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# vaidyam
A JOURNAL ON EVOLVING AYURVEDA

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Vol. 3. Issue 2 ■ April - June 2010



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A rare and unique icon of Dhanvantari in sitting posture. Presumably the effigy is from South India and belongs to the Chola period.

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संपद्विपत्स्वेकमना, हेतावीर्ष्येत्फले न तु।
(अ. हृ. सू. २.२५)

Let your mind be poised both in gain and loss. Don't be intolerant to the result but you may be intolerant to the cause. (A.H.Soo.2.25)

When you gain some thing don't be overwhelmed with happiness. When you lose something don't be immersed in despair. Don't be jealous to the victory or gains of others. You may seek the cause of such victories and try to achieve the victory by utilizing the same causes. In other words, don't be jealous to the winner. Just follow the path of the winner to achieve victory.

Feeble minded people become overwhelmed with joy and worry on trivial gains and loss. Be strong minded so that trivialities do not affect the balance of your mind. When you are overwhelmed, your actions and words will not be suitable. Only a stable and poised mind can prompt good words and actions.

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# Antioxidant potential of ayurvedic formulations

**Santhosh N, Reshmi R. Manayath, Dr. Sarala Samuel & Dr. Jolly**

R&D, Kerala Ayurveda Ltd.



*"Healing" Papa would tell me,*
*"is not a science but the intuitive art of wooing nature."*

*W.H. Auden*

We are being constantly bombarded both from inside and outside by a very active form of Oxygen called free radicals. These are continuously generated by the body and also by external pollutants, particularly containing chlorine (most of our pesticides and household articles are manufactured from chlorine), radiation and other synthetic chemicals. These cause peroxidation of body fats which is a causative factor of heart related diseases. They bring damage to the organs of the body and can even cause cancer, malfunctioning of brain, kidney etc. Free radicals also promote degenerative diseases such as Alzheimer's disease, arthritis and cataract.

Life span of a man is directly related to his ability to repair free radical damage. The good cholesterol (HDL) benefits the body because it acts as antioxidant to prevent free radicals from damaging arterial walls.

In the aerobic environment, the most dangerous byproduct is the species of reactive oxygen. The role of antioxidants is to detoxify

Reactive Oxygen Intermediates (ROI) in the body. Over the past several years, nutritional antioxidants have attracted considerable interest in the popular press as potential treatment for a wide variety of disease states, including cancer, atherosclerosis, chronic inflammatory diseases and ageing.

Antioxidants get their name because they combat oxidation. They are substances that protect other chemicals of the body from damaging oxidation reactions by reacting with free radicals and other reactive oxygen species within the body, hence hindering the process of oxidation. During this reaction the antioxidant sacrifices itself by becoming oxidized. However, antioxidant supply is not unlimited as one antioxidant molecule can only react with a single free radical. Therefore, there is a constant need to replenish antioxidant resources, whether endogenously or through supplementation.

Most commonly found antioxidant substances and their presence in herbs are,

- Beta-carotene (Carrot)
- Lutein (Marigold)
- Lycopene (Tomato)
- Selenium (Garlic)
- Vitamin A (Sweet potatoes)
- Vitamin E (Flax seed)
- CoQ10 (*Arjuna*)
- Resveratrol (Grapes)
- Curcumin (Turmeric)
- Gallic acid (Chebulic myrobalan)
- Vitamin C (Indian gooseberry)
- Epigallocatechin gallate (Green tea)
- Quercetin (Indian madder)

Antioxidants are found in many foods and in traditional Ayurvedic preparations. In traditional medicine they are seen in Cyavanapraasa, Nisaa aamalakee coornam, Triphalaa coornam etc. In foods they are present in fruits and vegetables, nuts, grains, some meats, poultry and fish.

## Antioxidant System

The body has developed several endogenous antioxidant systems to deal with the production of ROI. These systems can be divided into enzymatic and non-enzymatic groups.

The enzymatic antioxidants include superoxide dismutase (SOD), which catalyses the conversion of $O_2^-$ to $H_2O_2$ and $H_2O$; catalase, which then converts $H_2O_2$ to $H_2O$ and $O_2$; and glutathione peroxidase, which reduces $H_2O_2$ to $H_2O$.

The non-enzymatic antioxidants include the lipid-soluble vitamins, vitamin E and vitamin A or provitamin A (beta-carotene), and the water-soluble vitamin C and GSH.

Classification of major antioxidants

| | Antioxidant | Role | Remarks |
|---|---|---|---|
| Enzymes | Superoxide dismutase(SOD) | Dismutates $O_2^-$ to $H_2O_2$ | |
| | Mitochondrial e. | | Contains Manganese (Mn.SOD) |
| | Cytoplasmic e. | | Contains Copper & Zinc (CuZnSOD) |
| | Extracellular e. | | Contains Copper (CuSOD) |
| | Catalase | Dismutates $H_2O_2$ to $H_2O$ | Tetrameric hemoprotein present in peroxisomes |
| | Glutathione peroxidase (GSH.Px) | Removes $H_2O_2$ and lipid peroxides | Selenoproteins (contains $Se_2^+$) Primarily in the cytosol also mitochondria Uses GSH |
| Vitamins | Alpha tocopherol | Breaks lipid peroxidation Lipid peroxide and $O_2^-$ and OH scavenger | Fat soluble vitamin |
| | Beta Carotene | Scavenges OH, $O_2^-$ and peroxy radicals Binds to transition metals | Fat soluble vitamin |
| | Ascorbic acid | Directly scavenges $O_2^-$, OH and $H_2O_2$ Neutralizes oxidants from stimulated neutrophils Contributes to regeneration of vitamin E | Water soluble vitamin |

Vitamin E has been described as the major chain-breaking antioxidant in humans. Because of its lipid solubility, vitamin E is located within cell membranes, where it interrup ts lipid peroxidation and may play a role in modulating intracellular signalling pathways that rely on ROI. Vitamin E can also directly quench ROI, including $O_2^-$, OH and $O_2$.

