most long-standing ancient traditions. We deliberately chose samples from 2 ancient Egyptian jars that illuminate the earliest and latest stages of Egyptian winemaking history and applied highly sensitive chemical techniques to obtain biomolecular information about what the vessels originally contained. Because we had already analyzed both samples by less precise methods, the latest results provide a means to test our previous results and conclusions; at the same time, they shed additional light on the vessels' contents.

History of Herbal wines in India

In India, wine was traditionally used to bring back health. Ayurvedic wines as medicine is documented in the ancient Indian healing system of Ayurveda. Arishthas and Asavas are fermented juices, and herbs. Draksharishtha, the name indicates grape wine. Draksha, the sanskrit word means grape. Draksharishtha is made of grape juice and herbs, but minus the microfiltration process that modern wineries use, and minus the stringent temperature monitoring in its making and storage. It may have a bit of a vinegary taste. Its wood and sweetness stands out on the palate.

Even now Draksharishtha is prescribed by Ayurvedic physicians as medicine, 6 spoons of Draksharishtha mixed in equal amount of water, with meals. Just as the French traditionally have their red wine!

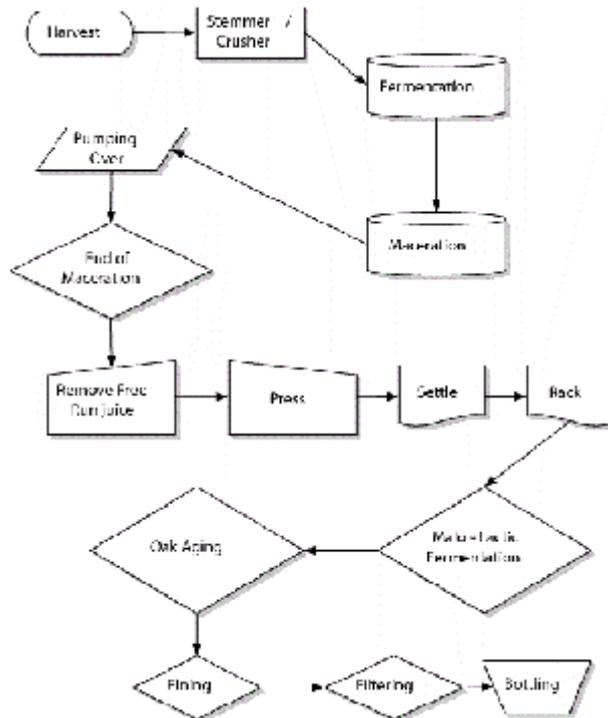
Several other Arishthas and Asavas in Ayurveda too use fermented juices and herbs, and they all have a specific purpose – to heal the body of specific ailments.

Originally, wine was used in India to take care of ill health. Later on, it may have been refined to enjoy the high one gets for it, and socialising.

Ayurveda, the oldest, documented system of medicine does not recommend wine for everyone. Wine is a potent healer for specific health conditions, on the other hand drinking wine without getting a pulse diagnosis done by an Ayurvedic doctor, may work the other way around. For instance, wine is recommended in specified quantity for Kapha body types, as wine has the fire and air element which eases the kapha imbalance. The same wine is capable of creating havoc in the body of a Pitta or Vata body type person. The pitta body type, identifiable with a fiery temper, high rate of metabolism, sharp intelligence is not going to do well with a liberal glass of wine!

In the cool climates, such as in Europe and North America, the Kapha element is predominant. In the tropical countries, it is Pitta that is easy to find. If a Frenchman in France has wine with his meals, it would fire his digestion and work in his favour, whereas an Indian in Rajasthan would be ruining his digestion and consequently body if he drinks the same quantity as the Frenchman!

Manufacturing process of Herbal Wine (Red)



The manufacturing process used for producing herbal wine is the same to that of producing herbal wines, the only difference is that, it is fortified and blended with different types of herbs depending on the type of wine to be made.

Harvest - The grapes are picked when they are ripe, usually as determined by taste and sugar readings.

Stemmer Crusher - This removes the stems from the grape bunches, and crushes the grapes so that they are exposed to the yeast for fermenting, and so the skins can better impart color to the wine.

Fermentation - Yeast turn the sugar in the wine primarily into Carbon Dioxide, Heat and Alcohol.

Maceration - This is how long the must is allowed to sit, picking up flavor, color and tannin. Too long and the wine is bitter, too short and it is thin.

Pumping Over - Skin and other solids float to the top, and need to be pushed back down to

stay in contact with the must. This “cap” can be punched down with a tool, or you can pump must from the bottom over the cap and submerge it that way.

End of Maceration - The winemaker must decide if the must has sat long enough.

Remove Free Run - The best quality wine is made just from the juice portion of the must. It is removed and the rest of the drier must (now called pomace) is sent to the press.

Press - This squeezes the remaining juice out of the pomace. If you do it too hard, or too many times, you get low quality wine.

Settle - The juice, now wine, needs to settle after this ordeal.

Rack(ing) - Moving the wine from one barrel to a new barrel allows you to leave solids and anything that might cloud the wine, behind.

Malo-Lactic Fermentation - This secondary fermentation can turn the tart malic acid (of green apples) into the softer lactic acid (of milk). Many, but not all red wines go through this step.

Oak Aging - Oak is expensive, if the wine is not meant to age for years, the winery may put the wine in oak for only a short time, or not at all.

Fortifying – A process in which brandy spirit is added to the wine

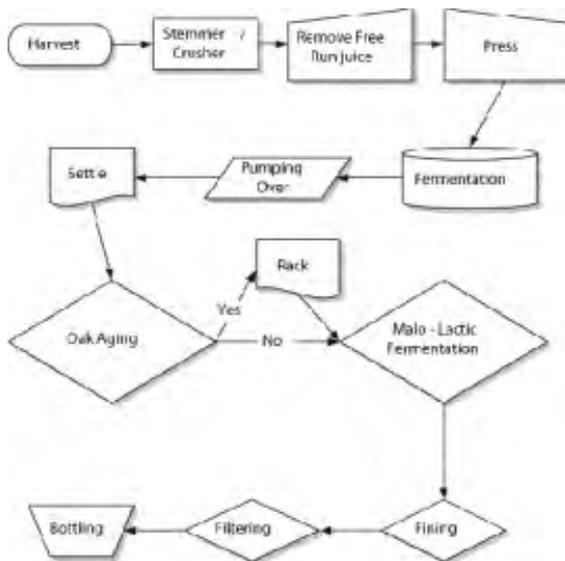
Blending of herbs – The extracts of herbs are added to the wine and blended together.

Fining - A process that helps to remove anything that may be making the wine cloudy.

Filtering - A process that removes any fining agents, or other undesirable elements in the wine.

Bottling - This is done carefully so that the wine does not come in contact with air. Finer wines may be stored for several years in bottles before they are released.

Manufacturing of Herbal Wine (White)



The manufacturing process of White herbal wine is same to that of the red wine only difference being that the skin of the white grapes is removed in a shorter span of as compared to the red ones, as the white grapes do not impart any colour as that of the red grapes. Rest all the method remains the same as that of the red wine.

Thus we conclude that the manufacturing process for Herbal wines is the same to that of the regular wines the only difference being that after fermenting it is blended along with the herbs, fortified with brandy spirit and then bottled and could be aged.

Following the manufacturing process of Herbal wines I have prepared a few samples of Herbal wine using herbs mainly used in Ayurveda. These herbs are available readily in the market. I have used herb extracts to get a finer product. The herbs selected while preparing the wine were based on the healing properties they have. The herbs main function is to regulate proper function of the organs by maintaining a balance between the consumption and digestion of the food intake.

It is known that some herbs have water soluble components and some have alcohol soluble components. Hence introducing herbal extracts to wines make both water soluble components and alcohol soluble components dissolve in it, as the wine has both water content as well as alcohol content in it. Thus it acts as a preserve for that particular herb by holding it in the wine.

The different Ayurvedic herbs used in the making of the Herbal wines are as follows :

1. Herbal wine - Ashwagandha



Latin Name: *Withania Somnifera*

Description:

Ashwagandha or *Withania somnifera* is an ayurvedic herb that has been used for centuries in India as an adaptogenic herbal remedy to improve overall health, vitality and longevity. It is a short shrub that grows naturally all around the Indian subcontinent; but is also native to the Middle East and North Africa. Ashwagandha is now also grown in North America and other temperate climates as its popularity increases. In western countries, Ashwagandha is also referred to as Winter Cherry.

Uses :

- Aswagandharishta is used in the treatment of feeling tired all the time psychiatric conditions, epilepsy, stomach problems like low digestion power, emaciation, Piles and Vata imbalance diseases.
- It is also used as a nervine tonic.

