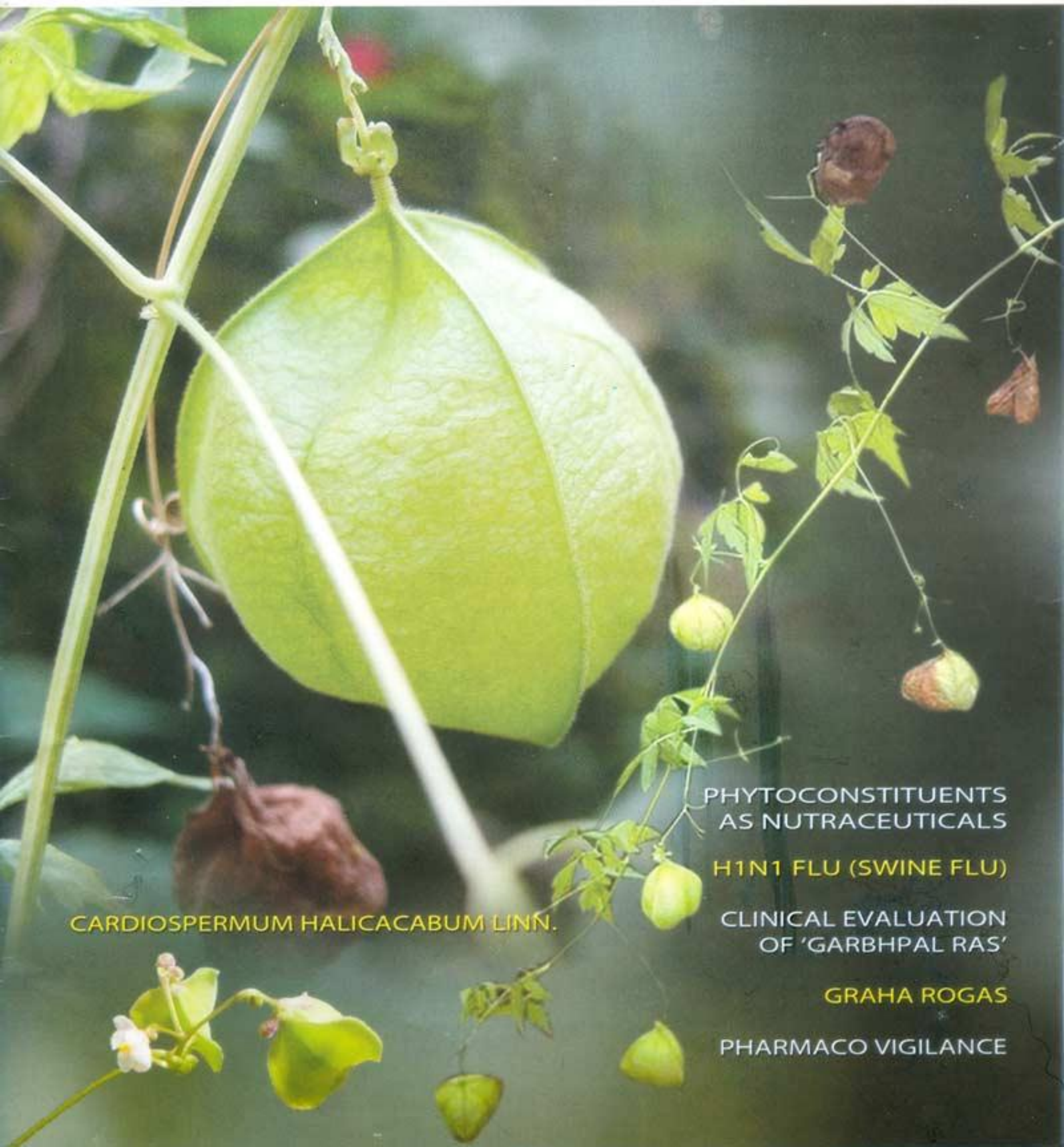
AYURVEDIC

Vol. VII No. 2 April - June, '09

# RENAISSANCE

THE COMPLETE MAGAZINE ON NATURAL HEALTHCARE



PHYTOCONSTITUENTS AS NUTRACEUTICALS

H1N1 FLU (SWINE FLU)

CLINICAL EVALUATION OF 'GARBHPAL RAS'

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*"Drugs are like nectar : administered by the ignorant, however, they become weapon, thunderbolt or poison. One should therefore shun the ignorant physician"*

*- Susruta Samhita*

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# Editor's Page

## Abolish the exemption order for Unauthorized medical practice

Since the origin of Ayurveda, this knowledge was imparted to selected individuals. Selection criteria are well defined in Ayurveda classics. One among several qualities for selection is 'inheritance'. Inheritance was never a quality to become a physician; it was a criterion for selection of students. This is being continued in the admission to BAMS till now. This is to boost the traditional value of Ayurveda. Ayurveda was brought down for the well-being of humanity. It should also change according to the human civilization. Hence the inevitable change happened in the selection of students and teaching methodology. Knowledge of other medical systems, their diagnostic methods and treatment modalities are necessary for successfully treating the present generation. Academic setup of Ayurveda is thought further planned to suit this purpose. Students having higher secondary education with more than 50% marks in Physics, Chemistry and Biology are selected for the BAMS course. Necessary knowledge in Sanskrit is given in the first year. Work load of the BAMS student is more in comparison to other professional students. Exposure to an entirely different subject with philosophic background makes them uncomfortable in the first year. Devoid of these difficulties, they work hard and attain the degree of BAMS. After successful completion of rotatory internship in all clinical branches of Ayurveda, they are given registration in Medical council. In order to renew and maintain the registration, Physicians must attend fifty hours of authorized Continuing Medical education programme in every five years. They are brought up in this way by parents facing several hardships but with great expectation. These well known facts are highlighted here in the light of the government decision to permit thousands of said to be traditional practitioners to practice medicine. Government has no idea about their subject knowledge. Whatever traditions existed in kerala was in specialized disciplines like '**Visha**', '**Marma**', '**Netra**' etc. Most of these households seldom practice their specialty. Then the question arises- "from where did these traditional practitioners come"? Most of them were attenders in pharmacy or dispensary of known physicians. They misunderstood that what they experienced is Ayurveda and started practicing it themselves. Law of the country pretended ignorance about it. Some of them became immensely rich by selling substitute for illicit liquors in the name of **Asava** and started influencing political parties. They gained strength by unity. This strength is being misused to legalize their activities and it culminated in the government decision to permit them to practice.

Once we were at the doorstep of WHO to get recognition for Ayurveda. One of the main difficulties was the lack of uniformity in the qualification of physicians. Central government setup CCIM and a uniform curriculum was introduced all over the country and eligibility was at par with modern medical students. It took decades with strikes, petitions, memorandums, by Ayurveda students to uplift Ayurveda to the present status.

This decision of the government to exempt thousands of unqualified persons from registration procedure in the name of "tradition" will jeopardize the situation – Mocking at law and order, challenge to academy and real threat to public health. Let us hope that the government will realize the facts and rectify the unjust steps taken to abate the field of Ayurveda.

**Thus comes the renaissance.**

**Dr. K. Unnikrishna Pillai BAM, MD (Ay) PhD**
*Chief Physician, Amruthanjali Ayurveda Hospital, Kollam, Kerala*

# PHYTOCONSTITUENTS AS NUTRACEUTICALS

*Sini Sadasivan, Latha P.G., Rajasekharan S.

Drug and food from natural origin play a significant role in public health care system of any nation. The search for specific constituents of plant, animals, minerals and microbial origin which are beneficial to our mental and physical health has caused the coining of the terminology "nutraceuticals". The term "nutraceuticals" is a broad one describing foods, food ingredients or dietary supplements that demonstrate specific health or medical benefits including the prevention and treatment of disease beyond basic nutritional functions.

The term "nutraceutical" was coined from "nutrition" and "pharmaceuticals" in 1989 by Stephen De Felice, founder and former Chairman of the Foundation for Innovation in Medicine (FIM). According to De Felice, nutraceutical can be defined as, "a food or part of a food that provides medical or health benefits, including the prevention and/or treatment of a disease" (Baichwal, 1999).

**The nutraceuticals are preferred due to the following reasons;**

1. Since a new molecule is difficult to discover and more expensive and risky than ever before, many pharmaceutical companies are now trying to discover nutraceuticals because there is undoubtedly a very huge and growing market.

2. The belief among consumers that these "food like substances" are either harmless or least toxic as compared to conventional pharmaceuticals.

3. Increased healthcare costs with conventional pharmaceuticals, recent legislation and scientific discoveries.

4. Inappropriate dietary habits are seen as contributing to the leading cause of death due to coronary heart disease, certain type of cancers etc. The role of nutraceuticals in treating these conditions is thus speculated.

5. The emergence of diet - disease relations have lead to search of specific constituents of plants, animals and minerals having a beneficial role for our mental and physical health.

6. Nutraceuticals are gaining popularity as people are relying on them for safeguarding their health and avoiding side effects associated with drugs as well.

7. As public knowledge in this field has evolved, manufacturers have sought to fulfill their appetite for these products resulting in exploding markets. Japan, USA, UK are the world leaders in the nutraceutical market. There are around 5000 established nutraceutical products, worldwide.

8. Long history of use and better patient tolerance as well as public acceptance.

9. Renewable source, ease of cultivation and processing, environmental friendly and local availability.

10. Plants constitute a major source of nutraceuticals.

In general nutraceuticals are often referred to as

*Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram

natural bioactive, chemical compounds that have health promoting, disease preventing or medicinal properties. Nutraceuticals are found in a mosaic of products emerging from (a) the food industry, (b) the herbal and dietary supplement market, (c) pharmaceutical industry, and (d) the newly emerged pharmaceutical / agribusiness/ nutrition conglomerates. It may range from isolated nutrients, herbal products, dietary supplements and diets to genetically engineered "designer" foods and processed products such as cereals, soups and beverages (Dureja et al., 2003). It is often difficult to distinguish among nutrients, food additives and drugs independent of the matrix (food or pill) in which it is taken. A dietary supplement can sometimes be food like and other times drug like. One way to differentiate between food and drugs could be examining how people are exposed to them. Drugs can be found sometimes in foods, and can participate in the metabolism. However, these substances are not normally exposed in humans at the dose at which they exert their beneficial effect. Some dietary supplements are drug like when ingested in amount that could never be achieved in the diet, even though they are essential nutrients when ingested in smaller quantities

The nutraceuticals of plant origin may be considered a vital aspect of dietary disease - preventive food components. Careful studies are being done on the various phytonutrients for their role in the prevention of chronic degenerative diseases. Phytonutrient is the term that emphasizes the plant source of most of these protective, disease - preventing compounds. A true nutritional role for phytochemicals is becoming more probable every day as research uncovers more of their remarkable benefits. There are over 900 phytochemicals found in foods, and one serving of a fruit or vegetable may have as many as 100 different phytochemicals. Fruits and vegetables that are bright in color - yellow, red, green, blue, and purple usually have the most phytochemicals and nutrients. Research is showing that foods with phytochemicals may help to avoid disease and hypertension.

The sources of nutraceuticals include ginseng, spirulina, gingko biloba, amino acids, glucosamine, chondroitin and Aegle marmelos that are to be formulated and consumed or administered internally under the supervision of a qualified medical practitioner and intended for the specific dietary management of a disease or condition for which distinctive nutritional requirements, based on recognized scientific principles, are established by medical evaluation. The nutraceutical containing phytosterols are effective in lowering LDL cholesterol.