## Non-Enzymatic antioxidants

### Alpha tocopherol (vitamin E)

It is the major lipid soluble antioxidant found in cells. Pumpkin seed oil - possesses very high levels of the natural antioxidants and poly unsaturated fatty acids. Pumpkin seed oil is especially high in the gamma-tocopherol form of Vitamin E, which is a powerful antioxidant.

### Beta Carotene

Carotenoids are pigmented micronutrients present in fruits and vegetables. Carotenoids are precursors of vitamin A and have antioxidant effects. While over 600 carotenoids have been found in the food supply, the most common forms are alpha-carotene, beta-carotene, lycopene, crocetin, canthaxanthin, and fucoxanthin of which Beta-carotene is the most widely studied.

Carotenoids also have been reported to have a number of other biologic actions, including immuno-enhancement, inhibition of mutagenesis & transformation and regression of pre-malignant lesions.

### Curcumin

Our traditional system makes use of the plant Curcuma longa (turmeric) which contains curcumin in various formulations and conventionally it is used as an antiseptic for cuts and burns. Turmeric contains components that are both anti-inflammatory and antioxidant, making it useful for treating arthritis,inflammatory conditions and possibly cancer. In promising, but very early research results,curcuma has kept several kinds of cancers from growing or spreading.



In addition to their anticancer effects, antioxidants in turmeric protect the brain, kidneys and liver from damage by alcohol, drugs, radiation, heavy metals or chemicals. Curcuma longa (turmeric) is the major ingredient of formulations like Nisaa-katakaadi kvaatha, Nisaa-aamalaka coornam etc.

### Resveratrol

Resveratrol is a flavonol belonging to the group of flavonoids. It is present in many plants and fruits, including red grapes, eucalyptus, spruce, blueberries, mulberries, peanuts etc.

Resveratrol is an antioxidant and has anticancer properties. It inhibits lipid peroxidation of low-density lipoprotein and prevents the cytotoxicity of oxidized LDL.

Resveratrol inhibits the oxidative damage caused by the heavy metal cadmium. The antioxidant activity of resveratrol reduces damage of endothelial cells exposed to nitrite radicals and protects skin cells against damage caused by UV radiation.

Resveratrol enhanced the proliferation activity of the cells and increased the activity of superoxide dismutase and glutathione peroxidase. It is also found that resveratrol reduced maleic dialdehyde levels, indicating reduced levels of lipid peroxidation and oxidative stress. Microscopic evaluation revealed that resveratrol protected the ultrastructure of the skin cells. In Draakshaasavam, Vitis vinifera (grape) is the major ingredient.

### Ascorbic acid (vitamin C)

Ascorbic acid (vitamin C) is a water-soluble, antioxidant present in citrus fruits, Indian goose berry, potatoes, tomatoes and green leafy vegetables.

Humans are unable to synthesize l-ascorbic acid from d-glucose due to absence of the enzyme L-galacolactone oxidase. Hence, humans must obtain ascorbic acid from dietary sources.

*Aamalakee* (Emblica officinalis) is by far the richest source of Antioxidants like Vitamin C, Emblicanin A, emblicanin B, punigluconin, pedunculagin, super oxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPX). It is the major ingredient of Nisaa-aamalaka coornam, Triphalaa coornam, Cyavanapraasa etc.

The Vitamin C and the other antioxidants in *aamalakee* attack the free radicals that damage body cells. The antioxidants in *aamalakee* are powerful free radical scavengers mopping up these harmful toxins. In that sense *aamalakee* tackles the very source of cellular damage.

### Mechanism of Action:

The chemo preventive action of vitamin C is attributed to two of its functions. It is a water-soluble chain breaking antioxidant. As an antioxidant, it scavenges free radicals and reactive oxygen molecules, which are produced during detoxification. It also prevents formation of carcinogens from precursor compounds.

### Quercetin

Quercetin is found to be the most active flavonoids in studies and many medicinal plants owe much of their activity to their high quercetin content. Quercetin has demonstrated significant anti-inflammatory activity because of direct inhibition of several initial processes of inflammation. For example, it inhibits both the manufacture and release of histamine and other allergic/inflammatory mediators. In addition, it exerts potent antioxidant activity and vitamin C-sparing action.

Quercetin is present in many ayurvedic herbs like Rubia cordifolia, Pterocarpus marsupium etc. Quercetin has positive effects in combating or helping to prevent cancer, prostatitis, heart diseases, cataracts, allergies/ inflammations, and respiratory diseases such as bronchitis and asthma. It also has antidepressant properties. Rubia cordifolia is the major ingredient of Mahaamanjjishthaadi kvaatha.

## Antioxidant enzymes: -

This includes super oxide dismutase, catalase, and peroxidases.

### Superoxide dismutase (SOD)

SOD is an endogenously produced intracellular enzyme present in essentially every cell of the body. Cellular SOD is actually represented by a group of metallo-enzymes with various prosthetic groups. The prevalent enzyme is cupro-zinc (CuZn) SOD, which is a stable dimeric protein (32,000 D).

Acacia catechu is highly



valuable for its powerful astringent and antioxidant activities. It is an indispensable ingredient of Khadiraarishtam, Khadira gulikaa etc. Khadira gulikaa is useful in dental, oral and throat infections. It is used as an astringent for reducing oozing from chronic ulcers and wounds. The chief phytoconstituents of the heartwood are catechin and epicatechin.