2. Herbal wine - Bramhi



Latin Name: *Bacopa Monneri*

Description :

Brahmi is the small creeping herb with the numerous branches. It grows to a height of 2 -3 feet and its branches are 10 -35 cm long. It has oval shaped leaves that are 1-2 cm long and 3- 8 mm broad. Leaves are formed in pairs along the stems. Small- tubular, five petaled flowers are white- purple in colour. Its stem is soft, succulent, and hairy with the glands. Roots emerge out of the nodules and directly go to the soil. The fruit is oval and sharp at apex.

Uses :

- Brahmi is used in traditional Indian medicines for centuries for the treatment of bronchitis, chronic cough, asthma, hoarseness, arthritis, rheumatism, backache, fluid retention, blood cleanser, chronic skin conditions, constipation, hair loss, fevers, digestive problems, depression, mental and physical fatigue and many more.
- It is used to treat all sorts of skin problems like eczema, psoriasis, abscess and ulceration. It stimulates the growth of skin, hair and nails.
- Brahmi posses anticancer activity. It is taken to get relief from stress and anxiety. According to the Ayurveda, Brahmi has antioxidant properties. It has been reported to reduce oxidation of fats in the blood stream, which is the risk factor for cardiovascular diseases.
- Brahmi is considered as the main rejuvenating herb for the nerve and brain cells.

3. Herbal wine - Gokshurah

Latin Name: Tribulus Terrestris

Description :

This trailing herb is found in sandy soil throughout India, and Sri Lank. Gokhru flowers are bright yellow in colour and fruits are green to yellow in colour. Fresh fruit and shade dried fruit, are used in Ayurvedic system of medicine. Root of Gokhru is also used for medicinal purposes in Ayurveda. A species of the tropical regions found to be distributed throughout

India from sea level to 3500 m. This species is native to the Mediterranean region, globally distributed in the tropics. Within India, it is found throughout in sandy soil.

Uses :

- Tribulus Terrestris is considered as a miracle herb in India & used as a physical rejuvenation tonic.
- This herb is used in the treatment of urinary disorders and impotence, kidney diseases and gravel, diseases of the genito-urinary system, calculus affections, gout etc.
- It is also useful for diseases of the heart, and many other conditions.

Ayurveda practitioners consider this herb to be very valuable in improving vitality. It revitalizes the emaciated (bony) human system. It is being studied as a potential herbal remedy against AIDS. These days it is used in combination with a variety of herbal products to treat headaches, eye conditions such as itching, conjunctivitis and weak vision, and nervousness. This herb has also been used to treat high blood pressure and rib pain.

4. Herbal wine - Arjuna

Latin Name : Terminalia Arjuna

Description :

The arjuna is about 20–25 metres tall; usually has a buttressed trunk, and forms a wide canopy at the crown, from which branches drop downwards. It has oblong, conical leaves which are green on the top and brown below; smooth, grey bark; it has pale yellow flowers which appear between March and June; its glabrous, 2.5 to 5 cm fibrous woody fruit, divided into five wings, appears between September and November.

Uses :

- Nevertheless, people today use Terminalia arjuna for disorders of the heart and blood vessels (cardiovascular disease), including heart disease and related chest pain, high blood pressure, and high cholesterol.
- It is also used as “a water pill,” and for earaches, dysentery, sexually transmitted diseases (STDs), diseases of the urinary tract, and to increase sexual desire.

5. Herbal wine – Kumari**Latin Name: Aloe Barbadensis****Description :**

Aloe vera is a stemless or very short-stemmed succulent plant growing to 60–100 cm (24–39 in) tall, spreading by offsets. The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on the upper and lower stem surfaces. The margin of the leaf is serrated and has small white teeth. The flowers are produced in summer on a spike up to 90 cm (35 in) tall, each flower being pendulous, with a yellow tubular corolla 2–3 cm (0.8–1.2 in) long.

Uses :

- Traditionally Ayurveda has used kumari for treatment of intestinal worms, liver and spleen imbalances, as a laxative, and as a tonic for the uterus.
- It is useful for any kind of pitta conditions, ulcers and inflammation, both internally and externally.
- It is considered an aphrodisiac and good for venereal diseases. Some modern studies have shown it effective in treating dyspepsia, flatulence, intestinal colic, general debility, cough, asthma, and as promoting hair growth.
- Kumari is well known in India and its uses are numerous; however, it excels in treatments of the female reproductive system and conditions of the liver and spleen.

Herbal Wines effect on the body**1. Bones**

Studies from St. Thomas' Hospital in London and EPIDOS medical group in France suggest that moderate wine consumption may offer positive benefits to women, particularly elderly women, in retaining bone density and reducing the risk of developing osteoporosis.

2. Cancer

While alcohol is a known carcinogen that can increase the risk of developing breast cancer, recent studies suggest that resveratrol, which can be found in wine, may be able to decrease production of estrogen metabolites which promote the development of cancerous tumors in the breast.

3. Cardiovascular system

The anticoagulant properties of wine may have the potential benefits of reducing the risk of blood clots that can lead to heart disease.

4. Dementia and mental functions

If it is the moderate consumption, researchers theorize that it may be alcohol's role in promoting the production of "good cholesterol" which prevents blood platelets from sticking together. Another potential role of alcohol in the body may be in stimulating the release of the chemical acetylcholine which influences brain function and memory.

5. Diabetes

Research has shown that a moderate level of alcohol consumed with meals does not have a substantial impact on blood sugar levels. A 2005 study presented to the American Diabetes Association suggests that moderate consumption may lower the risk of developing Type 2 diabetes.

6. Digestive system

The anti-bacterial nature of alcohol may reduce the risk of infection by the *Helicobacter pylori* bacterium that has been associated with stomach cancer as well as gastritis and peptic ulcers.

7. Vision

The anti-oxidant and anticoagulant properties of wine may have a positive benefit in slowing the effects of macular degeneration that causes vision to decline as people age. An American study from the late 1990s showed that vision of moderate wine drinkers suffered less macular degeneration than non-drinkers

8. Weight management

Alcohol can stimulate the appetite so it is better to drink it with food. When alcohol is mixed with food, it can slow the stomach's emptying time and potentially decrease the amount of food consumed at the meal.

Nutritional Significance

Table 1

Grapes, red or green (*Vitis Vinifera*), Nutritive Value per 100 g,
ORAC Value 3,277 (Source: USDA National Nutrient data base)

Principle	Nutrient Value	Percentage of RDA
Energy	69 Kcal	3.5%
Carbohydrates	18 g	14%
Protein	0.72 g	1%
Total Fat	0.16 g	0.5%
Cholesterol	0 mg	0%
Dietary Fiber	0.9 g	2%
Vitamins		
Folates	2 g	0.5%
Niacin	0.188 mg	1%
Pantothenic acid	0.050 mg	1%
Pyridoxine	0.086 mg	7.5%
Riboflavin	0.070 mg	5%
Thiamin	0.069 mg	6%
Vitamin A	66 IU	3%
Vitamin C	10.8 mg	18%
Vitamin E	0.19 mg	1%
Vitamin K	14.6 g	12%
Electrolytes		
Sodium	0%	1 mg
Potassium	191 mg	4%
Minerals		
Calcium	10 mg	1%
Copper	0.127 mg	14%
Iron	0.36 mg	4.5%
Magnesium	7 mg	2%
Manganese	0.071 mg	3%
Zinc	0.07 mg	0.5%
Phyto-nutrients		
Carotene-	1 g	—
Carotene-β	39 g	—
Crypto-xanthin-β	0 g	—
Lutein-zeaxanthin	72 g	—

Source: THE TIMES OF INDIA
Dated: TNN Jan 26, 2013
“Raise a toast to medicinal wine”
(Annexure 1)



Drink wine guilt-free and soak in all its health benefits Here's some good news for wine lovers. An Australian biochemist-turned-winemaker has claimed to have created a wine which is medicinal in nature and in which, wine lovers can revel. Greg Jardine announced that his creation would “finally give wine a real medicinal edge.”

- Previously, some studies have shown that antioxidants are effective in fighting a variety of health problems.
- Jardine had been working on the process for 10 years, but had only recently discovered a way to retain the taste while enhancing antioxidants.
- “Wine has got massive amounts of antioxidants, but they are quite tannic. So, if you put more in, people would not drink it because of the taste,” he says.
- What needed to be done was to allow the wine to age and stop it at the right point of time so that the tannic taste goes away and make it taste good.
- Medical experts found that the non-alcoholic dried crystal, used to make the wine successfully, treated rats with arthritis.
- However, here's a word of caution: Wine, in general, is not a medicine, it should be consumed in moderation as it has the same alcoholic content as regular wine.

From the research that I had conducted I came across the mostly following questions. These were the frequently asked questions, so they are written down as follows with their respective answers :

Q. 1. What is the difference between Wine & Herbal wine?

A. The main difference between wine & herbal wine is that

i. Wine is an alcoholic drink made from fermented grape juice according to local traditions and customs

ii. Herbal wine is a fortified alcoholic drink which is made from fermented grape juice along with herbs which are macerated in it before fortifying it.