One finger pointing in this direction is a body of research that strongly links the importance of diet to health. Studies are showing that as we move away from the diet of our ancestors we succumb to "modern" diseases. Evidence of this can be seen in societies such as the Centenarian tribe that live in remote villages in the Andes Mountains and who still embrace traditional dietary practices. These people have been reported to live extraordinarily long lives that are free of such illnesses as cancer, heart disease and arthritis. Since few people live today as "naturally" as do the tribes in remote Andean villages, researchers have examined epidemiological evidence from modern societies for clues to the diet - disease connection. On the basis of such studies, biochemical researchers have identified certain phytochemicals that aid the body in maintaining health and combating disease. As an overall guideline, health authorities recommend that we consume diets rich in whole grains and fresh fruits and vegetables as well as reduce fat and

animal - protein consumption.

Recent research, however, has enabled scientists to group phytonutrients into classes on the basis of similar protective functions as well as individual physical and chemical characteristics of the molecules. Each class offers a unique kind of protection for the body. To keep the body healthy all classes of phytonutrients need to be consumed.

Some of them are listed as below.

**Terpenes**

Terpenes such as those found in green food, soy products and grains, comprise one of the largest classes of phytonutrients. The most intensely studied terpenes are carotenoids-- as evidenced by the many recent studies on beta carotene. The terpenes function as antioxidant, protecting lipids, blood and other body fluids from assault by free radical oxygen species including singlet oxygen, hydroxyl, peroxide and superoxide radicals. Terpenoids are dispersed widely throughout the plant kingdom, protecting plants from the same reactive oxygen species that attack human cells.

**Carotenoids**

This terpene subclass consists of bright yellow, orange and red plant pigments found in vegetables such as tomatoes, parsley, oranges, pink grapefruit, spinach and red palm oil. There are more than 600 naturally occurring carotenoids. Among the carotenes, only alpha, beta and epsilon carotene possess vitamin A activity. Of these, beta carotene is the most active. Alpha carotene possesses 50 percent to 54 percent of the antioxidant activity of beta carotene, whereas epsilon carotene has 42 percent to 50 percent of the antioxidant activity. The above - mentioned carotenes, along with gamma carotene and the carotenes lycopene and lutein, which do not convert to vitamin A, seem to offer protection against lung, colorectal, breast, uterine and prostate cancers. Carotenes are tissue - specific in their protection. Overall protective effects are therefore greater when all carotenes are taken together. Carotenes also enhance immune response and protect skin cells against UV radiation. Additionally, they "spare" the glutathionine Phase II detoxification enzymes in the liver that we rely on to safely eliminate pollutants and toxins from the body.

**Xanthophyll**

The xanthophyll type of carotenoids also include many interesting molecules. One xanthophyll, canthaxantin, was popular as a tanning pill a few years ago. It migrates to the skin and protects it from sunlight. Other important xanthophylls are cryptoxanthin, zeaxanthin and astaxanthin.

Xanthophylls are important because they appear to protect vitamin A, vitamin E and other carotenoids from oxidation. Evidence is emerging that xanthophylls are tissue specific. Cryptoxanthin, for example, may be highly protective of vaginal, uterine and cervical tissues.

**Limonoids**

This terpene subclass, found in citrus fruit peels, appears to be specifically directed to protection of lung tissue. In one study, a standardized extract of d - limonene, pinene and eucalyptol was effective in clearing congestive mucus from the lungs of patients with chronic obstructive pulmonary disease.

Additionally, limonoids may be specific chemopreventive agents. In animal studies, results suggest that the chemotherapeutic activity of limonoids can be attributed to induction of both Phase I and Phase II detoxification enzymes in the liver.

**Phenols**

These phytonutrients comprise a large class that has been the subject of extensive research as a disease preventive. Phenols protect plants from oxidative damage and perform the same function for humans. Blue, blue - red and violet colorations seen in berries, grapes and purple eggplant are due to their phenolic content. Bilberries, for example, are high in phenolic anthocyanidins and are red in color. The outstanding phytonutrient feature of phenols is their ability to block specific enzymes that cause inflammation. They also modify the prostaglandin pathways and thereby protect platelets from clumping.

**Flavonoids**

Phytonutrients of this phenol subclass enhance the effects of ascorbate - vitamin C. The biologic activities of flavonoids include action against allergies, inflammation, free radicals, hepatotoxins, platelet aggregation, microbes, ulcers, viruses and tumors. Flavonoids also inhibit specific enzymes. For example, flavonoids block the angiotensin - converting enzyme (ACE) that raises blood pressure: By blocking the "suicide" enzyme cyclooxygenase that breaks down prostaglandins, they prevent platelet stickiness and hence platelet aggregation. Flavonoids also protect the vascular system and strengthen the tiny capillaries that carry oxygen and essential nutrients to all cells. Additionally, flavonoids block the enzymes that produce estrogen, thus reducing the risk of estrogen - induced cancers. One way they do this is by blocking estrogen synthsase, an enzyme that works overtime in binding estrogen to receptors in several organs (Northrup, 1994). Flavonoids also appear to retard development of cataracts in individuals with inborn errors in sugar metabolism such as diabetes (Murray et al., 1994). Catechins differ slightly in chemical structure from other flavonoids, but share their chemoprotective properties. The most common catechins are gallic esters, named epicatechin (EC), epicatechin gallate (ECG), and epigallocatechin gallate (EGCG). All are found in green tea, Camellia sinensis, and are thought to be responsible for the protective benefits of this beverage.

**Isoflavones**

Phytonutrients of this phenol subclass come from beans and other legumes and are distant cousins of flavonoids. Isoflavones function much like flavonoids in that they effectively block enzymes that promote tumor growth. Isovlavones are fairly stable; they are not destroyed under normal cooking methods. Best known isoflavones are genistein and daidzein found in soy products and the herb Pueraria lobata (Kudzu). Pueraria has gained popularity as an aid for those who consume alcohol because it appears to alter the activity of alcohol detoxification enzymes, namely the speed at which alcohol dehydrogenase converts alcohol into aldehydes. The result is a lowered tolerance for alcohol and reduction of the pleasure response to drinking it.

Soya isoflavones have been shown to reduce the risk of some types of cancer, cardiovascular disease, osteoporosis and some menopausal symptoms. The major isoflavones in soya are genistein, daidzein and glycetin. They are usually found in the form of glycosides. The highest amount of isoflavones can be found in soya nuts and tempeh. Soy isoflavones provide beneficial effects for the prevention and treatment breast, uterine and prostate cancers. They also reduce the bioavailability of sex hormones that may stimulate tumor growth capacity in both men and women (Wei at al., 1995; Rao et al., 1997; Divi et al., 1997; Lee et al., 1991).

Next Issue

# H1N1 Flu (Swine Flu)

Excerpts from an article published by CDC*, USA in their website for public awareness

H1N1 (referred to as "swine flu" early on) is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009. Other countries, including Mexico and Canada, have reported people sick with this new virus. This virus is spreading from person-to-person, probably in much the same way that regular seasonal influenza viruses spread.

This virus was originally referred to as "swine flu" because laboratory testing showed that many of the genes in this new virus were very similar to influenza viruses that normally occur in pigs in North America. But further study has shown that this new virus is very different from what normally circulates in North American pigs. It has two genes from flu viruses that normally circulate in pigs in Europe and Asia in avian genes and human genes. Scientists call this a "quadruple reassortant" virus. The outbreak of human infection with this H1N1 influenza virus were intensified rapidly and more and more states have been reporting cases of illness from this virus. CDC and local and state health agencies are working together to investigate this situation.

**Signs and symptoms of this virus in people**

The symptoms of this new H1N1 flu virus in people are similar to the symptoms of seasonal flu and include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. A significant number of people who have been infected with this virus also have reported diarrhea and vomiting. Also, like seasonal flu, severe illnesses and death has occurred as a result of illness associated with this virus.

**Severity of illness**

It's not known at this time how severe this new H1N1 flu virus will be in the general population. In seasonal flu, there are certain people that are at higher risk of serious flu-related complications. This includes people 65 years and older, children younger than five years old, pregnant women, and people of any age with certain chronic medical conditions. Early indications are that pregnancy and other previously recognized medical conditions that increase the risk of influenza-related complications, like asthma and diabetes, also appear to be associated with increased risk of complications from this novel H1N1 virus infection as well.

One thing that appears to be different from seasonal influenza is that adults older than 64 years do not yet appear to be at increased risk of novel H1N1-related complications thus far in the outbreak. CDC is conducting laboratory studies to see if certain people might have natural immunity to this virus, depending on their age. Early reports indicate that no children and few adults younger than 60 years old have existing antibody to the novel H1N1 flu virus; however, about one-third of adults older than 60 may have antibodies against this virus. It is unknown how much, if any, protection may be afforded against the novel H1N1 flu by any existing antibody.

**Comparison of H1N1 flu to seasonal flu in terms of its severity and infection rates**

CDC is still learning about the severity of the

* Centers for Disease Control and Prevention, United States of America

novel H1N1 flu virus. At this time, there is not enough information to predict how severe this novel H1N1 flu outbreak will be in terms of illness and death or how it will compare with seasonal influenza.

With seasonal flu, we know that seasons vary in terms of timing, duration and severity. Seasonal influenza can cause mild to severe illness, and at times can lead to death. Each year, in the United States, on average 36,000 people die from flu-related complications and more than 200,000 people are hospitalized from flu-related causes. Of those hospitalized, 20,000 are children younger than 5 years old. Over 90% of deaths and about 60 percent of hospitalization occur in people older than 65.

So far, with novel H1N1 flu, the largest number of novel H1N1 flu confirmed and probable cases have occurred in people between the ages of 5 and 24-years-old. At this time, there are few cases and no deaths reported in people older than 64 years old, which is unusual when compared with seasonal flu. However, pregnancy and other previously recognized high risk medical conditions from seasonal influenza appear to be associated with increased risk of complications from this novel H1N1.

**Spreading of new H1N1 virus**

Spread of this H1N1 virus is thought to be happening in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. Sometimes people may become infected by touching something with flu viruses on it and then touching their mouth or nose.

At the current time, CDC believes that this virus has the same properties in terms of spread as seasonal flu viruses. With seasonal flu, studies have shown that people may be contagious from one day before they develop symptoms to up to 7 days after they get sick. Children, especially younger children, might potentially be contagious for longer periods. CDC is studying the virus and its capabilities to try to learn more and will provide more information as it becomes available.

H1N1 viruses are not spread by food. Pork or pork products also will not spread this virus. Eating properly handled and cooked pork products is safe.

**Risk chance from drinking water**

Tap water that has been treated by conventional disinfection processes does not likely pose a risk for transmission of influenza viruses. Current drinking water treatment regulations provide a high degree of protection from viruses. No research has been completed on the susceptibility of the novel H1N1 flu virus to conventional drinking water treatment processes. However, recent studies have demonstrated that free chlorine levels typically used in drinking water treatment are adequate to inactivate highly pathogenic H5N1 avian influenza. It is likely that other influenza viruses such as novel H1N1 would also be similarly inactivated by chlorination. To date, there have been no documented human cases of influenza caused by exposure to influenza-contaminated drinking water.

**Prevention & Treatment**

There is no vaccine available right now to protect against this new H1N1 virus. There are everyday actions that can help prevent the spread of germs that cause respiratory illnesses like influenza.

**Take these everyday steps**

- Cover nose and mouth with a tissue when you cough or sneeze. Throw the tissue in

the trash after you use it.