Catechins have significant antioxidant and antimicrobial effects. It is considered to be the best antioxidant. The antioxidant capacities are evaluated in terms of ascorbate equivalents by different methods. The extract restores antioxidant enzyme super oxide dismutase (SOD) from damage induced by the radiation.

### Glutathione peroxidase enzyme:

It is a tetrameric protein (85,000-D). It has 4 atoms of selenium (Se) bound as seleno-cysteine moieties that confer the catalytic activity. One of the essential requirements is glutathione as a co-substrate.

### The catalase enzyme:

This enzyme is a protein enzyme present in most aerobic cells in animal tissues. Catalase is present in all the organs of body especially in the liver & erythrocytes. The brain, heart and skeletal muscles contain only low amounts.

Catalase and glutathione peroxidase seek out hydrogen peroxide and convert it to water and diatomic oxygen. An increase in the production of SOD without a subsequent elevation of catalase or glutathione peroxidase leads to the accumulation of hydrogen peroxide, which gets converted into the hydroxyl radical.

**Every breath is a step towards the grave yard. The chemistry behind this journey of life is oxidation. Ayurvedic rejuvenating formulations have a rich anti-oxidant resource potential to retard the progressive process of oxidation in cells. The research and development team of KAL has** evaluated two each of our classical and proprietary products **viz.** *Triphalaa coorna*, *Cyavanapraasa*, **Prostact and Immugest. They shown excellent antioxidant potential in addition to its desired activity. This study gives a ray of hope to tackle the ageing problem.**

### Glutathione (GSH):

GSH is synthesized intracellularly from cysteine, glycine and glutamate. In addition to its role as a substrate in GSH redox cycle; GSH is also a scavenger of hydroxyl radicals and singlet oxygen. It is capable of either directly scavenging ROI or enzymatically via glutathione peroxidase, as described previously.

### Selenium

Selenium is an essential constituent of a number of enzymes, some of which have antioxidant functions. Deficiency of the element in animals makes them susceptible to injury by certain types of oxidative stress. It seems prudent to avoid selenium deficiency. Selenium a trace mineral is a powerful antioxidant that means it prevents hemoglobin in red blood cells from damage by oxidation. Selenium also works synergistically with another antioxidant; vitamin E. Selenium is present in garlic, broccoli, cucumber etc. Allium sativum (garlic) is one of the ingredient of Ashtavargam kvaatha, Prasaaranyaadi kvaatha etc.

### CoQ10:



CoQ10 (Coenzyme Q10) is also known as ubiquinone. It is found in almost every living cell (hence the name "ubiquitous") and is essential to energy production by the mitochondria. Far beyond producing energy, CoQ10 can protect the body from destructive free radicals and enhance immune defences.

Terminalia arjuna is a good heart tonic and can be used daily for a flawless cardiovascular system. Bark of Arjuna tree has been found to be rich in Co-enzyme Q-10 which is highly prescribed in cardiology departments nowadays to prevent heart problems. High amounts of CoQ10 prevent heart attacks. It also has a tonic effect in cases of cirrhosis of the liver. It induces a drug dependent decrease in blood pressure and heart rate. It has been reported to possess protective cardiovascular properties and the herb has been used as lipid controlling agent since many years in Ayurveda. Terminalia arjuna is the major ingredient of age-old formulations Paarthaarishtam and Arjunaarishtam.

### Uric acid:

Uric acid acts as an endogenous radical scavenger and antioxidant. It is present in the body fluids in a concentration of about 0.5 mmol/L. It is the end product of purine metabolism. Uric acid is a powerful scavenger of singlet oxygen, peroxyl radical and OH radical.

### Albumin:

Depending on the fact that albumin has one sulfhydryl group per molecule; it itself scavenges several free radicals and thus can be considered as one of the primary extra cellular defense systems.

In our R&D laboratory we have evaluated two each of our classical and proprietary products which have shown excellent antioxidant potential in addition to its desired activity. The two classical formulations are Triphalaa coornam and Cyavanapraasa. The proprietary formulations are Imugest (Immunomodulator) and Prostact (for benign prostatic enlargement). The experimental details are given below.

We have used DPPH method using UV-Vis Spectrophotometer for the in vitro antioxidant assay of all the four products.

### Free radical scavenging activity

The 1, 1"-diphenyl-2-picryl hydrazyl (DPPH) assay method was employed to measure the free radical scavenging activity. The assay method is based on the reduction of a methanolic

solution of the colored free radical DPPH by free radical scavenger. The decrease in absorbance of DPPH at its absorbance maximum of 516nm is proportional to the concentration of free radical scavenger added to the DPPH reagent solution. The activity is expressed as EC50 (i.e. the concentration of the test solution required to give 50% decrease in absorbance compared to that of a control solution).