Q. 2. Can Herbal wine be prepared from both red and white grapes?

A. Yes, Herbal wines can be prepared from both red and White grapes.

Q. 3. Is there any difference between the manufacturing process of herbal wines & regular wines?

A. No, There is no difference between the manufacturing process of herbal wine & regular wine, the only difference is that, in herbal wines, after fermentation the herbs are blended and macerated with the wine and then it is fortified with brandy spirit just the same as to that of to the manufacturing of sherry and port wine.

Q. 4. What is the serving temperature of Herbal wines?

A. Herbal wines are usually served at a higher temperature than that of regular wines, reason being, higher alcohol content. It should be served from 10-18p°C as it has higher alcohol content about 18-20% alcohol v/v.

Q. 6. With what food item can the herbal wine be consumed?

A. Herbal wine can be served as an aperitif and thus it can be consumed with the hors doeuvres.

Q. 7. Is herbal wine consumption good for health?

A. Red wine in particular is said to reduce the risk of coronary heart disease. The cholesterol that blocks arteries is low-density lipoprotein cholesterol (LPD). This is cleared from the blood by high-density lipoprotein cholesterol (HPD). Both are carried in the blood. Moderate alcohol consumption produces a better balance of the two. In addition, alcohol has an anticoagulant effect which makes blood less likely to clot. There is also evidence that wine can reduce the risk of developing Alzheimer's disease or having a stroke.

Aim :

To Study and Review literature of Herbal Wines by correspondence and case studies.

Objectives :

- i. To study about the history of Herbal Wine, how it was made in ancient India and today.
- ii. To study about its nutritional significance.
- iii. To study different types of herbal wines.
- iv. Review of companies producing herbal wines.
- v. Demand for herbal wines in hotel industry.

Hypothesis :

The research topic, "Role and Scope of herbal wines today and tomorrow" is a detailed study of herbal wines, how it was made in ancient India & World and today. Benefits of consuming of herbal wine, the different types of herbal wine that have been taken up as case study. Review of companies producing herbal wines. And lastly, demand for herbal wines in the market.

Methodology :

This research is mainly about Herbal Wines, which are not much in demand, and the current scenario is such that there is no awareness about this concept in the Indian market therefore :

- Professionals were consulted and the information given by them was very useful.
- Different books were referred for information on Herbal Wines.
- The different herbs used in herbal wines were studied for their effects on health.
- Questionnaires were distributed amongst people who are above the drinking age bar, in all 30 questionnaires were distributed.
- The overall information was gathered on the basis of these questionnaires, the internet was also the main source and this information was helpful to analyze and draw conclusion

Questionnaire

Q. 1] Have you come across the term “Herbal Wines”?

Yes No

Q. 2] Who/What introduced you to Herbal Wines?

Friends Magazine T.V Wine Show Others

Q. 3] How often have you heard of Herbal Wines?

Often Rarely

Q. 4] Have you ever tasted Herbal Wine?

Yes No

Q. 5] With what would you like to consume Herbal Wine?

Hors doeuvres Dessert

Q. 6] Which one of these would top your favorite list?

Wine Herbal Wine

Q. 7] What is your spending capacity per Wine?

Please mention : _____

Q. 8] Would you spend more, as the costs of ‘Herbal Wines maybe slightly more than the usual wines due to the use of different techniques & materials?

Yes No Cant say

Q. 9] What is your spending capacity per Herbal Wine?

Please mention : _____

Q. 10] Rate its popularity in India?

Popular Very popular Rare Not Known

Q. 11] Would you like to suggest/Comment any additional point not mentioned in this questionnaire?

Have you come across the term “Herbal Wines”?

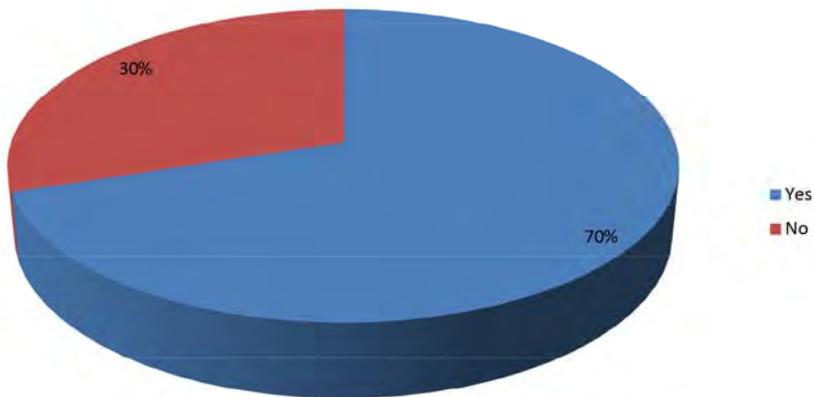


Figure 1

From the survey conducted we get to know that 70% of people have heard the term Herbal Wines.

Who/What introduced you to Herbal Wines?

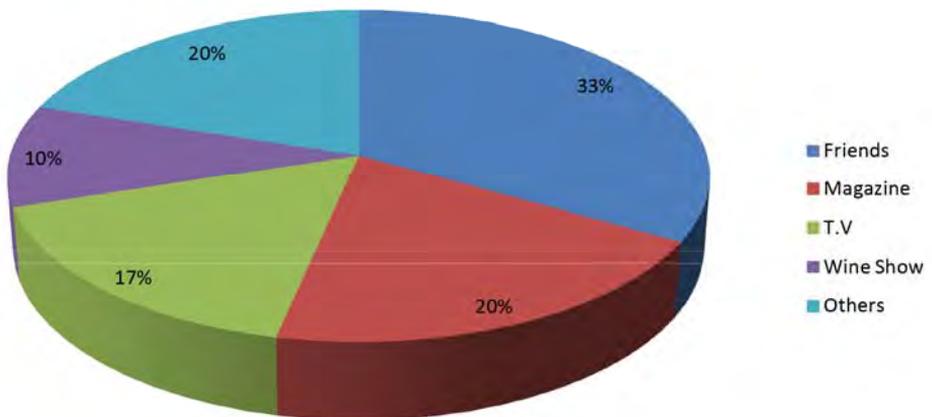


Figure 2

From the survey conducted it is known that the Herbal wines was popularized through friends which accounts to 33%.

How often have you heard of Herbal Wines?

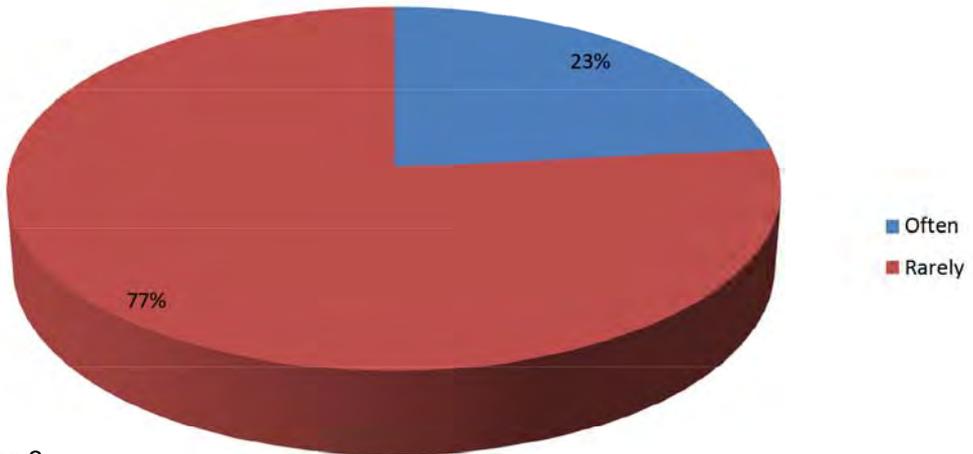


Figure 3

77% of the people have rarely heard about Herbal wines which states that it is a new concept and hence not so popular amongst people.

Have you ever tasted Herbal Wine?

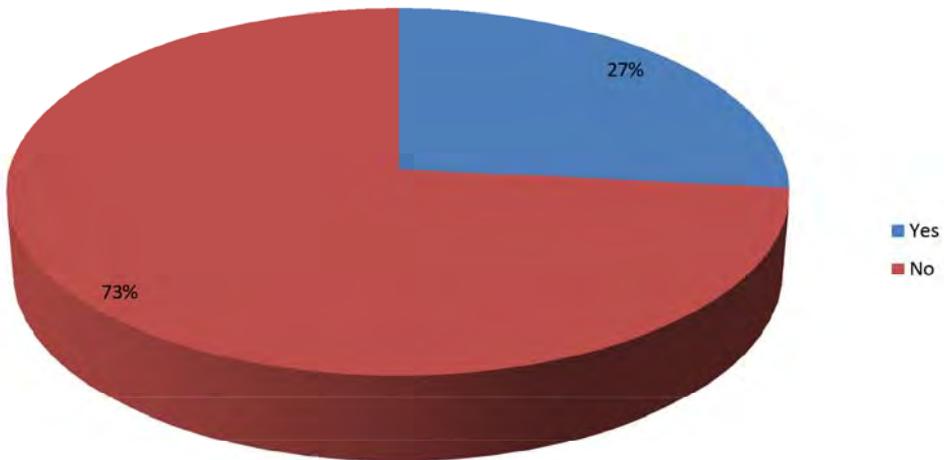


Figure 4

From the survey conducted, it is known that 73% people have not tasted Herbal Wine as yet.