- Wash hands often with soap and water, especially after cough or sneeze. Alcohol-based hand cleaners are also effective.
- Avoid touching eyes, nose or mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- Stay home, if sick, for 7 days after symptoms begin or until symptom-free for 24 hours, whichever is longer. This is *to keep from infecting others* and spreading the virus further.

**The best technique for washing hands to avoid getting the flu**

Washing hands often will help protect from germs. Wash with soap and water or clean with alcohol-based hand cleaner. CDC recommends to wash hands -- with soap and warm water -- for 15 to 20 seconds. When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used.

**Initiatives after getting sick**

If H1N1 flu is identified with with influenza-like symptoms, including fever, body aches, runny or stuffy nose, sore throat, nausea, or vomiting or diarrhea, keep stay home and avoid contact with other people. Staying at home means that you should not leave your home except to seek medical care. This means avoiding normal activities, including work, school, travel, shopping, social events, and public gatherings

If you become ill and experience any of the following warning signs, seek emergency medical care.

**Warning signs that need urgent medical attention**

**In children**

- Fast breathing or trouble breathing
- Bluish or gray skin color
- Not drinking enough fluids
- Severe or persistent vomiting
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu-like symptoms improve but then return with fever and worse cough

**In adults**

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve but then return with fever and worse cough

**Medicines to treat infection with this new virus**

Antiviral drugs are prescription medicines (pills, liquid or an inhaler) that fight against the flu by keeping flu viruses from reproducing in the body. If get sick, antiviral drugs can make illness milder and make feel better faster. They may also prevent serious flu complications. During the current outbreak, the priority use for influenza antiviral drugs during is to treat severe influenza illness.

**Contamination & Cleaning**

**Duration of viable virus remain on objects (such as books and doorknobs)?**

Studies have shown that influenza virus can survive on environmental surfaces and can infect a person for up to 2-8 hours after being deposited on the surface. Influenza virus is destroyed by

heat (167-212°F [75-100°C]). In addition, several chemical germicides, including chlorine, hydrogen peroxide, detergents (soap), iodophors (iodine-based antiseptics), and alcohols are effective against human influenza viruses if used in proper concentration for a sufficient length of time. For example, wipes or gels with alcohol in them can be used to clean hands. The gels should be rubbed into hands until they are dry.

**Household cleaning**

To prevent the spread of influenza virus it is important to keep surfaces (especially bedside tables, surfaces in the bathroom, kitchen counters and toys for children) clean by wiping them down with a household disinfectant according to directions on the product label. Linens, eating utensils, and dishes belonging to those who are sick do not need to be cleaned separately, but importantly these items should not be shared *without washing thoroughly first*. Linens (such as bed sheets and towels) should be washed by using household laundry soap and tumbled dry on a hot setting. Individuals should avoid "hugging" laundry prior to washing it to prevent contaminating themselves. Individuals should wash their hands with soap and water or alcohol-based hand rub immediately after handling dirty laundry. Eating utensils should be washed either in a dishwasher or by hand with water and soap.

**CDCactivities**

CDC has implemented its emergency response. The agency's goals are to reduce transmission and illness severity, and provide information to help health care providers, public health officials and the public address the challenges posed by the new virus. CDC continues to issue new interim guidance for clinicians and public health professionals. In addition, CDC's Division of the Strategic National Stockpile (SNS) continues to send antiviral drugs, personal protective equipment, and respiratory protection devices to all 50 states and U.S. territories to help them respond to the outbreak.

**Epidemiological investigations**

CDC works very closely with state and local officials in areas where human cases of new H1N1 flu infections have been identified. In California and Texas, where EpiAid teams have been deployed, many epidemiological activities are taking place or planned including:

- Active surveillance in the counties where infections in humans have been identified;
- Studies of health care workers who were exposed to patients infected with the virus to see if they became infected;
- Studies of households and other contacts of people who were confirmed to have been infected to see if they became infected;
- Study of a public high school where three confirmed human cases of H1N1 flu occurred to see if anyone became infected and how much contact they had with a confirmed case; and
- Study to see how long a person with the virus infection sheds the virus.

** Note : Much of the information in this document is based on studies and past experience with seasonal (human) influenza. CDC believes the information applies to the new H1N1 (swine) viruses as well, but studies on this virus are ongoing to learn more about its characteristics. This document will be updated as new information becomes available.*

# CLINICAL EVALUATION OF 'GARBHPAL RAS' IN PREGNANCY RELATED GASTROINTESTINAL DISORDERS

Mishra, Deepa*, Sinha, Mukta** and Kumar, Vikas***

**Abstract-** *Great maestros of Ayrurveda described about pregnant woman and its care in detail. During this nine month long journey, many physiological changes take place in every system in woman including gastrointestinal tract. 'Garbhpal Ras', a herbo-mineral formulation advised during antenatal period for feto-maternal well being in ayurvedic texts. In present study 170 pregnant women registered and divided into 4 groups on the basis of trimester and presence/ absence of risk factors. These cases were further subdivided in to two groups control and trial. Aim of present study to assess the efficacy of 'Garbhpal Ras' on gastrointestinal disorders like flatulence, constipation, heartburn and abdominal pain related to pregnancy. It was observed that the incidence as well as severity of these ailments in 'Garbhpal Ras' treated women were less in comparison to control group. No sign of haemopoitic toxicity was observed. Biochemical blood parameters were also within range thus, showed non toxic nature of drug.*

**Keywords-** *Garbhpal Ras, gastrointestinal, pregnancy, flatulence, constipation, heartburn, abdominal*

**Introduction-** Pregnancy is a very unique period in the life of a woman, and Ayurveda has very fair and quality recommendation for obstetric care. Some gastrointestinal changes take place in child bearing women due to pregnancy, results in indigestion, constipation heart burn and flatulence. These ailments are weird to pregnancy and are called *'garbhopadravas'*, they are nausea, anorexia, vomiting, fever, oedema, anaemia, diarrhoea (H.S.Tri.51/1). *Kashyap* emphasized that appropriate management of disorders during pregnancy is obliging protection and development of both mother and fetus (K.S.Khil.10/3). According to author of *'Ras Chandanshu'* the text of 17th century, a panacea *'Garbhpal Ras'* remarkably cures various pregnancy induced minor ailments (*Rasyogsagar*, 1907-1910; *Chhangadi*, 1999; *Goyal, et al.*, 1988).

*'Garbhpal Ras'* contains minerals like *'Hingula'* (Cinnabar Hgs), *'Nag'* (lead Pb), *'Vang'* (Tin Sn) and *'Loh bhasma'* (Iron Fe). Herbal contents of *'Garbhpal Ras'* include *'Dalchini'* (*Cinnamomum zeylanicum*), *'Ela'* (*Elettaria cardmomum*), *'Tejpatra'* (*Cinnamomum tamala*), *'Shunthi'* (*Zingiber officinale*), *'Marich'* (*Piper nigrum*), *'Dhanyak'* (*Coriandrum sativum*), *'Chavya'* (*Piper retrofractum*), *'Krishna jeerak'* (*Carum bulbocastanum*), *'Draksha'* (*Vitis vinifera*) and *'Devdaru'* (*Cedrus deodara*). All ingredients in same quantity except *'Loh bhasma'* (half quantity then others) were

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triturated in extract of *'Vishnukranta'* (*Clitoria ternatea*).

Many dilemmas exist when assessing the impact of a drug on child bearing woman and her developing fetus. So making it moral, *'Garbhpal Ras'* was evaluated for acute (Mishra, *et al.*, 2008), sub-chronic (Mishra, *et al.*, 2008), and chronic toxicity (Mishra, *et al.*, 2009a) on animal model. It was also evaluated for teratogenic effects (Mishra, *et al.*, 2009b), if any, in dams and was found safe at therapeutic doses (Mishra, *et al.*, 2008, Mishra, *et al.*, 2009a., Mishra, *et al.*, 2009b; Mishra, *et al.*, 2009c).

The main object of present study is to assess the efficacy of *'Garbhpal Ras'* in âilments like heartburn, constipation, flatulence, abdominal pain as majority of woman experience ailments related to gastrointestinal tract during the course of pregnancy.

**Materials and Methods**

**Inclusion Criteria:** Women belonging to age group 18 to 38 years, having amenorrhoea due to pregnancy (as soon as pregnancy detected to fifth month of amenorrhoea), history of spontaneous abortion, history of intra uterine death/still birth, history of preterm delivery or any other obstetric problem during previous pregnancies were included for study.

**Exclusion Criteria:** Women having essential hypertension, severe aneamia, severe degree of pregnancy induced hypertension, diabetes mellitus, hypo/ hyperthyroidism, liver or renal disorder were excluded.

**Criterion of selection of drug:** The drug has been selected on the basis of authentic reference (*Rasyogsagar*, 1907-1910). *'Garbhpal Ras'*, a panacea for pregnancy induced minor ailments. It ensures well being of mother and fetus, as mentioned in *'Ras Chandanshu'*.

**Grouping of patients:** One hundred seventy cases were randomly selected and registered from out patient department, *Prasuti Tantra*, Sir Sunderlal Hospital, BHU, Varanasi. At the time of registration written consent for becoming a volunteer of this study was taken from each pregnant woman.

All the registered cases have been categorized as follows

**Group 1** : Patients registered from first trimester having normal course of pregnancy with no specific obstetric or medical history.

**Group 2** : Patients registered from first trimester with risk factors like history of spontaneous abortion, pregnancy induced hypertension in previous pregnancy, preterm delivery, previous caesarean section within two years, elderly primigravida, TORCH (Toxoplasmosis, Rubella, Cytomegalovirus, Herpes) infection and on anti-tubercular treatment.

**Group 3** : Patients registered from second trimester having normal course of pregnancy with no specific obstetric or medical history.

**Group 4** : Patients registered from second trimester with risk factors like history of spontaneous abortion, pregnancy induced hypertension in previous pregnancy, preterm delivery, previous caesarean section within two years, elderly primigravida, TORCH infection and on anti-tubercular treatment.

This type of group division in the study was done because effect of *Garbhpal Ras* was evaluated on various parameters and present work is only a part of entire study.

Each group is further subdivided into control and trial:

*Control group* ($C_1$,$C_2$,$C_3$,$C_4$): Patient received routine medication iron, calcium and folic acid

as advised in *'Prasuti'* OPD.

*Trial group* ($T_1$,$T_2$,$T_3$,$T_4$): Patient received *'Garbhpal Ras'* (120 mg bid with milk and *'munakka'*) along with iron, calcium and folic acid. Maximum duration for drug administration was 6 month.

Criteria of scoring and assessment (Table No.1)

**Parameter studied**

Effect of *Garbhpal Ras* has been assessed on pregnant women considering the following-

1. Pregnancy induced gastrointestinal ailments (heart burn, constipation, flatulence, abdominal pain)
2. Biochemical and haematological parameters (Haemoglobin, TLC, DLC, Fasting blood sugar, Blood urea, Serum creatinine, Serum bilirubin, SGOT, SGPT, Alkaline phosphatase, Serum protein, Serum albumin), Urine (routine and microscopic) and Ultrasonography (any gross congenital anomaly)

All the patients were registered till 5th month of pregnancy. Pregnancy induced gastrointestinal ailments mostly appear in 2nd trimester and develops as pregnancy advances, so these symptoms were analyzed from 5th month of pregnancy onwards and followed up on monthly basis. Heamatological and biochemical test were advised to patients before treatment and at 9th month gestation.

**Statistical analysis-** All data were expressed in Mean ± SEM (standard error of means). Symptoms were compared with chi square test (MSTAT). Significant changes were observed in haematological and biochemical parameter through paired and unpaired 't' test.