## Method

The DPPH reagent was prepared in methanol (2mg/ml). Ascorbic acid was used as the standard. To a set of clean and dry test tubes containing 3ml of methanol, 50µl of DPPH reagent was added and mixed thoroughly. The initial absorbance of each test tube was measured at 516nm. To these test tubes, the solution of Prostact in DMSO solvent was added in increasing concentrations. The solution was mixed, allowed to stand for 20 minutes in dark at room temperature and the final absorbance was measured at 516 nm. The percentage reduction in absorbance was calculated from the initial and final absorbance at each level. Concentration of test solution required for producing 50% reduction in absorbance (EC50) was calculated by plotting the linear regression calibration curve of log of concentration of test solution on X-axis against percentage reduction in absorbance on Y-axis. Ascorbic acid pure was used as a standard and its EC50 value is 8.91µg/ml

## Results

**Antioxidant activity of the herbal formulation - Prostact**

| Concentration (µg/ml) | Absorbance at 516 nm | Log concentration | Percentage inhibition |
|---|---|---|---|
| Control | 0.902 | | |
| 30.15 | 0.608 | 1.4793 | 32.594 |
| 50.25 | 0.527 | 1.7011 | 41.574 |
| 80.40 | 0.423 | 1.9053 | 53.104 |
| 100.50 | 0.361 | 2.0021 | 59.977 |
| $EC_{50}$ of the herbal formulation - Prostact is 71.61µg/ml | | | |

**Antioxidant activity of the herbal formulation – Imugest**

| Concentration (µg/ml) | Absorbance at 516 nm | Log concentration | Percentage inhibition |
|---|---|---|---|
| Control | 0.808 | | |
| 37.575 | 0.544 | 1.5748 | 32.673 |
| 62.625 | 0.438 | 1.7968 | 45.792 |
| 87.675 | 0.326 | 1.9429 | 59.653 |
| $EC_{50}$ of the herbal formulation - Imugest is 69.98µg/ml | | | |

**Antioxidant activity of Triphalaa coornam**

| Concentration (µg/ml) | Absorbance at 516 nm | Log concentration | Percentage inhibition |
|---|---|---|---|
| Control | 0.823 | | |
| 2.525 | 0.721 | 0.4023 | 12.3936 |
| 5.050 | 0.613 | 0.7033 | 25.5164 |
| 7.575 | 0.523 | 0.8794 | 36.4520 |
| 10.10 | 0.469 | 1.0043 | 43.0133 |
| 12.625 | 0.406 | 1.1011 | 50.6682 |
| $EC_{50}$ of Triphalaa coornam is 12.45µg/ml | | | |

**Antioxidant activity of the herbal formulation - Cyavanapraasa**

| Concentration (µg/ml) | Absorbance at 516 nm | Log concentration | Percentage inhibition |
|---|---|---|---|
| Control | 0.8325 | | |
| 164.58 | 0.605 | 2.2163 | 27.3273 |
| 274.3 | 0.476 | 2.4383 | 42.8228 |
| 329.16 | 0.4135 | 2.5174 | 50.3303 |
| 384.02 | 0.3305 | 2.5843 | 60.3003 |
| $EC_{50}$ of the herbal formulation - Cyavanapraasa is 327.3 µg/ml | | | |

## Conclusion

Free radicals can be made inert by trapping in the compounds called scavengers which are present in many ayurvedic herbs such as *Aamalakee*, *Haridraa*, *Draakshaa* etc. In-vitro antioxidant studies were conducted in our R&D to ascertain the usefulness of our formulation as antioxidants apart from other targeted activities. It was observed that Triphalaa coornam is the best among all followed by Imugest, Prostact and Cyavanpraasa for their antioxidant potential.

***"Growing old happens in the mind, but reshaping of ageing process is within our control."***

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# The Three Fruits
## *(triphalaa)*

The three fruits otherwise known as the 'three myrobalans' is a very important group of drugs in Ayurveda. We find them as a regular ingredient in many ayurvedic formulations. The three fruits are – 1) chebulic myrobalan (Terminalia chebula Retz.) 2) belliric myrobalan (Terminalia bellirica (Gaertn.)Roxb.) and 3. emblic myrobalan usually known as the Indian goose-berry (Phyllanthus emblica Linn.) syn. Emblica officinalis (Gaertn.). The first two myrobalans belong to the family combretaceae whereas the third is a member of the family euphorbiaceae. Mostly the rind of the dried fruts are used. They are also used as whole fruits either fresh or dried.



The combination of the three fruits is considered as rejuvenative and good to the eyes. The combination has antioxidant and laxative properties. Of the three, chebulic myrobalan is very much laxative and is met with in many laxative formulations.



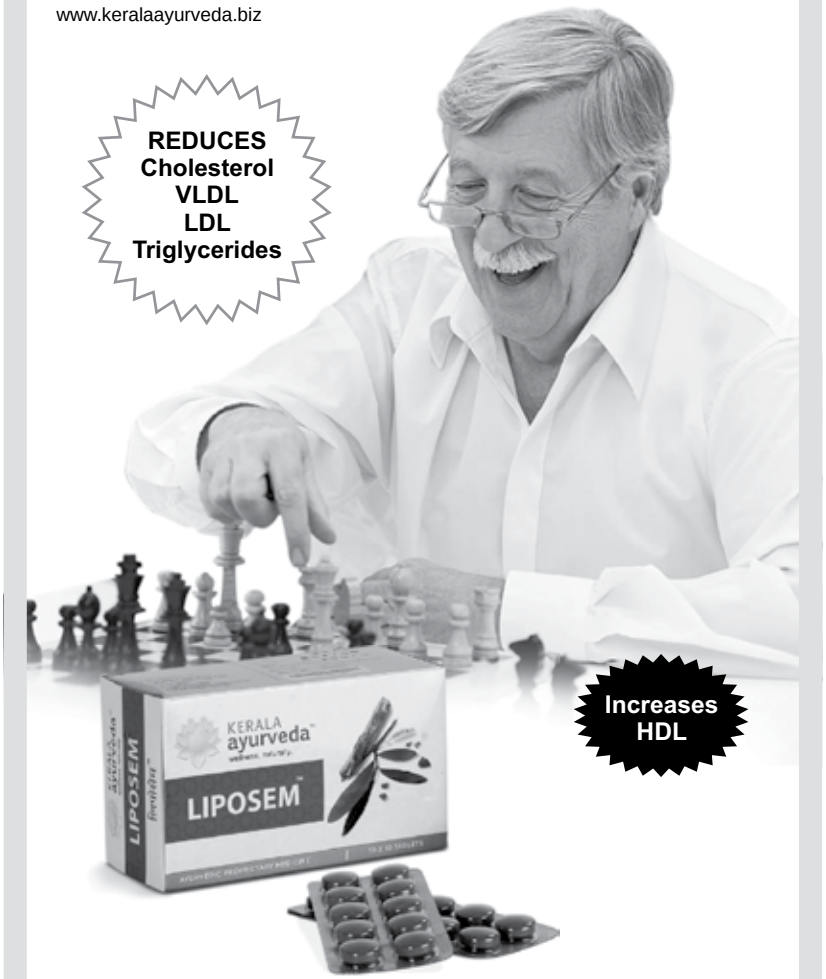
The three drugs are to be taken in equal quantities by weight as a group. Sometimes they are counted and taken. In that case to form the group we will have to take chebulic, belliric and emblic fruits in the proportion of 1: 2: 4 and this will make the combination approximately equal in weight.