With what would you like to consume Herbal Wine?

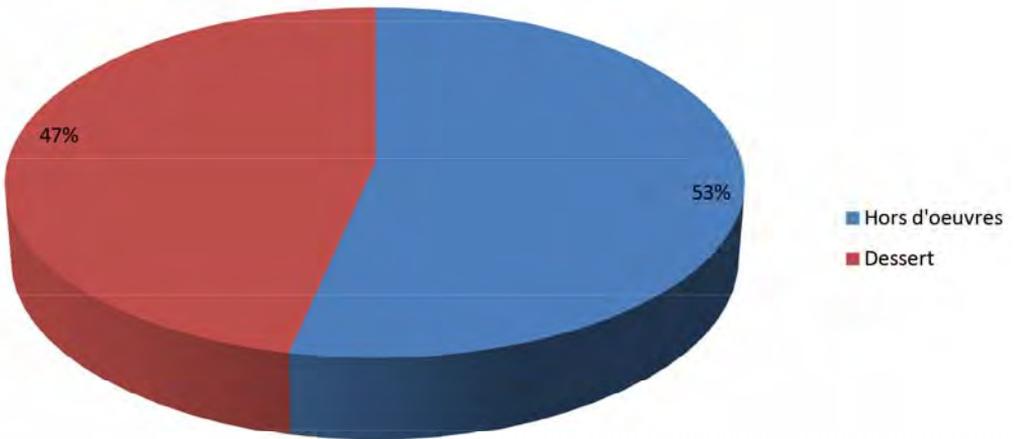


Figure 5

From the survey conducted, it is known that 53% would like to consume the Herbal Wine with dessert.

Which one would top you favorite list?

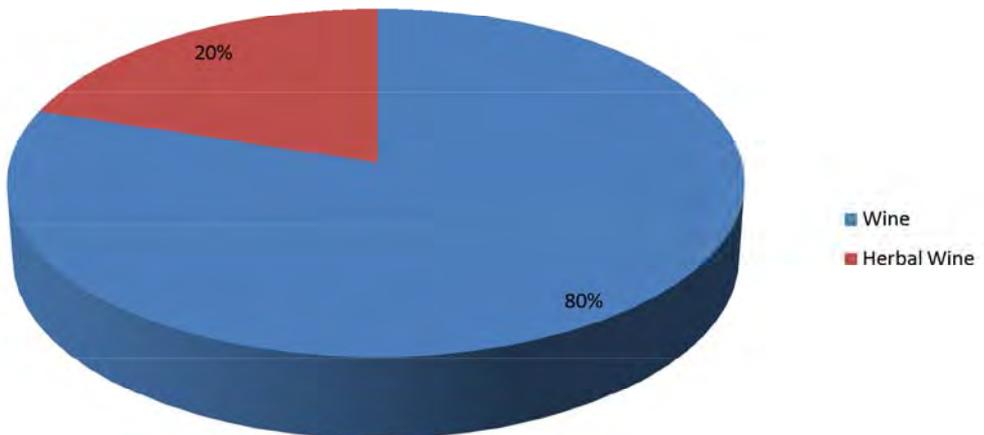


Figure 6

80% of the people still prefer wine over Herbal Wine as Herbal Wine is a new concept and hence not known much to people.

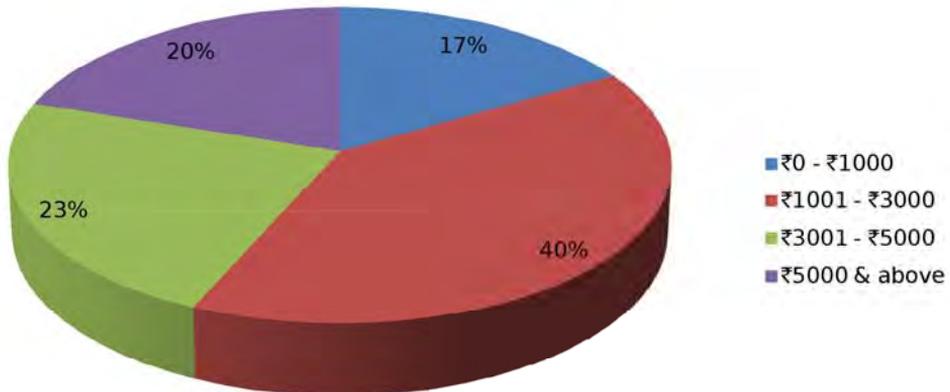
What is your spending capacity per Wine?

Figure 7

The above pie chart depicts the spending capacity of people, which states that 40% people are willing to spend '1001 - '3000 per wine.

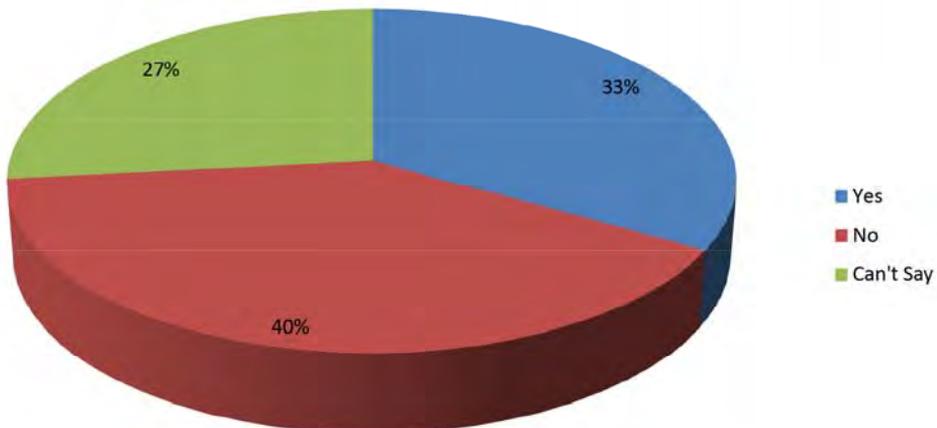
Would you spend more as the cost of 'Herbal Wines' slightly more than usual wines due to the use of different techniques & materials used?

Figure 8

The survey conducted says that 40% people are not willing to spend more for Herbal wines due to different techniques and materials used.

What is your spending capacity per Herbal Wine?

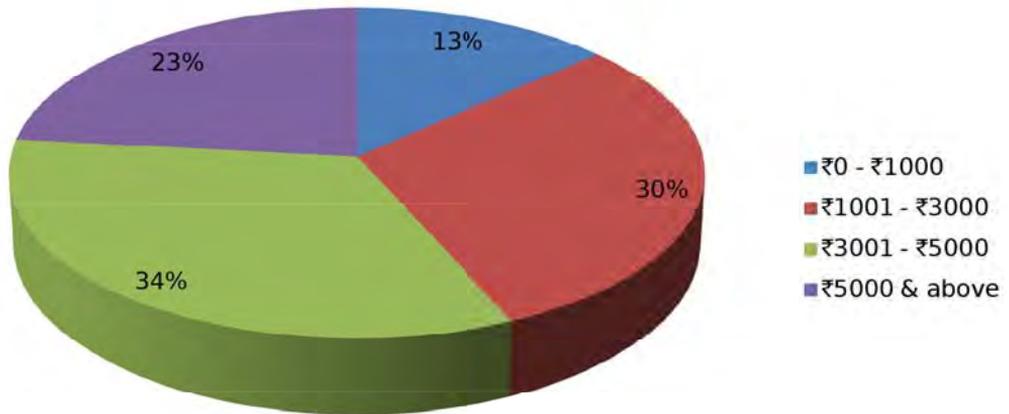


Figure 9

The survey depicts that 34% people are willing to spend '3001 – '5000 per Herbal wine.

Rate its popularity in India?