**Result and Discussion-** Results have been assessed mainly on the basis of absence/ reduction of incidence or relief in ailments (symptoms), untoward effect on haematological and biochemical blood parameters, if any.

***Effect of Garbhpal Ras in constipation*:** Many women complain constipation during pregnancy. The influence of progesterone on smooth muscle during pregnancy slows peristalsis to improve the absorption of nutrients. This is the major cause of pregnancy induced constipation. Pressure from the growing uterus, inadequate fluid intake, a lack of fiber in diet and possibly stress contributes to pregnancy induced constipation. The end results of this constipation can be rectal disorder such as haemorrohoids and fissures (Buregie 2006). The number of cases of constipated women were increased in consecutive months in both the groups. But at 5th month average mean was 0.06 which increased up to 0.22 in trial group, however in control group average mean was 0.16 at 5th month which increased up to 0.43 at last month. It was observed that in 5th month, 6% pregnant women suffered with mild degree of constipation in *'Garbhpal Ras'* treated group in comparison to 15.71% women of control group. Similarly in 6th month only 10% and 2% cases face mild and moderate degree of constipation in *'Garbhpal Ras'* treated group while it was 17.14% and 4.29% in control group. There was not a single case of trial group suffered from severe degree of constipation in last month; however 2.86% cases of control group had severe degree of constipation. Occurrence of constipation was less in *'Garbhpal Ras'* treated group may be due to coriander and black pepper (Vasudevan *et al.*, 2000; Shukla, 1984). It improves digestion, thus prevent constipation. Ginger (in some Ayurvedic formulation) helps to relieve constipation (H.S.Tri. 51/10). Ayurvedic texts always advice to take metallic preparations along with milk and milk products, which makes these elements easily assimilative, eliminating their harmful effects and enhancing

their biocompatibility (Kumar *et al.*, 2005). *'Garbhpal Ras'* was prescribed with milk (and *munakka*) as *'anupan'*. Because of that pregnant women remain free from problem of constipation and so with flatulence and pain abdomen (due to constipation).

***Effect of Garbhpal Ras in flatulence*:** Flatulence is caused by the same mechanism that cause constipation. Table (3) shows that problem of flatulence occur in less number of pregnant women in trial group. In this group 78% women were free from this complaint, while in control group 72.86% women had no complaint of flatulence in 5th month. Although cases of flatulence increased during follow up period in both the groups, degree of severity was more in control group in the last month (severe degree of flatulence observed in 8.57% women of control group and 4% women of trial group). Improved results in trial group may be due to properties of contents *Garbhpal Ras*. Black cumin alleviates flatulence, dyspepsia and diarrohoea. Coriander used as carminative and for general digestive aid, increases gastric secretions (Vasudevan *et al.*, 2000). Black pepper also promoted digestive juice secretion (Shukla, 1984). Improvement in digestive power prevents flatulence. Hence it is proved that pregnant women taking *'Garbhpal Ras'* were less likely to suffer with this problem and thus abdominal pain.

***Effect of Garbhpal Ras on heart burn*:** Gastro-oesophageal reflux disease is common during pregnancy, affecting 30-50% of all patients. These patients report that worsening of the symptom occurs during meals and at bed time. The aetiological factors include a decrease in lower oesophageal sphincter pressure due to hormonal change induced by the pregnancy, delayed bowel transit moment and possibly the physical space occupied by gravid uterus. However pregnancy induced heart burn resolves soon after delivery (Biko 2007). Incidence of heart burn in 5th month of pregnancy in *Garbhpal Ras* treated group was observed less in respect to control. Improvement was observed in cases of heart burn as average mean decreased in consequent follow ups in both the groups. It was 0.42 at 5th month and 0.20 at 9th month in *'Garbhpal Ras'* administered group and 0.46 and 0.36 at 5th and 9th month respectively in control group. Cardamom gastro protective efficacy has been reported (Jamal *et al.*, 2006), may have positive effect on heart burn. *'Anupan'* of milk and *'munakka' (sheeta virya)* also help to improve heart burn to some extent (Table 4).

***Effect of Garbhpal Ras on abdominal pain*-** Exact cause of abdominal pain in pregnancy may be difficult to diagnose. Established common causes in the absence of maternal and fetal distress are urinary tract infection and constipation. Less occurrence of abdominal pain in *Garbhpal Ras* administered group (9%) was observed with respect to control group (12.86%) in 5th month. Average mean value of cases of abdominal pain of trial group was found less in each follow up with respective control. 90% and 82.86% cases in *Garbhpal Ras* administered group and control group respectively have no abdominal pain at 9th month. In last month false labour pain may occur (true labour pains are not included). In control group 8.57% cases had moderate and severe degree of abdominal pain in 9th month and 8% had mild and moderate degree of abdominal pain in trial group . Abdominal pain in pregnancy may be due to the anatomical and physiological changes of the pregnant state or may be totally unrelated to pregnancy. Some conditions that are associated with the pregnant state such as urinary tract infection, flatulence and constipation may present with abdominal pain. These common causes of abdominal

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# AN APPROACH TO UNDERSTANDING OF

## *GRAHA ROGAS*

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*Graha rogas* are separate entity from other general disorders. Their cause, mode of onset, symptoms, severity and management are entirely different from other disorders which we come across in day- to-day practice. They constitute potent pediatric disorders which are rapidly progressive, difficult to diagnose and carry high mortality and morbidity rates. All such disorders are grouped under the heading of *Graha rogas*.

These are certain challenging disorders in the pediatric field of which causes are unknown. Contemporary modern science also faces such problem which they refer as idiopathic origin. In our science such entities are attributed to *Diavika Shakti, Poorvajanmakruta papam,* or *Adharma palanam* etc. *Jataharni, Matrakaya, adhi bala vyadhis, Janapadadwamsa rogas* and *Graha roga* may be included under this group.

The main reason for *graha aavesham* is the failure to follow the principle laid down in *swastha vritha*. In other words, unhygienic *achara* and *viharas* followed by child and mother. Word meaning of *Graha* is to cease or grasp and attack the *Shishu* suddenly. *Vaghbatta* opines that *Graha rogas* are the diseases present in the hidden form causing fatal effects and having capacity to change their size and shape and requiring both *yukthi* and *diavapashraya chikitsa*. They are not visible by naked eye and require special supportive aid for their visualization. They are only appreciated by experts in the science who are having *sookshma drusti* (special minutest visual power). Further it is also described that *graha rogas* should be treated by using the knowledge of the *apthas* because for an expert physician also their management is difficult.

Above facts confirm that *Grahas* are unicellular organisms, microscopic in nature which can be visualized with special vision (microscope). They can change the shape and size according to the situation while they are passing through different phases of their life cycle like egg, larva, and spore. (Recent research studies confirm that AIDS virus change its shape at different phases of treatment). Their treatment most of the times requires an empirical approach. These facts give a fair idea that they can be better compared to unicellular microscopic pathogens. Description of microscopic pathogens in modern microbiology also reveals the same. While treating infective disorders modern science also most of the time relays on past and present prevalence of organism in that locality (*Apthas*).

References regarding *graha rogas* are available in Vedas. Word *grahi* is mentioned

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in *Atharva Veda*. *Sayana* metioned the word *rakshasa* and demons which destroys fetus and neonate. *Maha bharata* explained the morphology of the *grahas* for the first time. *Kaushika sutra* and *skanda Bhaishajya* also mentioned about *Graha rogas*. Significant contribution was given by *Agnipurana* which explains 38 *Grahas*. *Grahas* attacking in fetal life, infancy & pediatric age group are explained. *Markandeya purana* explains 16 demons out of which 8 are male and 8 are female.

According to mythological concept these *Grahas* are produced by *Eshwara*, the supreme power which controls this universe. The purpose is protection of his son *Ganesha*. *Skandha graha* is produced by *Shiva* where as *skanda apasmara* by *Agni*, *Niagmesha* by *Parvati*, and *Mukhamandika & Pootna* by *Kartikeya*. What-so-ever may be the case *Grahas* are produced with good intention of protection of child *Ganesha* from enemies. Micro organisms although they cause disease, they live back certain immunity inside the body against then same species by stimulating the immune system.

*Sushrutha* explains 9 *Grahas* including 3 *purushas* and 6 *stri Grahas*. *Astanga samghraha* explains 12 *Grahas* with a slight change with nomenclature. *Kashyapa samhita* summarized *Grahas* under 10 varieties & *Ravati* has been given more importance. Other scholars also mentioned about *Graha roga* just like *samhitakaras*. Different number of *Graha rogas* as mentioned by different *Acharyas* suggests prevalence of certain infections and discovery of more and more infectious disorders with change in time. *Purusha* and *stri Grahas* may be indicating pathogens which vary in their potency and severity. (Gram positive or –ve organisms).

Contribution of *Mahabharata* in explaining morphology of different *Grahas* was significant. *Skanda Graha* is having *divya teja*, *swastha shareera*, *putra* of *maha deva Agni & Ganga* may be suggesting a pathogen which is very potent having complete cell structures and able to survive in aquatic medium and able to tolerate heat and cold. Properties of polio virus also match with same. *Skanda-apasmara* is one which is having abnormal body postures with deviations of mouth, trunk, etc, resemble with different pathogens causing convulsive disorders. *Niagmesha* is one which looks like goats face. Hyperextension of the neck is striking feature of *mesha* which is very well correlated with different pathogens causing CNS infections with fever (Meningitis).

*Sakuni* which is *akasa vihari* having long body, may be pointing towards an aerobic bacteria. *Mukhamandika* which resides near *goshala* (cow shed) may be a acid resistant bacteria or pathogen which uses cow as definite or indefinite host for its transmission. *Pootana* which reside in *soonyagaras* (vacuumed areas) may be anaerobic bacteria which can survive without oxygen. It is also told that it increases during *meghakalam* which give ideas of viruses which grow in humidity. *Sheetapootana* which grows in *mudga*, *odana*, *sura*, like fermentating substances may suggestive of some dangerous fungi.

Causes for which *Grahas* enter inside the body are mainly three. They are *Himsa Rathi* and *Archana*. Some of the pathogens

enters the body (it may be a virus bacteria fungi parasite) with only intention of causing the *Himsa* that is disease. They enter through different portals and cause systemic diseases.

Some pathogens enter the body in search of a definite or indefinite host in order to complete their life cycle. After completing the different phases of life cycle they go out of the body. In the process they may cause the disease but it is not intentional. They use the host only for their reproductive purpose, which can be termed as *Rathi*.

Some micro organisms enter the body only for getting the nourishment and shelter. That is *Arccahana*. In prognosis also disease causing *(Himsa)* is incurable , Which use human as a host for reproduction is difficult to cure and attacking with intention of nourishment is easy to cure. Modern micro biology also explains, micro organism enter the body with only these three intentions

Etio pathogenisis decribed for the *graha rogas* greatly differs with the general disorders. These disorders are not primarily due to the *doshik vitiation*. They are *Aghantuja* in nature and cause *Achaya prakopa*. Hence *Charaka* describes *Deva* is the cause.

Causative factors contain two aspects. First one is related to the unhygienic condition which includes violating the rules and regulations of lifestyle, child and mother taking food in the broken bronze vessel, not keeping the surrounding clean. etc. *Dhatri* and mother indulging in excessive sex, eating, sleep, exercise harmful activities and unreligious conduct are also the other reasons.. Second one related to the psychological make up of the child in which child is carried to lonely and inauspicious places, fearful due to beating, threatening., and not respecting the saints, teachers, guests, by disobeying their advice as they were the main source of knowledge in those days.(consultation of today's practice) This shows the psychosomatic nature of the *graha rogas*. Further it is justified in symptom latology, and treatment.