*Phalatrika* and *varaa* are two Sanskrit synonyms of *triphalaa*. The terms *triphalaa* and *phalatrika* mean the three fruits. *Varaa* means the best or superior. This group combats the humors pitta and kapha. It is indicated in diabetes, skin diseases, diseases of the eye and periodic fever. It increases appetite and is carminative. It is regularily admin istered at night to control habitual consti-pation. In eye diseases the powder of the three myrobalans is mixed with honey and ghee and given at night even for long courses.



In market the powder of the three fruits (*Thriphala Churna*) is available in handy packs. In some cases licorice is also added to the combination (*Triphalaadi Coorna*). ■


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*Saastra-mathanam* (churning of science) is a discussion program conducted at Kerala Ayurveda Hospital, Aluva on all Tuesday afternoons except the 3rd Tuesdays. Padmasree Dr. K. Rajagopalan MBBS, DAM, FAIM is leading the discussions. Doctors of KAH, doctors of nearby KAL outlets and scientists of KAL participate in the discussion.

# Edema *(Sopha)*

Excerpts from Saastramathanam -Scientific discussions



Padmasree **Dr. K. Rajagopalan** MBBS, DAM, FAIM

## *Saama – Niraama* Differentiation

Before starting treatment first ascertain whether edema (*sopha*) is with or without undigested principles (*saama* or *niraama*). How can we distinguish the conditions? Treatment depends on this especially in mature edema (*pakva-sopha*). Ashtaanga Samgraha and Ashtaanga Hrdaya states that examination of stool will reveal it. (A.H.Ci.17.4). Here it is mentioned that in *saama* condition the undigested stool will be heavy (*guru* - sink in water) and unformed (*bhinnasakrt*). On the other hand if the stool is digested, there will be constipation (and the stool will float on water) (A.H.Ci.17.9).

## Treatment

Edema can occur due to de-unction also. Hypoproteinaemia is such a condition. Here reductive measures are not to be employed. Additive treatment is to be done. Protein rich food materials are to be supplemented. The white of egg, peanuts, milk after cutting the cream etc are useful here.

### In *aama sopha*

If the patient is having dyspepsia (*mandaagni*)

- buttermilk, sonchal salt, the three acrids and honey is to be given.
- Chebulic myrobalan (*abhayaa*) can be administered with jaggery (*guda*) followed by a buttermilk drink.
- If there is excessive vitiation of humors Navaayasa also can be given.
- After purification Chebulic myrobalan with cow's urine (gomootra hareetakee) may be administered. The popular formulation is mentioned in the treatment of piles (A.H.Ci.8.55, 56). There are other modified formulations too in Kerala. There are two such formulations in Yoga-ratna-samuccayam.

### Gomootra hareetakee 1

Make decoction of 4800gm of purging fistula (*aaragvadhaa*). Boil 300 fruits of chubulic myrobalan in cow's urine till exortion of urine. Add the decoction and jaggery. Make a jam. Let it come to room temperature, add honey and mix well.

### Gomootra hareetakee 2

1 kg each of iron powder, fire plant root and tamarind leaves are cooked in 120 L of cow's urine and reduced to 15 L. Add 5 L each of decoctions of tinospora, purging fistula and trailing eclipta. Cook 100 fruits of chubulic myrobalan in it and concentrate. Add 50gm each of the powders of dry ginger, long pepper, black pepper, cumin seeds, asafetida, iron, embelia, nut grass tuber and ajovan. Add 200gm of honey and keep in iron vessel.

It can be given even in cancer. The cow's urine has such wonderful effects.Gomootra-arishtam (Citrakaarishtam) is also useful in cancer to some extent.

- Chaagakareeshaadi gudikaa prepared with the ash of the



*Dr. Rajagopalan leading the discussion in this Saastra-Mathanam*

dung of goat and urine. (A.H.Ci.15.103-106) This is used in edema and ascites. The formulation also contains *yavakshaara* (*yavasookajam*). This is used in undigested (*ajaraka*) edema.

• Gulaardrakam the combination of ginger with equal quantity of jaggery can be given.