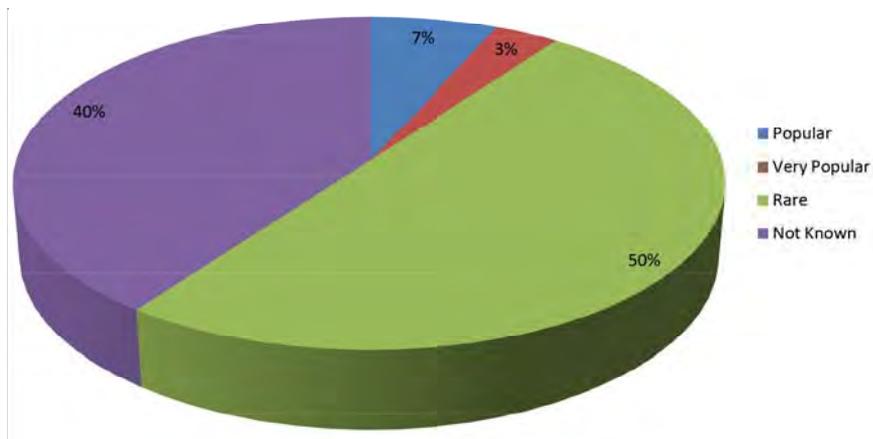


Figure 10

From the survey conducted it is known that the Herbal Wine is rare in India as 50% of people rate its popularity as rare.

Summary and Conclusion :

After carrying out the research, the following conclusion was drawn :

- ❖ The topic “Herbal wines” is in great demand and will gain good response in India if it is well marketed.
- ❖ According to the questionnaire we got most of the people dont know what herbal wine is, but wouldnt mind trying out new stuff such as herbal wines.
- ❖ Guests really liked the concept of “Herbal wines” and would appreciate if any such new concepts are introduced and consistently remain in the market for a longer period of time.
- ❖ From the survey we get to know that people are willing to spend ‘ 3000 - ‘ 5000 for herbal wines which show their interest in herbal wines.
- ❖ Many people dont know about the benefits of consuming herbal wine as the term “herbal wine”, itself is not known to the people, hence spreading its awareness is a must.
- ❖ Herbal wines is a pretty new concept where as wines is known for ages. Though herbal wines were consumed as medicinal wines ages ago, commercialization of the same has just begun. So it will take time to establish in the market, awareness for the same is of great importance.

Limitations :

- Due to shortage of time, the research was conducted only in selective locations.
- Research was conducted mostly in Restaurants.
- The research is compiled of hotel information only.
- The research was conducted on selected income group of people.

Recommendations :

- Research should have been conducted in various cities to get accurate results regarding the topic.
- Research can also be done from other aspect of the topic e.g.: Wines v/s Herbal Wines.
- Research should have been done by considering all income groups to get the better conclusion of this topic.

Suggestions :

From this survey certain suggestions we received like :

- Introducing these Herbal Wines in various Health Spas in Hotels along with proper marketing for the same.
- Proper information to be given about different ingredients used in preparation of herbal wines.
- Proper marketing should be done.
- Herbal Wines have a vast scope ahead if properly introduced in the market.
- Health benefits of consuming Herbal Wines.
- Difference between the taste of regular wine and Herbal wine should be given.
- Awareness amongst people regarding Herbal wines as people dont know what exactly Herbal Wine is.
- It is a new concept; proper marketing should be done for the same.

Research : Clinical

Evaluation The Role of Shatavari Granules Compound with Milk in Management of Protein Energy Malnutrition in Child

Dr. Vikas C. Kathane, Aso. Professor "Swasthavritta" Bhaisaheb Sawant Ayurveda College, Sawantwadi. Dist. Sindhudurg (Mah.) 416 510
M. : 9766619610 / 9422584504 E-mail : vckathane@gmail.com.

Abstract :

This research is carried out with the aim to study the role of shatavari granules compound with milk in management of protein energy malnutrition in child. The PCM is not only a nutritional problem it is also the big social - economic problem related with poverty. This problem is mainly occurring in slum areas and tribal areas of Maharashtra in some specific parts. Konkan region is also affecting from this malnutritional problem with different causes some of them causes are nutritional, dietary habits and mainly the economical condition of family along with no. of child in the family and they can not provide balanced nutrition in this age group of child.

The age group of 5-10 years are mainly selected for this study. The total 91 child are occurred suffering from PEM in various degrees in the survey of Zila parishad primary school at Sawantwadi taluka, out of them 80 child complete the diet Programme in scheduled time. The Assessment of PCM is mainly based on Quelet Index & Gomez Classification as per modern nutritional science parameters along with clinical symptoms of PCM. The management of PEM by using the Shatavari granules with milk as a natural remedy, Shatavari & Milk are good source of essential amino acids which are necessary nutritive compound for correcting the PEM. Another benefit of this compound is the good taste and easily mixes up with milk so the child drinks this compound easily without any hesitation.

After the completion of trial for 6 weeks, it was observed that the significant changes are occurring in the above parameters, and positive clinical changes also seen in child. This study shows the natural remedy of Shatavari and Milk as a compound food is an ideal supplementation for controlling the PEM in Indian scenario, where both the things are easily available, low cost and the procedure of making the granules is very simple and the milk is also regular dietary component of this age group of child. The further scientific evaluation is also necessary on major class of malnutritional child. The further scientific evaluation is also necessary on major class of malnutritional child on mass level for recommending this remedy for correction the PEM in our country.

Key words - PEM, Quelet Index, Gomez Classification, Shatavari.

Introduction :

The child population is one of the most important sections of society which being vulnerable needs very careful nurturance. Their growth and development is strong reflection on the future of a country. In any development effort, The starting point should be child for several physiological, social and even economic reasons. A wise investment in child health, nutrition and education is the foundation stone for all national developmet. Neglecting child needs will by contrast condemn them and their society to a vicious cycle pf proverty and deprivation (UNICEF 1991). A healthy generation of child will lead to a healthy generation of productive young people and adults. Nutrition plays a very important role in the physical, mental and socio-emotional development of a child. The infants and pre-school child are most vulnerable to retardation in growth as a result of malnutrition particularly under - nutrition.

Hence the Protein Energy Malnutrition is very common problem in our society, so in hope of Protein Energy Malnutrition free India, I would like to one step by doing survey for PEM in age group of 5-10 years of Zila Parishad school's of Sawantwadi and do the research study in management of PEM b using the Shatavari Granules with Milk as a natural remedy.

Protein Energy Malnutrition & It's Effect :

Protein Energy Malnutrition has been identified as a major health & nutrition problem in India. It's occurs particularly in child in the first years of life. It's not only an important cause of morbidity & mortality but leads also to permanent impairment of physical and possibly of mental growth of those who service. The current concept of PEM is that its clinical forms marasmus and kwashiorkor are two different clinical pictures at opposite poles of a single continuum.

The malnutrition is not only a medicinal problem it's a mainly social-economical problem. In India poverity is main cause of PEM due to low intake of protein food, another factors are choosing the wrong food and food habits followed in India, so the requirment of nutrition is not fulfill. Protein calorie malnutrition occurs when the child's diet is deficient in protein calorie. Sym of protein calorie malnutrition are child grossly underweight, muscular wasting, distended abdomen, loss of subcutaneous fat, dull dry hair, thin hair, dispigmentation, easy pluck ability of hair, moon face, clouded eyes, dry conjunctiva, oedema, scarlet and raw tongue. Apart from that there are vitamin and mineral deficiencies in large percent of child. Specially in Konkan Region where study was conducted, the people are mainly rice and sea food eaters, such food does not fulfill the daily requirement of Proteins. The child's in the age group of 5 to 10 years are at high risk of PEM as a growing age requires more proteins which is not fulfill by food habit in Konkan Region.

Objectives :

- 1) To do survey for PEM in group of 5 -10 years of age in Zila parishad primary school of Sawantwadi taluka & detecting the student's which are suffering from PEM.
- 2) The Management of PEM by Shatavari Granules with Milk.

Material & Method :

The 91 child of this age group discovered in this survey which was suffering from different gradation of PEM. These detected cases registered on OPD level at RJVS & Cottage hospital, Sawantwadi for Management of PEM by shatavari granules with milk. Out of these 11 patients were dropped out and 80 patients completed the prescribed course of the treatment.

Criteria of Diagnosis :

The diagnosis was mainly based on the Assessment of Protein Nutritional Status by Gomez Classification and Quetlet Index as mentioned for PEM was prepared accordingly, detailed clinical and food habits history was taken and physical examination was done.

Inclusion Criteria :

1. Age group of 5-10 years.
2. Patients having clinical presentation of PEM.
3. Child & family member are ready for treatment plan.
4. The Gomez classification below the 89%.
5. The Quetlet Index is below the 0.14.

Exclusion Criteria :

1. Patients in the age group below than 5 years and more than 10 years.
2. Patients suffering from other Nutritional deficiencies diseases like Rickets', Anaemia, Vit. deficiency.
3. Patients of PEM associated with other infectious diseases like Diarrhea, Bronchitis and Skin diseases like Scabies.