All *samhita karas* accept the fact that entry of the *Graha* cannot be .appreciated like a image in a mirror, entry of heat in to sun light, soul entering in to the body. As we know infectious disorders are first identified by their symptom presentation. Before that they spend short or long incubation period which run unnoticed. So comparing the *graha rogas* with the infectious disorder can be well justified.

Vitiation of breast milk by *graha* is the only contribution of *Kashyapa*. Taste of the breast milk gets altered to *katu thiktha* in *Skanda* while swadu and katu in case of *putana*. All the three *doshas* are vitiated in case of *putana*. *Shri krishnsa* also afflicted with *Putana* who fed *Krishna* with poisonous milk. In this regard explanation of milk vitiation by *Grahas* may reflects contra indicated condition for breast milk feeding in some of the infectious disorders like AIDS, tuberculosis, TORCH infections.

*Poorva rupas* mentioned for *Graha rogas* are excessive crying and fever. Modern science also believes that 90% of the infectious disorders are associated with the fever. As baby shows the paucity of the symptoms it uses same symptom for many disorders. Horrible shape and size of the *Grahas* may also make the baby fear leading to cry.

Symptoms described are related to different system. Vaccant stare, unconsciousness irritability, hypotonia, rolling of the eyeball ,jerky

movements of the head, change in the voice and speech, incontinence of the urine and fecal material, twisting of the eyelids, facial muscle tremor, defective posture, dribbling of the saliva are symptoms related to the different infections of the central nervous system.

Diarrhea, distention of the abdomen, vomiting, thrust, constipation, and stomatits are mainly the outcome of infection of the digestive system. Similarly cough, hiccough grunting are the striking features of severe infections of the respiratory system. Infection of the skin leads to change in the color of the skin, blisters urticaria and prominent veins over the abdomen. Involvement of the mind is also appreciated by fear, pulling of the hairs, laughing without reason, violent, biting the lips etc.

Points of interest lie in the fact that different bad smell is emitted in different *Grahas*. Apart from *unhygienic condition, most common* pathological cause for bad odor from the body surface and urine is metabolic disorders. Modern science also explains metabolic disorders emitting different smell like phenyl ketonuria etc. Can we compare the *graha rogas* to certain metabolic disorder is matter of discussion.

**Treatment aspect:**

As *Graha rogas* are having both involvements of Physical & Psychological entities our *Acharyas* describes both *Daiva & Yukti-vyapashrya chikitsa*. *Sushrutha* also describes blind treatment without considering the diagnosis. Modern contemporary science also many times practices empherical treatment in case of infections without considering the organism involved. *Sushruthas* opinion of *Aptha vakya palana* also implies the same.

Isolation of child is first line of treatment. Ceased child should kept in separate room. This room should be cleaned repeatedly twice or thrice. Fire should be kept on burning with *sarshapa taila* & water should be sprinkled to avoid dust. Those drugs which are having strong aromatic smell & antiseptic properties and having *Katu & Kashaya Rasa* are kept inside the room in the form of ash etc. Latest medical researches also prove isolation of infected patients is the best method of prevention of infection in the society. Strong aromatic smell act as bacteriostatic & keep away the infection. Fomites may be important carriers, so strict aseptic measures were followed by our *Acharyas*, which no away defer from modern approach.

When epidemic infective disease spread in a society, its control is a real challenge. Carrier may be in the form of fomits, animals, insects or person. By realizing these facts our *Acharyas* explains strict prohibition for the entry of attendees inside the room. They also say strict hygienic & day to day regimen to the attenders. An unhygienic attender may easily spread the disease. Hence this looks to be extreme degree of precaution to prevent infection in the society by our *Acharyas* which people of social medicine today also follows.

Bath to infected child is one more contribution. Although modern science not much specific about bath, our *Acharyas* describes bath as one of the important preventive method. Keeping the body clean & maintain Ph over the surface of the skin hence keeping pathogens away may be the idea. Drugs used in this regards are also very specific like *Bala*, *Nimba*, *Agnimantha*, *Paribhadra*, *Shonaka*, *Apamarga* etc. Which has got very good antiseptic properties. *Vaghbatta* also mentioned special type of bath to child, mother & *Datri* called as *Snapana*.

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# PHARMACO VIGILANCE
# FOR AYURVEDIC DRUGS - AN OVERVIEW

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## Introduction:

Now a days Pharmaco Vigilance is given more concentration at the national and international levels because the clinical trails involve several thousand patients at most; less common side effects and adverse drug reactions are often unknown at the time of a drug enters to the market. Even very severe adverse drug reactions like liver damage, renal damage etc. is often undetected because study populations are very small. Post marketing Pharmaco Vigilance uses tools such as data mining and investigation of case reports to identify the relationship between drugs and adverse reactions.

As per World Health Organization (WHO) the Pharmaco vigilance is defined as it is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problems particularly long term and short term side effects of medicines.

## Etymological Derivation of Pharmaco Vigilance:

Pharmaco Vigilance is derived from two wards i.e- Pharmacon (Greek word) which means 'drug' and Vigilance (Latin word) which means 'to keep awake or alert'.

Generally speaking Pharmaco Vigilance is the science of collecting, monitoring, researching, assessing and evaluating information from health care providers(doctors, nurses, health workers etc.) and patients on the adverse effects of medications, biological products, herbal products and traditional medicines with a view to-

- identifying new information about hazards associated with medicines

- preventing harm to patients

Pharmaco Vigilance is particularly concerned with adverse drug reactions (ADRs). It is gaining importance for doctors and scientists as the nature of stories in the mass media of drug increases.

## Pharmaco vigilance and Ayurvedic perspective:

*Ayurveda* the science of life has described the concepts of diagnosis and therapy of diseases as well as ways to maintain positive health. However the technical term pharmaco vigilance does not attribute in any of the classical literature, the strength of pharmaco vigilance is vivacious and is emphasized repeatedly in *Brihatrayees*. The foremost goals of pharmaco vigilance, namely to improve patient care and safety in relation to drug use, and thus promote rational drug use are persistent themes of *Ayurvedic* pharmacology and therapeutics. The use of *Ayurvedic* drugs is

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popular in India and becoming popular in other countries in recent times. Associated with this increasing use, are growing concerns about the safety of *Ayurvedic* drugs.

**Adverse reactions in Ayurvedic drugs**

There is a popular misapprehension in the public that *Ayurvedic* drugs are devoid of side effects. However, *Acharya Charaka* has described in his treatise *Charaka samhita* about all the adverse reactions to medicines when they are prepared or used improperly. Hence the physician has to give more attention for the factors like *prakrithi* of the plant part (physical appearance), its *guna* (properties), Karma (actions), desha (habitat), *ritu* (season in which it grows), grahitam (harvesting condition), *nihitam* (method of storage) and *upaskritam* (pharmaceutical processing) etc which must be considered while selecting the starting drug material that goes to form the medicine. To minimise the adverse events and drug reactions *Charaka* also described some other host related factors which are to be considered when selecting medicines such as*[1] Patient's body constitution, age, disease, tolerance, psychological state, digestive capacity, capacity of exercise, tissue quality, body physical proportions and strength etc.

Patient's body constitution, age, disease, tolerance, psychological state, digestive capacity, capacity of exercise, tissue quality, body physical proportions and strength etc.

In Ayurveda there are prescriptions of *rasa oushadhies* (metals and minerals) as medicines given as bhasmas and vatis or in combination with herbs as herbo mineral formulations. Manufacturing procedures for these formulations are inflexible, and adverse reactions are described when precautions are not taken while manufacturing and administrating these medicines. Although these metallo mineral drugs are very effective in small dose are being prescribed since centuries by the *Ayurvedic* physicians in India, doubts about their long term safety has come up due to the presence of toxic metals in them. Increased prescription and demand of *Ayurvedic* drugs globaly causing short cut method of its preparations and purificatory processing may certainly causes adverse reactions.

In this regard *Charaka* says that, even the most useful drug can act like a poison if used imprecisely. On the other hand even a strong poison can become an excellent medicine if administered properly. He also emphasises the drug adverse reactions may be possible in certain conditions*[2] . States about the adverse drug reactions are possible when the medicine is taken in wrong time, insufficient dose or over dose, expired in potency not impregnate *(na cha bhavitam)* and improper processing etc.

**Need of Pharmaco Vigilance for Ayurveda drugs:**

Since ages an *Ayurveda* system is being practised in India. In ancient times, the *Ayurvedic* physicians prepared medicines for their patients themselves. Whereas now a days, only some of the practitioners are only following this practice and production and sale of drugs has become formalised into a thriving industry. There are two kinds of *Ayurvedic* drugs are available in the market: one is classical formulations and the other one is patent & proprietary formulations. Due to the increases demand and commercialization has brought with it many challenges about safe use of *Ayurvedic* medicines, bringing in to focus

the need for formal pharmaco vigilance programs in the field.

The ADR to *Ayurvedic* drugs reported or recorded in India is insignificant. Moreover there is strong motion that *Ayurvedic* drugs are safe could be the reason due to lack of knowledge about the concept and importance of pharmaco vigilance in *Ayurveda* among the practitioners.

Since there are considerable social and economic consequences of adverse drug reactions and the positive benefit/ cost ratio of implementing appropriate risk management there is a need to engage health-care professionals and the public at large, in a well structured programme to built synergies for monitoring adverse drug reactions of *Ayurveda* medicines.

**History of Pharmaco Vigilance:**

Drugs for new safety issues came in to being following the unpredicted teratogenic out come from the use of Thalidomide in the mid 1960 in USA. In India the awareness regarding monitoring the drug safety and adverse reactions (Pharmaco Vigilance) started in the year of 2006 for modern medicine and for *Ayurveda* drugs from 2008. For *Ayurveda* drugs Dept., *AYUSH*, Health and Family Welfare Dept. Govt. of India took initiation and made Pharmaco Vigilance Programme in different levels i.e- National Pharmaco Vigilance Resource Centre (NPRC), Regional Pharmaco Vigilance Centre (RPC) and Peripheral Pharmaco Vigilance (PPC).

Institute of Post Graduate Training and Research in *Ayurveda* (IPGT&RA), Jamnagar, Gujrat, India has considered as NPRC followed by eight RPCs and thirty PPCs are considered by Dept. of AYUSH.

**Detection of Adverse Reactions:**

- The concept and terminologies related to Adverse Reactions (AR) monitoring are to be included in the *Ayurvedic* curriculum precluding accurate identification of adverse reactions.
- Methods to study drug safety problems have to be evolved adequately in *Ayurveda*.
- Need easily accessible information related to medicines.
- Education about reporting and collection of reports related to drug safety.
- Quality assurance and controlling manufacture of *Ayurvedic* Medicines.
- Identification and action against counterfeit and spurious drugs.

**Prevention of Adverse Reactions:**

- Adequate communication between the practitioners and policy makers to report the AR
- Making easily available unbiased drug information including both classical and patent formulations.
- Adequate awareness about the necessary ARs of *Ayurvedic* drugs among the patients
- Education of the concept of pharmaco vigilance in *Ayurveda* and Modern medicine at UG and PG level.
- Availability of updated *Ayurvedic* formulary for the needful drug information.