There are two other formulations by the name Gulaardrakam and Dasamoola-gulaardrakam. Here only ginger and jaggery are present and it is to be consumed in increasing doses of one *pala* (48 g) and the maximum dose is 5 *pala* (240g). It is almost effective in all its indications. Even mental diseases are indicated and it is found effective also. In *Aama-vaata* the same can be given with pancakola coornam. It can be started with smaller doses and attain the maximum dose by one month. Gulaardrakam is indicated in *gulma*, ascitis, piles, edema, diabetes, dyspnoea, rhinorrhea (*pratisyaaya*), intestinal stasis (*alasaka*), indigestion, jaundice, emaciation, mental diseases and productive cough. Vegetable soups, milk and meat soup are to be consumed during the administration of this.

A variation of the formulation where sliced ginger is fried in ghee is mentioned in Cikitsaa gaanam by Seevelikkara Kunjiraman Vaidyar.

There is a ghee called Aardraka naagara ghrta (A.H.Ci.17.8) for edema. It is also useful in sneezing and can be prescribed for sinusitis.



Photo: R. Anilkumar

**The pathogenesis of edema is inter-related with a number of other clinical conditions. Before treating sopha the real cause should be identified. On the basis of the causes there is a veriety of treatment options also. Some effective medicines are discussed herewith.**



When the formulations mentioned here for *saama sopha* are not handy, in practice Amrtottaram kvaatha and pancakola coornam are given. The Amrtottaram mentioned in Cikitsaa-manjari has edema in its indications. It especially digests *aama*. Pancakola coornam also is digestive.

In ***niraama Sopha***

• milk boiled with the three acrids (*trikatu*), turpeth (*trivrt*), tusker plant (*dantee*) and fire plant(*citraka*) is to be given. The patient should drink milk and eat rice with milk. In ashtaanga-samgraha a bit more is mentioned. There, boiled ghees are suggested. In conditions such as hypoproteinemia milk and ghee are helpful.

• In Ashtaanga Hrdaya medicated ghees such as Dhanvantaram, Mahaatiktakam, kalyaanakam and Abhayaa ghrtam (mentioned in *udara*) are prescribed. One among them may be selected.

• In edema there is condition when we have to prescribe alkalis (*kshaara*) and *aasava*. It is when channels are obstructed (*sroto-rodha*), bio-fire is diminished (*agni-maandya*), appetite is lost (*aruci*) and reservoirs are stagnant (*stimitaasaya*) that we have to administer alkalis, powders, fermented preparations (*aasava, arishta*), urines and buttermilk regularly. On the basis of this use of alkali, in Kerala two famous formulations have emerged – Panaviralaadi bhasma (Cikitsaa Manjari – *Mahodara* 7, Page 280) and Aaviltolaadi bhasma. They are alkaline diuretics.

There is a controversy about *panaviral* that it is the root or stem of the inflorescence of the palm tree.It is the root. The roots above the ground are taken.

• Valmeeka vati can also be used.

• In this condition the famous formulation Dasamoola Hareetakee is mentioned. In Cakradatta (*sopha*) two varieties of it viz. Dasamoola Hareetakee and Kamsa Hareetakee are mentioned.

Dasamoola hareethakee is an example for *vikrti-vishama-samaveta*. We cannot rationalize the effect by scanning the ingredients. The indications of Dasamoola Hareetakee are wide. Edema, fever, diabetes, *gulma*, emaciation, *aamavaata*, hyperacidity, bleeding diseases (*raktapitta*), discoloration, diseases of urine, neurological diseases (*anila-dosha*), diseases of semen (*sukra-dosha*), dyspnoea, anorexia, spleenomegaly, compounded poisons (*gara*) and abdominal enlargement (*udara*) are mentioned there. (A.H.Ci.17.14-16)

In south Kerala, Dasamoola Hareetakee is commonly known as Dasamoola rasaayana. But in north Kerala Dasamoola rasaayana is a different formulation. It contains a lot of camphor and the dose is very small.

The dose of Dasamoola Hareetakee is 15 grams (one Tbsp.). Lesser amounts will delay the effect. ■

Clinical yoga is an evolving new branch of yoga and is now in use in prevention and treatment of various pathologic conditions, alone or in combination with other modes of therapy. Diagnosis in this system is based on the five sheath theory (*panca-kośa-siddhaanta*) of yoga. Specific yogic postures and other yogic procedures are utilized to correct the anomalies in these sheath. This issue deals with clinical yoga for spinal disorders.

# Yoga for spinal disorders



**Dr. K.V. Dilipkumar**
Professor, V.P.S.V. Ayurveda College, Kottakkal

The diseases of the spine top the list of the common health problems created by changing lifestyles. The spectrum of diseases ranging from the idiopathic back pain to the malignant tumor of the bone belongs to this.

The diseases of the spine are grouped into two:

1. Structural disorders

2. Functional disorders - especially due to mental stress or variation in lifestyles.

The precise knowledge of the pathological transformations which occur in the spine can be obtained today by imaging techniques, but the approach of yoga is different from this. Yoga views this disease from the angle of *pancakośa* theory.

## *Anna-maya-kośa*

The structural fabric of the human body is known as *anna-maya-kośa*. Any structural deformity in the body can be included under pathology of *anna-maya-kośa*.

1. Congenital: These are the inherent defects of the vertebral column.

2. Spina bifida: This condition develops due to the failure of fusion of the posterior part of the spine resulting in a defect through which membranes and spinal cord may herniate.