Examination and Test :

1) Gomez Classification : This Classification is based on body weight of child.

$$\text{Gomez Classification} = \frac{\text{Wt. of Examining Child}}{\text{Wt. of Normal child}} \times 100$$

If percentage is in between :

- 90 - 100% = Normal Protein Energy Nutrition
- 75 - 89% = 1st Degree Protein Energy Malnutrition (Mild)
- 60-74% = 2nd Degree Protein Energy Malnutrition (Moderate)
- Below 60% = 3rd Degree Protein Energy Malnutrition (Severe)

2) Quetlet Insex : This Classification is based on body weight & height of child.

$$\text{Quetlet Index} = \frac{\text{Wt. of Examining Child}}{\text{Height of child in (cm)}^2} \times 100$$

If Quetlet Index is 0.14 to 0.16 it is Normal protien energy nutrition,

Less than 0.14 it is indication of Protein Energy Malnutrition

Method of Preparation of Drug :

Details of Ingredients - 1. Shatavari 2. Milk

Properties of Shatavari :

Shatavari guru : shita tikta swadu rasayani

Medhaagni pushtida snigdha netrya gulmatisarjit !!

Shukrya stanyakari balya vatpitastra shothjeet !!!

(Bhavprakasha Nighantu)

Guna - Balya, (body building) Vayasthapan, (to increase life longevity) Guru (heavy), Snigdha (oily)

Kula - Rason

Family - Liliaceae

Latin Name - Asparagus Racemosus

Ras (Taste) - Madhur (Sweet)

Vipak (final taste after digestion) - Madhur (sweet)

Virya (Potency) - Sheet (Cold)

Doshaganata (Functions as per doshas) - Vatta-Pitta Shamak (Control power of Vatta - Pitta)

Botanical Description :

It is a creeper, it has thorns on it's stalk & it grows upward. It branches are triangular, oily and have striation on it, It leaves are very small, these are many thick ablong rootlet near the main root. These are used as medicine.

Part Use - Tuber

Chemical Composition :

Saponin (Shatavarin 1,4)

Shatavarin 4 contains proteins, starch, Tannin, Alkaloid's Asparagamine.

Properties of Milk :

Ayurvedic Properties of Milk :

1. "Gavyam dugdham visheshen madhuram raspakyo : !

Doshadhatu malstrotaha kinchit kledakaram guru !!

Shitalam stanya krutsnigdham vatpitastra nashanam !

Jara samast roganam shantikrut sevinam sada !!

(Bhavprakash Nighantu - Dugdha-varga Sutra kra. -7-8)

2. "Swadu sheetam mrudu snighdham bahalam slakhanam pichilam !

Guru mandam prassanam cha gavyam dashgunam pay : !!

Tadavguna medouj : samanyatbhivardhayet !

Pravaram jivniyanam khiram yuktam rasayanam !!

(Charak Samhita - Sutrasthan Ch. - 26./Sutra Kra. - 217)

As per Ayurvedic concept milk properties are sweet in taste, cold, body building, vatpitta Shamak, fatty, ojovardhak (good for complete health) as per above references described in ayurvedic text-books.

Properties of Milk as per Modern Nutritional Sciences :

Milk is complete food contains Proteins like Caseinogens, Lactic albumins, Lactic globulins.

Composition of Coe Milk :

1) Proteins - 3.5% of Total Wt. consisting

- Caseinogens 3%

- Lactic albumins 0.4%

- Lactic globulins 0.1%

2) Corbo hydrates - Lactose or milk sugars 4-5%

3) Fat's - 3.5% - 4% in the form of glycerides in emulsified form, Chemically milk fat consists of myristin, olein, palmitine and stearine.

4) Vitamins - It contains all vitamins except vit. E If cow fed on grass produce milk containig large amount of Vit. B, C and D but in winter amount of Vit. A & Din milk is much reduced.

5) Mineral Salt - Phosphates and chlorides of Calcium, Potassium and sodium, it is poor in Iron.

6) Enzymes - Amylolytic, Protolytic and Lypolytic these are catalytic in action.

Process of Preparation of Shatavari Granules :

1. Take a 1 kg. of fresh Shatavari root then clean and washed by water completely.
2. After soaking completely it's crushed and mixing the water as per need and making a juice of shatavari root.
3. Then take a 4kg. of sugar approximately 4 part of shatavari root. Start the boiling of statutory juice and mixing the sugar in shatavari juice and stride continuously. Like wise while sugar is added in shatavari juice and boiled till granulation appear.
4. Prepared granules are stored in clean places.

Centre of Work :

All the preparation of drug is completed in Ayurveda Rasshala of Bhaisaheb Sawant Ayurveda College, Sawantwadi.

Duration of Treatment :

Duration of treatment for selected cases was 6 weeks.

Dose :

200 ml. Boiled Milk with 30 gm. Shatavari granules everyday in morning.

Criteria of Assessment :

The effect of Therapy was assessed on the basis of changes occur in reading of Quetlet Index and Gomez Classification co-related with changes occurring in clinical appearances of patients.

Observations :

A) Age wise distribution of patients in %

Table - 1

Sr. No.	Age	No. of Patients	Percentage
1	5-7 Years	60	75%
2	8-10 Years	20	25%

B) Sex wise distribution of patients in %

Table - 2

Sr. No.	Sex	No. of Patients	Percentage
1	Male	50	62.5%
2	Female	30	37.5%

C) Distribution of Patients according to socio - economic condition in %

Table - 3

Sr. No.	Socio-Economic condition of Patients	No. of Patients	Percentage
1	Lower	57	71.25%
2	Middle	20	25%
3	Upper	03	3.75%

D) Distribution of Patients as per observation of Gomez Classification

Table - 4

Sr. No.	Observation of Gomez Classification	No. of Patients	Percentage
1	1st Degree PEM G.C. = 75-89%	42	52.5%
2	2nd Degree PEM G.C. = 60-74%	33	41.25%
3	3rd Degree PEM G.C. = Below 60%	05	6.25%

E) Distribution of Patients as per observation of Gomez Classification

Table - 5

Sr. No.	Observation of Quetlet Index	No. of Patients	Percentage
1	0.12 to 0.13	40	50%
2	0.12 to 0.10	32	40%
3	Below 0.10	08	10%

F) Distribution of Patients as per dietary habits

Table - 6

Sr. No.	Dietary habits	No. of Patients	Percentage
1	Veg. food habits	35	43.75%
2	Non-Veg food habits	45	56.25%

G) Distribution of Patients as per Quetlet Index before & after the Treatment.

Table - 7

Sr. No.	Observation Index	Before Treatment	After Treatment
1	Above 0.14	00	15
2	0.12 to 0.13	40	35
3	0.12 to 0.10	32	28
4	Below 0.10	08	02

H) Distribution of Patients as per Gomez Classification before & after the Treatment

Table - 8

Sr. No.	Observation	Before Treatment	After Treatment
1	1st Degree PEM	33	25
2	2nd Degree PEM	42	38
3	3rd Degree PEM	05	10
4	Normal Cases	00	07

Discussion

1. In the present series, 91 patients fulfilling the criteria for the diagnosis of PEM were selected, out of which 11 patients had left the treatment at different stages. The remaining 80 patients completed full course of treatment for the period of six weeks.
2. In Age wise distribution the Age group 5-7 yrs are more prone for PEM comparatively the age group of 8-10 yrs.
3. The child from lower social - economic conditions living in slum areas only eating rice, dal & some veg. curry are more deficient for PEM, due to the absence of other protieneous supplementary food.
4. In age wise distribution of patients 60 child were belonged to age group of 5-7 yrs whereas 20 child were belonged to age group of 8-10 yrs.
5. In sex wise distribution, present study comparisons 50 male and 30 female child of different grades of PEM.
6. Socio-economic condition among cases evaluated in the present study reveals that, most of the cases i.e. 57% cases belonged to lower socio-economic class followed by 20%cases in the middle socio-economic class & very few 3% cases from upper class. The detailed socio-economic history of these cases has given out some facts responsible for PEM.

7. In lower socio-economic class, most of the cases of PEM were found to have insufficient protein nutrition in their weight loss.
8. In middle socio - economic class, in spite of having moderate supply of nutrition, the cases found to have bad dietary habits such as inclusion of road side & bakery food which are low in proteneous nature.
9. In upper socio - economic class all cases give a clear history of good protien & diet intake. The very few cases among this group were suffering from mal absorption sybdrome.

Conclusion :

The study shows the following Conclusions after the administration of drug with milk as per schedule.

1. The changes occured in Gomez Classification 1st degree of PEM G.C. of 75-89% reaches to more than 93-95%, 2nd degree of PEM G.C. of 60-74% reaches to 90%, 3rd degree of PEM G.C. below 60%reaches to 75-80%.
2. The changes occured in Quetlet Index the Q. I. of 0.12 to 0.14 reached to 0.16, the Q.I. of 0.10 to 0.12 reached to 0.13 & the Q.I. of below 0.10 reaches to 0.11 to 0.12.
3. Both the parameters showing significant changes after completion of drug schedule.
4. In lower socio - economic class the diet is more dificient in essential amino acids of protiens so they are more prone for PEM.
5. The child food habits are nonveg food like Egg, Fish, Chicken they are mostly suffering from mild degree of PEM.
6. After the completion of this schedule the physical fitness of child is remarkably improved.
7. Appetite is improved after 2 weeks of drug administration.