**Reporting System of ADR, AE etc:**

The reporting system of ADR & AE should be as follows-

1. PPC – The notification or complains received from the notifier in the notification slip is to be recorded(statistically speaking 30 ADR in about 1000 patients who visited each month would be quite easy to record). Completed ADR forms (forms can be downloaded from the web site of www.avpayurveda.com) shall be forwarded to the concerned RPCs and mailed to nprcasu@gmail.com at the end of each month under the intimation to concerned AYUSH authority.

2. RPC – Each RPC should

- Collect and scrutinize the data received from PPC
- Perform causality assessment of all forms received every month
- Submit a monthly report prepared in a specific form to be forwarded to NPRC every month
- Report any alarming ADRs within 24 hrs to NPRC along with supporting evidences

3. NPRC- It have the following roles-

- Collate the data received from RPCs and its own centre
- Verify and validate the causality analysis
- Prepare a monthly information sheet(MIS) reports in a specified format
- Passed on a final data to NPTAC for analysis and passed on the data to AYUSH dept. for further necessary action.

**Certain Terms used in Pharmaco Vigilance:**

**1. ADRs(Adverse drug Reactions) -** A response to a drug which is noxious (harmful/toxic/dreadful etc) and unintended(not intentionally) and which occurs at normal dosages used in man for the prophylaxis, diagnosis or therapy of disease or for the modification of physiological functions

**2. A.E(Adverse Event)** –Any untoward Medical occurrence that may be present during treatment with a pharmaceutical product but which does not have a causal relationship with this treatment

**3. Causality Assessment-** Causality Assessment is the explanation or establishment of the relation between cause(drug) and event(ADR/AE)

**4. Signal** – Reported information on a possible causal relationship between an adverse event and a drug, the relationship being unknown or incompletely documented previously. Usually more than a single report is required to generate a signal, depending upon the seriousness of the event and quality of information. This describes the first alert of a problem with a drug.

**5. Notifier** – Any person who suspects to have experienced / observed any Adverse drug reaction and informs any participating Pharmaco Vigilance centre about it.

**6. Reporter** – Any health care professional (doctor, nurse, pharmacist, PHC workers etc) reporting ADR in a prescribed reporting form.

**Conclusion:**

Keeping in view of eternal and

To Page 29

# NAGARJUNA TO ADDRESS KOREAN HEALTH HAZARD

Adding up further to the global acknowledgment and appreciation for the Indian Medical System of *Ayurveda*, a group of 10 delegates headed by The Honorable Mayor, of Jinan County of South Korea, Mr. Song Yung Sun arrived in Kerala.

Jinan County, with Red Ginseng cultivation as the main agriculture is adversely affected by some Allergic diseases on its residents. The studies conducted by the Korean team revealed that almost 10% of the population is suffering from different kinds of allergies extending from simple itching on the skin to such a level restricting even their routine activities.

The Honorable Mayor expressed that, "The Desire for Total Cure Without Side Effects" is what had shown their way towards *Ayurveda* and subsequently Kerala.

The team visited Nagarjuna Ayurvedic Centre Kalady, the treatment division of Nagarjuna Ayurvedic Group, one of the leading runners in the field of Ayurvedic manufacturing and treatments in Kerala. The delegation was mediated by Mr. Park in Soo, Representative Director, Ayurveda Korea, a business associate of Nagarjuna Ayurvedic Group in Korea. Mr. Jathavedan Nampoothiripad, Executive Director, Nagarjuna Ayurvedic Centre Ltd headed the team from Nagarjuna.

A detailed account on the Causes and Management of Atopy in Ayurveda was given by a team of Doctors including Chief Physician of Nagarjuna Dr. C S Krishnakumar with the company of Dr. Ragesh D Cheeran, Senior Manager (Marketing) and Dr. K Krishnan Nampoothiri, Senior Physician, from Nagarjuna Ayurvedic Centre Ltd.

The presentations were based on the study conducted by the Nagarjuna team, together with the CEO, Mr. N V Subrahmanyam, and Dr. Ragesh D Cheeran during their visit to Jinan County earlier this year on March 12th. The visit was also in connection with the Seminar on Ayurveda and Yoga for Well Being in association with AYUSH, ICCR and the Indian Embassy.



*Mr. Jathavedan Nampoothiripad, Executive Director, Nagarjuna Ayurvedic Centre Ltd exchanging MOU withThe Honorable Mayor, of Jinan County of South Korea, Mr. Song Yung Sun and Mr. Park in Soo, Representative Director, Ayurveda Korea*

The Korean team enunciated their desire to work along with the Research and Development wing of Nagarjuna and invited a team of Doctors and Ayurveda Panchakarma therapists to Jinan County on an association with Nagarjuna through the various Health centers and Atopic Specialty Clinics at Jinan County.

Areas of association identified for this purpose and MoU were signed for association in areas like

- Starting atopy clinic in Jinan County
- Exploring the possibility of distributing Ayurvedic Products in Jinan County
- Exploring possibility of distributing herbal products like Red Ginseng from Jinan County, subject to approval and licensing from Ayush and Drugs authorities in India

Garbhpal Ras
From Page 14

pain/ discomfort are less likely to occur or relieved while taking *'Garbhpal Ras'* judiciously.

Pregnancy is a period with changes, so *Vata* is normally emphasized. Metabolism and warmth in the body is also increased so *Pitta* is usually increased. And the size of the body is increased so *Kapha* is also normally increased. In each woman these changes are interplaying according to her and her baby's constitution, and her environmental influences. Many ingredients of *Garbhpal Ras* have *tridosh shamak* properties they stabilized *vata, pitta* and *kapha* properly during pregnancy course. *Marich, Dhanyak, Krishna jeerak* are described as *deepaniya, pachniya, aruchinashak* herbs in different Ayurvedic text. They enhance digestive system during pregnancy, results in low occurrence of pregnancy induced gastrointestinal ailments.

Digestive herbs like coriander and black pepper also prescribed to cure *'aamatisar'* in our texts (K.S.Khil. 10/70). Piperine (P.longum, P.nigrum, P.retrofractum) has immunomodulatory and cytoprotective activity (Pathak *et al.,* 2007, Choi *et al.,* 2007), thus pregnant women taking *'Garbhpal Ras'* have better immunity to overcome several diseases. Coriander may also help to overcome stress of pregnancy which many women experiences during pregnancy. Experiments in mice support use of coriander as an anxiolytic (Emamghoreishi *et al.,* 2005).

***Effect of Garbhpal Ras on heamatological parameters*** : In the cases registered from first trimester, the level of haemoglobin was found significantly increased in pregnant women administered with *'Garbhpal Ras'* as well as in cases of control group. All the patients of all the group were taking iron and calcium preparations. However, increase in haemoglobin percentage was found statistically significant in pregnant women taking *'Garbhpal Ras'* from 1st trimester and belong to risk group with respective control . It shows that *'Garbhpal Ras'* causes no interference / impairment in absorption of iron rather it might have synergistic effect.

It was observed that average mean value of total leukocytes count was increased significantly in last month in all the groups, though it was a physiological change and was with in normal limits. Changes in the hematological parameters of the trial group were found statistically not significant in comparison to control. It shows that *'Garbhpal Ras'* does not produce any haemopoitic toxicity.

***Effect of Garbhpal Ras on biochemical parameters of blood*** : Level of blood sugar was found with in normal range in all groups. No incidence of hypo/ hyperglycemia was observed in any of the case. Renal function (blood urea, serum creatinine) and liver function (serum bilirubin, SGOT, SGPT and Alkaline phosphatase) were maintained during ante-natal period in trial group as well as control group. Normal levels of biochemical parameters till the end of treatment, show non-toxic nature of *'Garbhpal Ras'*.

***Conclusion-*** Pregnancy induced ailments are markers of hormonal changes. Most minor ailments of pregnancy do not require drug treatment however aspire of this research work was to provide a simple approach to manage common gastrointestinal ailments. Consequently, knowledge of these findings can be applied to nursing practice to improve maternal well being. As there is a very little knowledge on interaction with 'Garbhpal Ras', so there is a need for more research and documentation on this topic.

# Keraleeyam

## National workshop on Panchakarma & Kerala special treatments 2nd – 8th May '09 – A report

*Keraleeyam* the 2nd National workshop on *Panchakarma* & Kerala special treatments was held in the month of May 09 with in the gap of 3 months, after the tremendous success of the 1st national workshop which lead us a great triumph.

Our honorable Executive Director Mr.Jathvedhan namboodiripad inaugurated the workshop, Dr.C.S.krishnakumam Chief Physician Nagarjuna Ayurveda group & Director Nagarjuna Ayurveda institute has addressed the delegates and presented the key note.

*Keraleeyam* 2nd was aimed a step ahead providing more facilities to the delegates for performing practical and of all the modalities of Kerala special treatments .Thirty different types of *Keraleeyam* treatments were taught.



Mr.Jathvedhan namboodiripad, Executive Director inaugurating the workshop.

The papers where presented on various topics of *Ayurvedic* treatments along with the practical sessions in morning and evening. Total 11 papers where presented by professors of various Govt .Ayurveda Medical Colleges. These include **Introduction to Kerala special treatments, *Vasthi*: indication, application, complication & management, *Abhyanga*: Kerala specialty, *Poorvakarma Sodhana chikitsa* in Diabetes, Mellitus, *Pindasweda*: Kerala modifications, Localized treatment procedures, *Dhara: Kayaseka, Sirodhara, Dhanyamladhara,* Basic Principles with reference to, *Panchakarma*, Nasal route &systemic diseases, An over view on Nagarjuna Product range.**

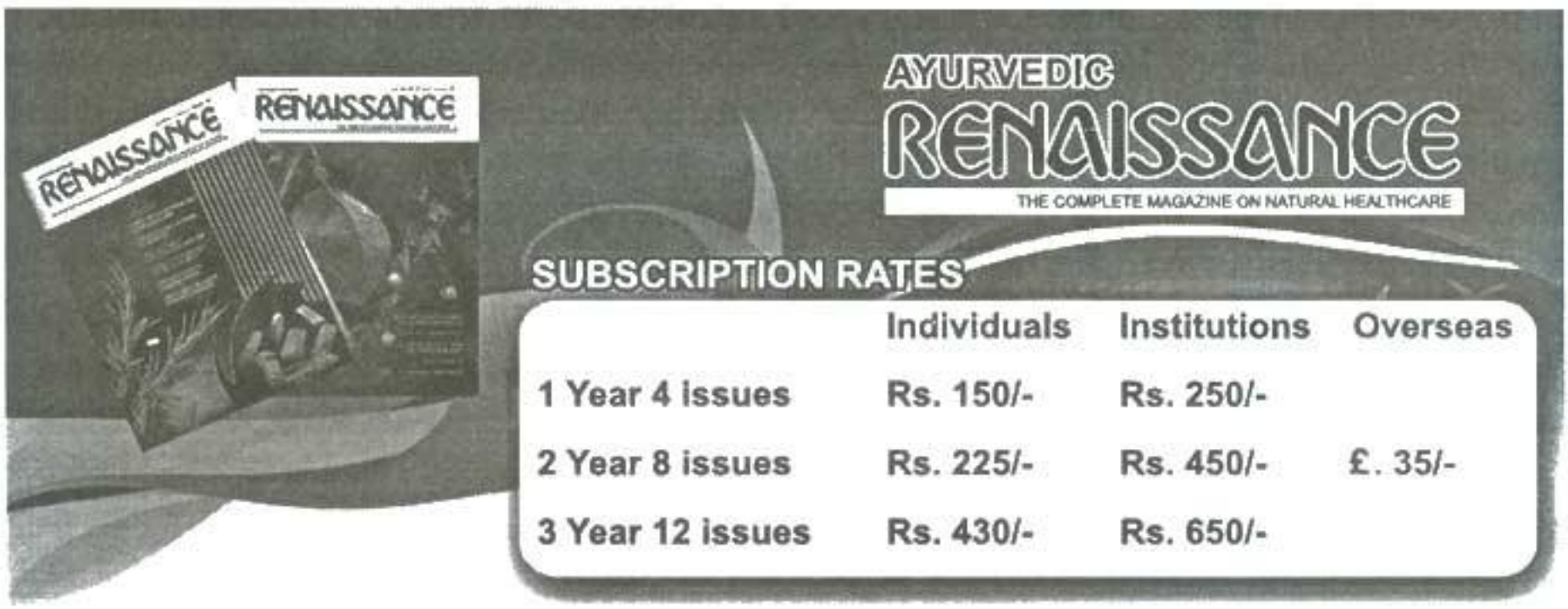
In the valedictory function Dr.K.Sundaran, Superintendent Govt. Ayurveda Research institute for Mental Diseases, Kottackal made the blessing speech and Presented the certificates for participation.