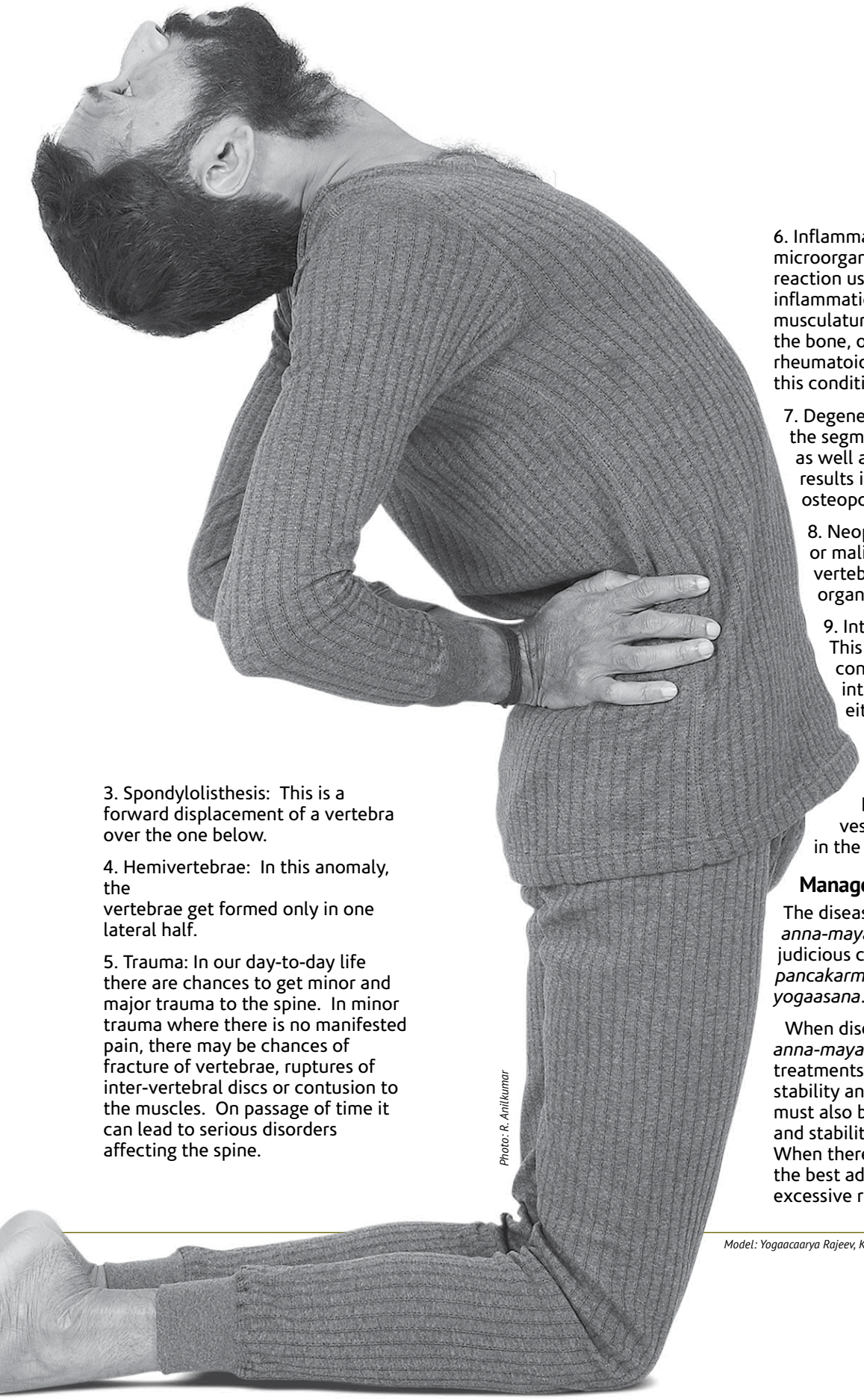


Photo: R. Anilkumar

3. Spondylolisthesis: This is a forward displacement of a vertebra over the one below.

4. Hemivertebrae: In this anomaly, the vertebrae get formed only in one lateral half.

5. Trauma: In our day-to-day life there are chances to get minor and major trauma to the spine. In minor trauma where there is no manifested pain, there may be chances of fracture of vertebrae, ruptures of inter-vertebral discs or contusion to the muscles. On passage of time it can lead to serious disorders affecting the spine.

6. Inflammation: The infection of microorganisms or auto-immune reaction usually results in the inflammation of paravertebral musculature. Synovitis, tuberculosis of the bone, osteoarthritis, and rheumatoid arthritis are examples of this condition.

7. Degenerative: The degeneration of the segments of the vertebral column as well as the intervertebral disc results in spondylosis and osteoporosis.

8. Neoplastic: These are benign or malignant growths seen in vertebral column and adjacent organs.

9. Intervertebral disc prolapse: This is a very common condition, wherein the intervertebral disc protrudes either due to trauma or due to degeneration.

In addition, the disorders of abdomen, pelvis, urinary bladder, uterus, and blood vessels can cause radiating pain in the spine.

## Management

The diseases that manifest in *anna-maya-kosa* must be dealt with a judicious combination of medications, *pancakarma*, surgery, radiation, and *yogaasana*.

When diseases get manifested in *anna-maya-kosa*, along with specific treatments for respective problems, the stability and mobility of the muscles must also be attained. The mobility and stability are opposite qualities. When there is injury to muscles, rest is the best advised treatment, but again excessive rest would lead to

*Model: Yogaacaarya Rajeev, KAL*

degeneration of muscles. Also muscles may get shortened and stretching capacity would decrease. Thus both mobility and stability must be given due importance throughout the treatment for maintaining the strength of muscles.

### *Aasana*

Yogic posters (*yogaasana*) are those forms of exercises which provide stability, mobility as well as adequate rest. Yogic posters can stimulate and provide rest to the individual as well as to the group of muscles. Control and coordination of neuromuscular system also increases through various yogic postures (*aasana*).

For the different conditions of spinal diseases, suitable postures should be selected.