References :

(1) Book :

1. Carak Samhita (Purvardha) - Pandit Kashinatha Shastri & Dr. Gorkhanath Chaturvedi 15th Edition 1989 Ch. No. - 14 Quotation No. 4 - 18 types of Kshaya (Malnutrition) / Annapanvidhi Adhyay 2 Goras varga (Class of Milk)
2. Swastha - Vritt Vidnyan - Dr. Ramharsha Singh ISBN-81-784-038-4 punarmudrit sanskaran 2002 Chapter No. 7 Aahardravya & Aahar. (Food & Rules of Nutrition)
3. Park's Text book of Precentive & social medicine written by K. Park 21st edition 2011 Chapter No. 11 'Nutrition & Health).
4. A book of Madhav Choudhari published by Navneet Publications (India) limited. Aahar hech Aushad (Food As a medicine) 1996 - Chapter No. 7 Page No. 25.

5. API Text Book of Medicine - Fifth edition 1992 Chapter No. 2 Assessment of Nutritional Status - P. S. Kulkarni / Section IV - Nutrition / Section XVIII - Pediatrics - Ch. No. 7 - Marasmus - Dr. N. S. Tibrevala.
6. Count what you eat - A book by National Institute of nutrition, Hyderabad. First Edition - 1989 Reprinted - 2004 Page No. - 76-77.
7. Social & Preventive Medicine - Dr. Yashopal Bedi. Fourth Edition 1985 Chapter No. 6 - Food & Nutrition.
8. Dravya-guna Vidnyan - Vd. Priyavat Sharma - Choukhamba Bharati Academy India 2001 Chapter No. 7 Vrushyadi Varga Plant No. - 234 Page No. - 562
9. Bhaprakash Nighantu - Written By Gangasahay Pandey & Krushnachandra Chuneekar - 9th Edition - Shatavari Page No. 392 / Kshirvarga (Class of Milk) Page No. - 759.

Review Article

ANALYTICAL STUDY OF JALAUKÂVACÂRAN INDICATIONS

Author : Vd. Smitarani A Nalawade MD Scholar Ayurveda Samhita Sidhanta

Co-author : Vd. Yogita A Jamdade Associate Professor

Sanskrit Samhita Siddhanta Department College of Âyurved and Research Center
Nigdi, Pune- 44.

ABSTRACT

Panchakarma therapy is mirror of great Âyurved science by which the golden rays of science are spread globally. Âyurved deals not only with disorders but also conserves health with the help of paCcakarma. It is very effective Sodhan therapy in acute & also in chronic conditions of diseases. But its utilization depends upon capacity of the Âyurvedic consultant and state of the patient. Raktamokcana (blood letting) is one type of paCcakarma procedures which gives quick relief from vitiated Rakta docha and Pitta. It allows letting out impure blood from the body & treats the root cause of the sufferings.

Raktamokshana is done by pracchân, sirâvedh, jalaukâvacâran, Sringavacâran. Out of which jalaukâvacâran & sirâvedh therapies can be practiced conveniently in modern era.

In Bruhatray detailed description of raktamokcana & jalaukâvacâran is given. Carak has enumerated Raktajroga & their treatment by Shonitavasecan¹. Sushrutâcarya, a pioneer of the plastic surgeon has dealt a special chapter only for jalaukâvacâran, types of jalaukâ, their habitat etc at first². Jalaukâvacâran (leech application) is still more popular in sophisticated people as it is less painful, effective & comparatively safe. It is mostly used in sukumârtam, young, old, debilitated people³. Indication of jalaukâvacâran is in gulma (phantom tumour), arSa (haemorrhoids), vidhradi (Abscess), kucmha (Skin disease), vâtarakta (Gout), galaroga (diseases of throat), netraroga (diseases of eye), visha (poisoning) & visarpa vyâdhi (herpes) is described by Vâgbhata⁴.

In present day also it is used in various diseases indicated in compendia & in some other conditions. A recorded use of leeches in medicines was also found during 200 B. C. by the Greek physician who indicates its globalized utilization⁵. With the growing worldwide popularity of jalaukâvacâran, the approach towards it needs a paradigm shift.

To explore its utilization as per indications & current trends a comprehensive retrospective study from available research works, articles were studied giving due importance to the following aspects

1. Efficacy of only in various indicated conditions / diseases.
2. Efficacy of Jalaukâvacâran along with the other Shodhan therapies in various indicated conditions / diseases.

3. Efficacy of jalaukâvacâran along with internal medication in various indicated conditions / diseases.

Data was collected and analyzed to search out

1. Whether the conditions/diseases are as indicated in compendia or other than it.

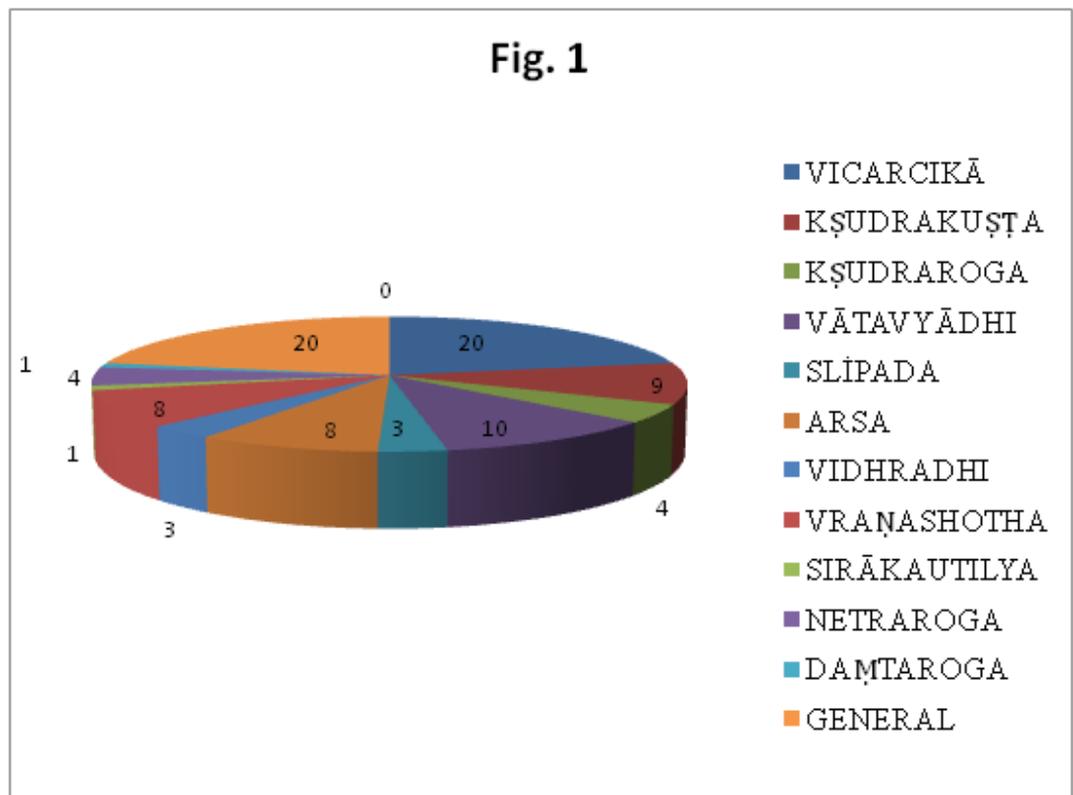
2. In how many indicated conditions jalaukâvacâran is utilized and are left over.

Current study can pave the way for further research and can also guide Ayurvedic consultants for evidence based utilized indications which can be practiced.

REVIEWED REPORTS

Total 91 data about jalaukâvacâran were studied which is explained in Pie-diagram :

Fig 1. Various diseases where jalaukavacharan is done



Collected data is bifurcated as per the conditions or diseases described under the Octopartitive Āyurved as follows.

KAYACIKITSA	Vicarcika, dadru, vitiligo, dermatitis w.s.r. to Kaudrakushaha) Vatavyadhi (Amavata, sandhivata & sula, vatarakta, pakaaghata) Shlipada
SALYATANTRA	ArSa (Thrombosed, prolapsed, baryars & secondary complication) Vidhradi Vranashotha Dushtavrana & Vranashotha Sirakautilya
SHALAKYATANTRA	Netraroga Dantaroga

It is observed that the conditions or diseases included under Kayachikitsa, Shalyatantra, Shalakyatantra are mainly searched out for jalaukavacharan.

OBSERVED EFFICACY OF JALAUKĀVACĀRAN.

In vicarcikā (Eczema) it is observed that jalaukāvācāran is effective in cardinal symptoms like kamdu, vaivarnya, pidakā, rauksya, size of patches, vedanā, dāha. But in Sravi (wet) conditions it is more effective with external lepa^{6/} with internally Samanausdhi like tiktak ghrit⁷.