*Darsan* to *Adi Sankara* birth place, the very rare *Dhanwanthari* temple, manufacturing facilities of Nagarjuna Herbal Concentrated Ltd and other historical places were arranged on the 6th day, which was highly appreciated by the delegates.

# WHO news update

- Half of 1.27 million people who die in **road traffic crashes** every year are pedestrians, motorcyclists and cyclists, according to a new WHO study released on 15 June.
- WHO Director-General Dr Margaret Chan urged governments to base their policies on fairness. Speaking at the United Nations Headquarters in New York on 15 June, she said that **health disparities** within and between countries should be taken as a human development indicator.
- On 11 June, WHO raised the influenza A (H1N1) pandemic alert to phase 6, but stressed that this referred to geographical spread of the disease and not severity of cases or number of deaths. As of 15 June, 76 countries had officially reported 35 928 cases of the infection, including 163 deaths. Based on available scientific evidence, WHO said that the overall severity of the **new pandemic influenza strain** was moderate.
- WHO recommended on 5 June that **rotavirus** vaccination be included in all national immunization programmes to provide protection against a virus that is responsible for more than 500 000 diarrhoeal deaths and 2 million hospitalizations every year among children.
- WHO won this year's **Prince of Asturias Award** for International Cooperation. The jury for the award announced its decision on 27 May in Oviedo, Spain.
- WHO and the International Atomic Energy Agency announced on 26 May the launch of the Joint Programme on Cancer Control aimed at strengthening and accelerating efforts to fight **cancer** in developing countries.

*Courtesy: WHO bulletin July 2009*

# Cardiospermum halicacabum Linn.

* Baby Joseph & Sophy Paul



| | | |
|---|---|---|
| **Malayalam Name** | **:** | **Valliuzhinja** |
| **Sanskrit Name** | **:** | **Karnasphota** |
| **English Name** | **:** | **Balloon wine** |
| **Hindi Name** | **:** | **Kanphuti** |
| **Family** | **:** | **Sapindaceae** |

Cardiospermum halicacabum is an annual climber with tendrils found throughout India commonly seen on fencing. It is one of the ten auspicious herbs in the group *"Dasapushpa"*.

Morphologically annual scrambling shrubs climbing by means of tendrillar hooks. Stem and branches wiry and furrowed. Leaves alternate, exstipulate leaflets deeply dentate or lobed acute at tip, flowers small white, style trifid, fruit an inflated trigonous 3 valved capsule, seeds globose black.

**Properties**

| | | |
|---|---|---|
| *Rasa* | - | *Katu, Tiktha* |
| *Guna* | - | *Tikshna, Sara, Laghu* |
| *Veerya* | - | *Sita* |
| *Vipaka* | - | *Katu* |

**Therapeutic uses**

*Jwara, Kamala, Kasa, Kushta, Khalitya, Sotha, Pandu.*

Important Formulations

*Neelibringadi keram, Thriphaladi thailam, Dusparsakadi kashayam, Dasapushpadi keram, Thriphaladi keram* etc.

**Properties**

The herb is used as diuretic, stomachic, rubefacient, lumbago, and nervous disorders and in preparing hair oil, for curing dandruff. The juice of the herb is used to cure earache and asthma. The decoction is given in piles. The pungent vapours from the crushed leaves are inhaled to relieve headache. The root is mucilaginous and considered emetic, laxative and antirheumatic. Aerial root is used to induce abortion.

**Ethnobotanical studies:**

Plant is used as diaphoretic, diuretic, laxative,

* Department of Pharmacognosu, R&D, Nagarjuna Herbal Concentrates Ltd, Alankodu, Thodupuzha

emetic, rubefacient, in rheumatism, earache, fever, Headache, Jaundice, lung diseases, eye sores. Seeds are used in dysentery, to cure skin diseases, in body pain, swelling, tumour, and to facilitate delivery, for healing wounds. Leaves are used for weight reduction, to relieve pain in joint at the time of delivery, rheumatic complaints. Leaves, root and seeds are used in lung diseases and rheumatism. Stem is used in fever. Roots used to cure epilepsy and hysteria.

**Chemical Constituents:**

Sigmasterol, apigenin, Saponins, tannins, alkaloids, glycosides, capric acid, lauric acid, palmitic acid, stearic acid, arachidic acid, protein, minerals, carbohydrates.

**Pharmacological studie :**

**Antipyretic**

The ethanol and n hexane extract of the powdered plant (400mg/kg) showed potent antipyretic activity against yeast induced pyrexia in rats.

**Anti inflammatory**

The alcoholic fraction of the plant showed anti inflammatory activity in hind paw oedema model of rats.

The alcoholic extract of leaves when administered orally produced significant anti-inflammatory effect in granuloma pouch and cotton pellet implantation methods in rats

**Hypotensive**

The alkaloidal fraction from chloroform extract of seeds produced transient hypotensive effect in anasthetized dogs.

The alcoholic extract of leaves showed hypotensive effect in anasthetized dogs.

**Diuretic**

Significant diuretic activity was observed in male albino rats with decoction of root. The drug at 1 and 2 g/kg bw exhibited higher diuretic activity than hydrochlorothiazide.

The essential oil obtained from the seeds caused a marked stimulation of isolated frog's heart. It caused an increase in the tone of isolated rabbit's intestine. Higher doses completely relaxed intestine. It caused an inhibition of movements of isolated rabbit or intestine. An initial depression followed by marked stimulation in isolated frog's heart preparation was observed with the water soluble portion of the extract.

**Antimicrobial**

The alkaloidal fraction from chloroform extract of seeds showed antibacterial activity against Staphylococcus aureus, Streptococcus faecalis, Salmonella typhosa, Escherichia coli,Vibrio cholerae etc.

**Cultivation and Collection**

The plants can be grown in variety of soils with sandy loam rich in carbon and humus. Plants are propagated by seeds on bed. After one month seedlings can transplant from bed to field at a distance of 1 feet. Cattle manure used in each month as fertilizer. After 1 year plants can harvest as whole by uprooted and dried in shade.

## PHARMACOGNOSY

**Materials & Methods**

Plant materials were collected from different parts of Kerala and Nagarjuna Herbal Garden. For Macroscopical characters Stereomicroscope is used and for microscopical studies, the compound microscope. For physical constants rotary shaker, muffle furnace, UV – cabinet, moisture balance were used

## RESULTS AND DISCUSSIONS

**Macroscopic features:**

Taproot, thick, reddish brown, hard, woody, branched rootlets, 2to 5 mm thick.

**Microscopic features:**

T.S shows outermost 3 or 4 layers of cork, cells of which are flattened and crushed, followed by a single layered cork cambium, followed by a cortex 10 to 15 layers deep, with cells compactly arranged and laterally elongated, endodermis single layered, phloem present, cambium 2 or 3 layered thick, xylem contain vessels of various diameters, medullary rays uniseriate, protoxylem points discrenible among collapsed cells of pith.

| No | Parameters | Values |
|---|---|---|
| 1 | Foreign matter | Max 2 % |
| 2 | Total Ash | Max 7 % |
| 3 | Acid Insoluble Ash | Max 1 % |
| 4 | Alcohol Soluble Extractive | Min 9 % |
| 5 | Water Soluble Extractive | Min 15 % |

| Rf values | Colour in spraying 10 % ethanolic sulphuric acid |
|---|---|
| 0.06 | Pinkish brown |
| 0.17 | Pinkish Brown |
| 0.22 | Greyish green |
| 0.29 | Brown |
| 0.34 | Greyish green |
| 0.46 | Purple |

PHYSICAL CONSTANT VALUES

**Thin Layer Chromatography**

Powder - 5 gms

Extract - Methanol

Solvent system - Phenol: Water - 3 : 1


**References:**

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Pharmaco Vigilance
From Page 22


safety of Ayurveda and its treatment modalities it is necessary to introduce pharmaco vigilance concepts in to the curriculum of *Ayurveda* and encourage studies on drug safety. The unbiased and easily accessible drug information to be made available through the TKDL. It is also essential to create awareness about the science of pharmaco vigilance among *Ayurvedic* physicians, patients and paramedical staff to train to report and assessments ARs. Therefore it is encouraged to all the health care professionals of *Ayurveda* to observe the adverse drug reactions and an event if any come across during and after your prescription do record/document and reports the same through prescribed format to nearest PPVC. The generated data will certainly help to prove the safety of *ayurveda* to medical fraternity and its scientific and global acceptance.

•[1] ***Thasmat aaturam parikshetа Prakrititascha, Vikruthi tasch, Sara tasch, Samhanana tascha, Pramana tascha, satmya tascha satwa tascha, ahara sakthi tascha, Vyayama sakthi tascha vayatascheti Bala pramana visesha grahana hethoh:*** (Ch.Vi.8/94)

•[2] ***Akaale alpaati matramcha puranam na cha bhavitam asamyak samskritamchaiva vyapadyedoushadam drutham*** (Ch.Si.6/28)

Graha rogas
From Page 18

Fumigation is one more preventive method followed. This is intended to clean individual & surrounding. As we are using *Krimighna, Kustaghna* etc. drugs for fumigation gaseous form contain active principles of these drugs in uniform and easily absorbable form. Inhalation therapy which is more popular in present day also based on this principle. Skin of Panther, Tiger, slough of Snake, *putikaranja, bhallataka, Ghrita, Sarshapa, Nimba, Vacha* are specific drugs are used for this purpose.

Classics mention the use fecal matter and urine of birds and animals in different *graharoga*

Practical application of these are although difficult recent papers of the pharmacology quotes that some of the important antibiotics are derived from fecal material.

Use of *Lepana* is another method of prevention. This act by local absorption & prevention pathogens entering in to the body through skin. This may be also helpful to prevent bad smell which is coming in *Graha rogas*. Use of old *Ghrita* is still another popular measure. As *Ghrita* is *Subhakaraka, Graha Doshahara & Tridoshaghna*. Differnt *Ghrita* preparations are helpful.

Tying of some of the potent medicines to the neck of the baby is most popular method followed by our *Acharyas*. Basically this idea was received from *Buddhism* and popularized by *Vaghbatta*. It is clever thinking that if body is out bursting a strong aromatic smell leading to no chance for infection individually although surroundings filled with Pathogens. This may be purifying the air to prevent the air born infection & this method can be used for therapeutic & prophylactic purpose. Drug *Aparajita* is mentioned in this regard to be tied around the neck along with *Gorochana, Lakshmana, Sahadevi, Nagadanti, Markati, Karkati, Brahati, Indrayaini* etc. In other sense this may be easy way of keeping emergency medicine round the clock .Application of this method in further generation without knowing the intention leaves back tradition of routine tying of cotton thread around the neck.