In comparative study with sirāvyadh in vicharcikā, Jalaukāvācāran still effective & there is no reduction in HB% is observed this point seems to be very important⁸.

In kcudrakucma like kitibh, ekkucma, dadru (types of skin disease) it is effective in cardinal signs & also anti-analgesic & anti-inflammatory effect is seen⁹.

In vitiligo after long duration of 5 months jalaukāvācāran once in week gives repigmentation in 65% in 35% patients with internal medicines¹⁰.

In mukhadusikā (Acne vulgaris) with external lodhrādi lepa jalaukāvācāran is effective¹¹.

In indralupta (Alopecia areata) raktamoksana with sirāvyadh or prachhān in text (Su. ci.20/24, 25) But result of jalaukāvācāran is more effective than that of pracchān with external gunja lepa¹² which is noticeable & useful in practice.

In āmavāta (Rheumatic arthritis) result of jalaukāvācāran is drastic as anti-analgesic & anti-inflammatory effect & quiet relief in samdhistabdhatā (joint lock). Also there is reduction in RA factor value after repeated use of jalaukāvācāran¹³.

In vātarakta (gaut) also same result of jalaukāvācāran & change in osteophytes on radiograph is seen¹⁴.

In arSa conditions like thrombosed, inflamed, prolapsed, with secondary complications of

arSa jalaukâvacâran is effective in reduction of pus & mucous discharge¹⁵.

In case of vidhradi jalaukâvacâran is effective to prevent abscess formation. One case report of ischemic ulcer with pre-gangrenous change in DM; application of jalaukâvacâran once in week has proved to be effective for healing of ulcer within 30 days & avoiding amputation¹⁶.

In case of varicose veins complicated with non-healing ulcers jalaukâvacâran showed extremely decline in oedema & venous congestion also decrease in hyper granulation¹⁷

In netraroga like in chronic simple glaucoma, pothaki (Trachoma), anjannâmikâ (Hardeolum stye), pillaroga (Diseases of fornices of eye) jalaukâvacâran is effective in managing this condition with positive change in IO pressure, vision test¹⁸.

Some research studies are about importance, utilization of jalaukâvacâran in general.

CONCLUSION

Thus the review study gives an idea of jalaukâvacâran effective in various indicated diseases. But still there is large unexplored area which should be explored by further research.

In Kâyacikitsâ visarp (herpes), gulma(Phantom tumour), plihodar (splenic enlargement), conditions of jwara (pyrexia) like visamjwara, karnmulSoth; vâtavyâdhi like aptânak (convulsion), ardita, (facial paralysis), kostrukSirs (knee arthritis), unmâd (Insanity), apsmâr (epilepsy), in guhyaroga updamSa (soft chancre), syphilis, alaji, astilikâ are left over areas or research areas for comparative study regarding sirâvedha and jalaukâvacâran.

In Salyatantra Sonitârbuda, medârbuda (tumour); sadyovrana, pittaj & sirâj grathi (Cyst); gamdmâla (Tubercular lymphadenitis) are left over areas.

In Salakya Siroroga like suryâvarta (subacute sinusitis), shamkhak (Temporal headache), shiroabhitâpa (type of headache), raktaja arumikâ (pityriasis capitis), dârunaka (dandruff); netraroga like puyâlsak (Dacrocystitis), sirotpâta (Hyperaemia of conjunctival panus), sirâharca (acute orbit al cellulitis), adhimaCth (glaucoma), abhicyanda (conjunctivitis) etc vedhya vyâdhi, pittaj timir, liCgnâSa (cat aract), pakchmasadan, pittotklicma & raktotklicma vartmaroga (diseases of eyelids); mukharoga (diseases of oral cavity) like pittaj kshataj ostroga, shitâd, jivhâroga; kamtharoga & raktaj karnSula (diseases of ear) are left over.

In visatantra (toxicology) lutâ (spider), vruschika (scorpion) & musak (rat) bite; condition like sarvSarirbhar vic a.

In peadiatrics ajagallikâ (Seborrhoea) can also be treated with jalaukâvacâran.

These left over indications can be topic for further research. Also by using "Yukti pramân" one can utilize it in favorable conditions like rakta & pitta ducti, localized venous congestion, acute pain, burning, inflammation, itching. Diseases are not mentioned but having favorable condition for jalaukâvacâran can be the prime research area

Though its description in Āyurveda is given at first time; it is more practiced & lots of research work is carried out all over world.

According to medical experts, leeches remove blood from their host and release pain-killing and blood-thinning substances into the blood through their saliva. The saliva contains about 100 different bioactive substances, including anti-coagulants, vaso-dilators, prostaglandin and anaesthetics¹⁹⁻²¹.

Jalaukâvacâran has been successfully used in plastic, reconstructive surgeries; cardiovascular complications & also being utilized in gastrointestinal disorders & recently its application in cancer therapy, hypersensitivity conditions like asthma, sterility and diabetes is found to be effective. Salivary glands secretion of jalaukâ eliminates microcirculation disorders, restores damaged vascular permeability of tissues and organs, eliminates hypoxia (oxygen starvation), reduces blood pressure, increases immune system activity, detoxifies the organism, releases it from the threatening complications, such as infarct, stroke, improves bio-energetic status of the organism.

Taking into consideration all the facts "safe and advantageous" jalaukâvacâran should be a great successful therapy in clinical practice.

ACKNOWLEDGEMENT

I pay sincere regards to those data pertaining jalaukâvacâran from research journals, articles, dissertations & major medical search engines like

PubMed,

ARDB (AYURVEDIC RESEARCH DATABASE) <http://www.ayurvedresearch.in/>

<http://www.ayurvedahealthcare.info/content/ayurveda-research-database-ard>

DHARA (Digital Helpline for Ayurveda Research Articles)

<http://www.dharaonline.org/Forms/Home.aspx>

AYU (An international quarterly journal of research in Ayurved)

<http://www.ayujournal.org/>

DOAJ (Directory Of Open Access Journals)

<http://www.doaj.org/>

Āyurved Rasâyani

http://www.rasayu.com/e-journal/rasamarut_ejournal.html

CCRAS (Central Council For Research In Ayurvedic Sciences)

<http://www.ccras.nic.in/>

REFERENCES

- 1) Vd Yadavji Trikamji Âcarya edited CaraksaChitâ with Cakrapâni commentary published by CaukhaCbâ SaCskrit SaCsthân; Reprint 2011; Ca.Su.24/18,19; page no 125
- 2) Vd Yadavji Trikamji Âcarya edited SuSrutsaChitâ with NibaCdhsaCgraha commentary published by CaukhaCbâ SaCskrit SaCsthân; Reprint 2012; Su.Su.13; Page no 55
- 3) Vd Yadavji Trikamji Âcarya edited SuSrutsaChitâ with NibaCdhsaCgraha commentary published by CaukhaCbâ SaCskrit SaCsthân; Reprint 2012; Su.Su.13/3; Page no 55
- 4) Pandit Hari Paradkar edited ActâCghrudaya published by CaukhaCbâ SaCskrit SaCsthân; Reprint 2011; As.Hr.Su 26/41(1); Page no 323
- 5) ^ Jump up to:^{a b c d e} Wells MD, Manktelow RT, Boyd JB, Bowen V (1993). "The medical leech: an old treatment revisited". *Microsurgery* **14** (3): 183–6. PMID 8479316
- 6) Dr K M Pratap Shankar IAMJ:Vol 1; Issu4; July-Aug13
- 7) Dr. Thammineni Ramkrishna; 1996 CCRAS 4th vol Page no 426
- 8) Sonaje Manoj et al/IJRAP 2011, 2(6) 1659-1663
- 9) Singh Akhileshkumar www.jpsionline; 2012
- 10) PanigrahiHemantkumar et al/ IJRAP 3(6),Nov-Dec2012
- 11) NS-535, BaghelBL-153, Baghel
- 12) Singh Akhileshkumar et al.IRJP 2011,2(12) 172-174
- 13) Singh Akhileshkumar et al.IRJP 2012, 3 (2)
- 14) BhagatPradnya J PJ et al, Ayu 2012 Apr; (2):0 DHARA ID:054350
- 15) Dr. SandhyaBhagat 1997, CCRAS 3rdvol
- 16) Dr. Amarprakash P Dwivedi, IJRAP 2012 VOL 3
- 17) Dr. K Rajeshwar Reddy, Dr.Shrikant Kashikar; "Clinical study of leech application in various Medico-surgical conditions" Rasamrut,5:23 Aug 2013
- 18) Dr. N. Srikant, CCRAS 3rd vol. Dr. P K Shanthakumari 1982, CCRAS 4thvol
- 19) Godfrey k. uses of leech and leech saliva in clinical practice. Nursing time 1997. 62-63.
- 20) Kaestner A. Invertebrate Zoology. Vol.1. New York: Intescience Publishers; 1967: 541-63.
- 21) Medicinal leech. www.leeches.biz (cited 20 march 2012)