Religious methods have got significant impression in treatment of *Graha rogas*. As placebo effect & Psychological effect place important role in treatment of any disease, our classics includes this in *graha rogas*. As origin of *Grahas*, their descriptions are attributated to *Diavika Shakti, Daivavyapashraya* is real need. Modern science also except the role of placebo effect & Psychological makeup of patient in many occasions.

*Japa & Mantra* which is followed as part of treatment may be viewed in different sense. *Mantra* carries the meaning about origin feature, morphology & treatment of each *Graha*. When chanted by the *Guru* and physician origin symptoms treatment prognosis congenials noncongenials are revised and better understood which helps in the treatment. *Mantras* are different for different *Grahas*. So if we are able to chant the *mantra* with meaning understood this is simply revising the subject.

*Saama Veda* dealt with chanting the *Mantras* in a Musical form. *Veda Mantras* are also considered as greatest Music of olden era. Rhythmic chanting of the *Mantras* is also believed to be stimulator of electromagnetic waves. Role of Musical therapy in treatment is a

emerging aspect.

*Bali* is mass disinfection method followed for controlling infection in the community. *Bali* for each *Graha* is different; material for *bali* is used also different. Classics explains the fermentation materials for giving *Bali* like Milk, *Ghrita*, Cooked rice, *Krushara*, wine, *Masha*, meat of any animal etc. The place of giving *Bali* is most infected areas like crowded area, crossing of four roads, temples, crematorium, near the tree etc

As we know all the pathogen need a definite or indefinite host for their growth and in search of it they attack the human. If we provide a ready made host like atmosphere resembling the culture medium, they grow there & spreading of disease in the community is automatically controlled. Specific pathogens grows in specific medium, hence different types of *Bali* materials are explained. Commonly in resent days we use meat & blood of different animals for culture medium, which is well explained by our *Acharyas*. In epidemic disorders this may have very good role.

*Homas* is one more method of purification of environment and self. It is intelligence of our *Acharyas* using scientific application with religious touch. *Homas* also used as method of diagnosis by observing the color of fumes. One such *Homa* is called as *Agni Danda*.

*Graha rogas* constitute the major portion of the *Kaumarabrhithyai* but unfortunately most neglected. This may be due to more mythological explanation keeping real facts away from the scientific explanation. Most of the scholars believe that *Graha rogas* can be compared to infective diseases but face paucity of supportive explanation from contemporary modern science. This is an attempt to fulfill this lacuna and provoke the thinking, which definitely needs further modification.

# Cold sores

Cold sores are proof that life can be unfair -- some people get them, others don't. Besides being itchy and painful, cold sores (fever blisters) make you feel self-conscious. Certain treatments can help shorten the duration of symptoms of cold sores, when used at the first sign of an outbreak. Other treatments can relieve symptoms. Cold sores aren't caused by the common cold. They're caused by the herpes simplex virus (HSV), passed on through contact with infected skin or body fluid. There are two types of HSV, type 1 and type 2. Cold sores are usually caused by type 1. HSV-1 damages the skin as it reproduces itself, creating cold sores that last about a week. Between outbreaks, HSV-1 hides out inside nerve cells, so it's never completely cured.

More than half of us have been infected with the HSV-1 virus, usually from well-meaning kisses from relatives or romantic partners. So why do only an unlucky few get cold sores? The answer may be in your genes. A 2008 study identified six genes that many people who get cold sores share. Three of those genes may relate to how HSV-1 reactivates itself, causing outbreaks.

HSV-1 spends most of its time inactive, hiding in nerves. Many people have familiar triggers that tend to bring HSV-1 out of seclusion, causing cold sores. Sunlight, fever, stress, and menstruation are common triggers. Some people get cold sores twice a year; for others, it's a frustrating, stressful, monthly ritual.

*Courtesy - webMD.com*

OCTOBER - '09

# 3rd NATIONAL WORKSHOP ON PANCHAKARMA & KERALA SPECIAL TREATMENTS

The role of *Panchakarma* Treatments in preventive as well as curative aspects is getting realised all over the world. The expertise of ancient Kerala Physicians in Developing effective modifications for the practical applications of *Panchakarma* has extensively accepted. The evolved treatment modalities are well known as KERALA SPECIAL TREATMENTS - most effective in eliminating the vitiated *doshas* metabolic wastes.

The changing life style of modern man lacking physical activities leads to the accumulation of metabolic wastes in the body. Ayurveda, having comprehensive modalities to eliminate metabolic wastes and vitiated *doshas*, has re-emerged as the unique purificatory treatment of modern times.

Nagarjuna Ayurvedic Institute - The education division of Nagarjuna Ayurvedic Group - the leading manufacturers of quality Ayurvedic medicines, is organising the III National Workshop on PANCHAKARMA & KERALA SPECIAL TREATMENTS for Ayurvedic Physicians in Octobr 2009.

## HIGHLIGHTS

1. A to Z on *Panchakarma* & Kerala Special Treatments.
2. Live demonstration of treatment procedures.
3. Opportunity for practicals.
4. Interaction with eminent Ayurvedic Scholars & Physicians in Kerala
5. Follow up support to establish treatment centres, on the job updating and guidance.

## DESIGN

1. Interactive sessions in class room mode with multimedia presentations.
2. Practicals in small groups to benefit maximum training on pre-treatment, treatment & post treatment procedures.
3. daily review & updating.

## DURATION

Six days including a post-workshop sight seeing programme and visit to Nagarjuna Ayurvedic Group Manufacturing facilities at Thodupuzha.

## ACCOMMODATION & FOOD

Accommodation shall be arranged in Kalady-the town near by, and food in the workshop venue.

## VENUE

Nagarjuna Ayurvedic Institute, Kalady, Ernakulam (Dist), Kerala (State).

## EXPLORE KALADY

1. The birth place of *Adi Sankara* and the ancestral temple complex associated with his life and teachings. Viz. *Adi Sankara Keerthi Sthambha* - The monumental tower, *Shringeri mutt, Kanchi mutt.*
2. St. Thomas Church - the International Plgrim Centre, Malayattoor.
3. *Dhanwanthari Temple, Thottuva*, Kalady.
4. Elephant Training Centre - Kodanadu, Kalady etc.
5. Nagarjuna Ayurvedic Centre Ltd.

For more details contact :

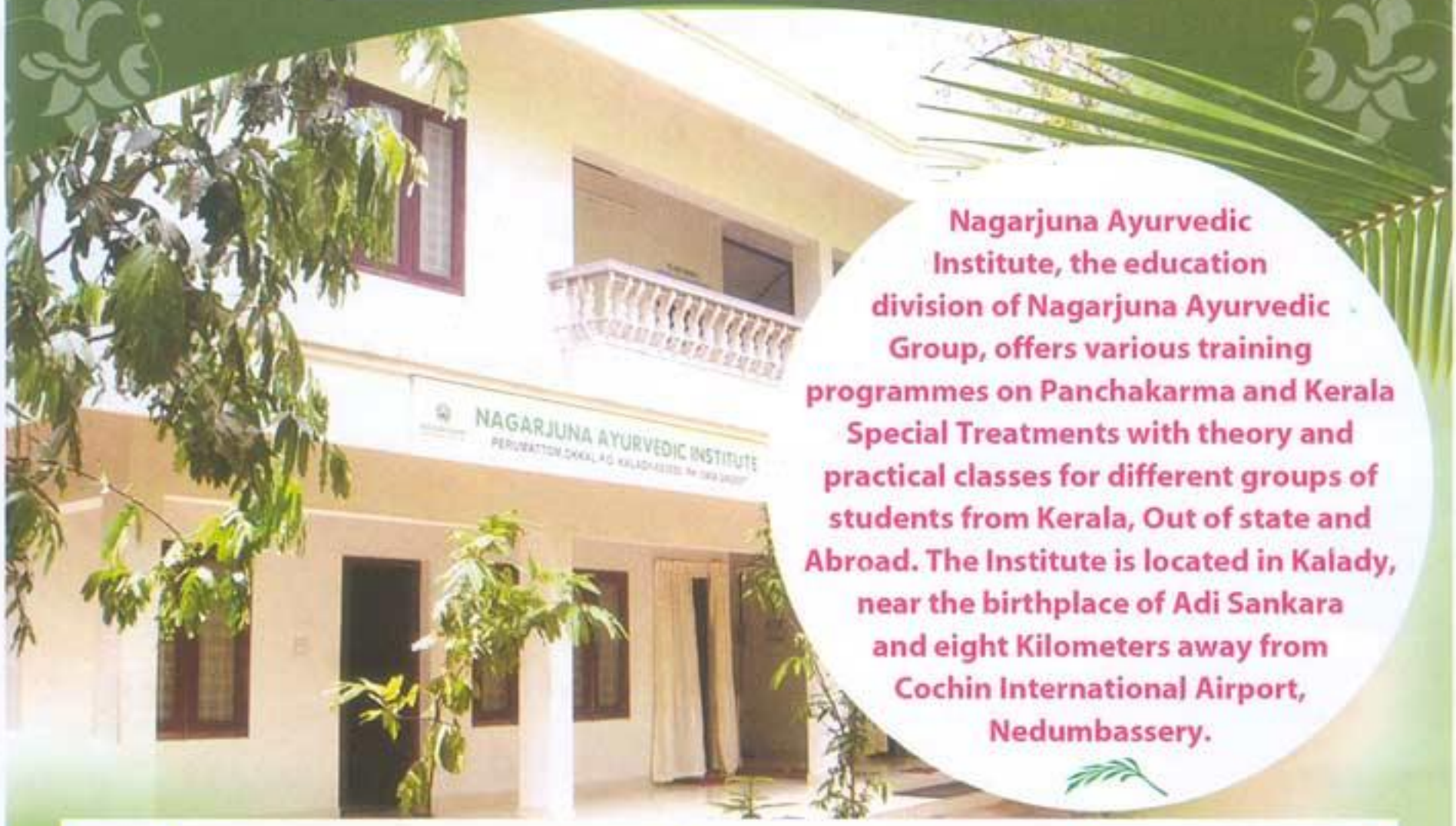

**NAGARJUNA AYURVEDIC INSTUTUTE**

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# NAGARJUNA AYURVEDIC INSTITUTE

(APPROVED BY THE GOVERNMENT OF KERALA)

## TRAINING PROGRAMMES ON PANCHAKARMA & KERALA SPECIAL TREATMENTS




**Nagarjuna Ayurvedic Institute, the education division of Nagarjuna Ayurvedic Group, offers various training programmes on Panchakarma and Kerala Special Treatments with theory and practical classes for different groups of students from Kerala, Out of state and Abroad. The Institute is located in Kalady, near the birthplace of Adi Sankara and eight Kilometers away from Cochin International Airport, Nedumbassery.**

| | Programme | Eligibility | Duration of Course |
|---|---|---|---|
| 1. | *Nursing (Ayurveda) | S.S.L.C. with 50% marks (C+) | 1 Year |
| 2. | *Ayurveda Therapist (Masseur) | S.S.L.C. with 50% marks (C+) | 1 Year |
| 3. | Panchakarma Orientation | Doctors out of Kerala | 2 Weeks |
| 4. | Training and Awareness in Ayurveda | International Students | 2-6 Weeks |

** Kerala Government Approved courses*

Accommodation Fecilities available

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