1. Acute inflammatory stage: In the initial stages the disease affected areas are inflamed with severe pain. This condition is known as acute inflammatory stage. At first, to alleviate inflammation, rest is important. Complete rest that can be provided for almost two days reduces the severity of the disease. Here the muscles must be relaxed through *savaasana*. In the following days slight movements should be imparted to the afflicted part without increasing the pain. Simultaneously, medication to pacify inflammation must also be administered.

2. Acute stage: When inflammation is alleviated through proper treatment, diseases get transformed to acute stage. It is a condition with duration of more than two weeks, the patient not able to stand even for 15 minutes and not able to walk greater than 300 metres. In this condition mild forms of *yogaasana* should be performed. The postures providing least strain to the spine must be selected. Sitting and leaning forward is the posture that provides maximum strain to the spine whereas lying supine is the most relaxing posture. Hence, such postures must be judiciously selected.

While selecting postures, posture bias is another aspect that requires due consideration. Some specific postures would relieve the patient from pain. This is known as posture bias. There are three types of posture bias.

i) Non-weight bearing bias: In general, standing postures would increase backache in the patients, but in non-weight bearing bias the pain will not increase.

ii) Flexion bias: The bias where the pain decreases on bending forward is the flexion bias. This condition is seen in cases where intervertebral disc protrudes anteriorly.

iii) Extension bias: This is the condition when there is comfort on backward bending and difficulty on forward bending. Extension bias is usually seen in cases where there is backward protrusion of intervertebral discs.

## *Yogaasana to be practiced during acute stage:*

To deal with diseases of the spine in the acute stage, mild yogic postures must be advocated considering the severity of pain.



***1. Supta udara-karshana-aasana Type 1***
(folded leg lumbar stretch):

This posture is performed by twisting the vertebral column gently and tightening the muscles. This should be repeated five times.



***2. Supta udara-karshana-aasana Type 2***
(crossed leg lumbar stretch):

In this posture by crossing the legs, the hamstring, gluteus, and sartorius muscles are stretched more. The posture is repeated for five times.

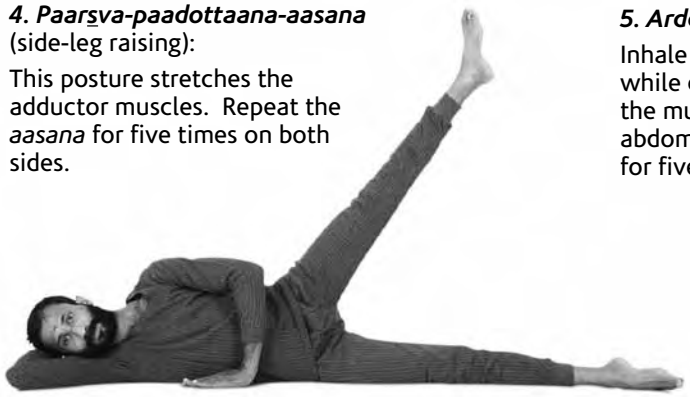


***3. Uttaana-paada-aasana***
(straight-leg raising):

This posture provides exercise to muscles of rectus abdominis, psoas, and iliacus. The legs are raised alternatively. The posture is repeated for five times.

***4. Paarṣva-paadottaana-aasana***
(side-leg raising):

This posture stretches the adductor muscles. Repeat the *aasana* for five times on both sides.



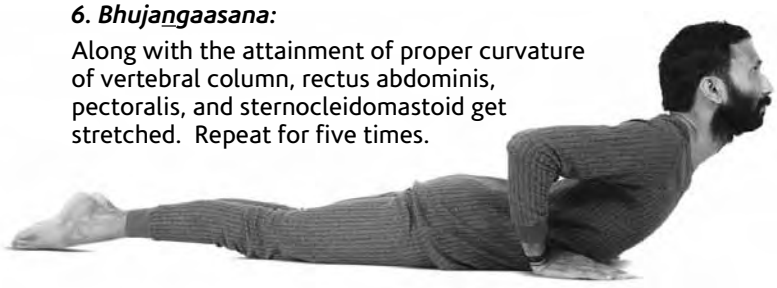
***5. Arddha ṣalabhaasana:***

Inhale while raising the leg and exhale while dropping it down. In this posture the muscles of the front of the thigh and abdomen get stretched. Repeat the same for five times.



***6. Bhujaṇgaasana:***

Along with the attainment of proper curvature of vertebral column, rectus abdominis, pectoralis, and sternocleidomastoid get stretched. Repeat for five times.



These exercises strengthen the muscles that support the vertebral column. Then, to provide relaxation to these muscles, *ṣavaasana* must be practiced. By loosening the joints each stretched muscle is visualized and then imagine that each of them is getting relaxed. The breathing should also be slowed down.

**3. Sub-acute stage:**

This is the condition in which the patient is unable to perform some specific functions in the daily routine. Here, the inflammation gets subsided completely, but it is the compression on the nerves that manifests as pain.

### *Aasana* to be practiced during sub-acute stage:

All the basic posters except those causing discomfort can be practiced in this stage.

i. ***Arddha-dhanur-aasana***
(half-bow posture):

In this *aasana* equal stretch is obtained laterally on both sides of the vertebral column. This should be repeated for five times on each side.





iii. ***Arddha-pavana-muktaasana:***

In this posture, a good stretch is obtained in the erector spinae muscles. Repeat on both sides.



ii. ***Setu-bandha-aasana:***

In this *aasana*, the pressure on the vertebral segments can be reduced. The final stage can be lengthened up to which there is comfort.

iv. ***Arddha-matsya-aasana:***

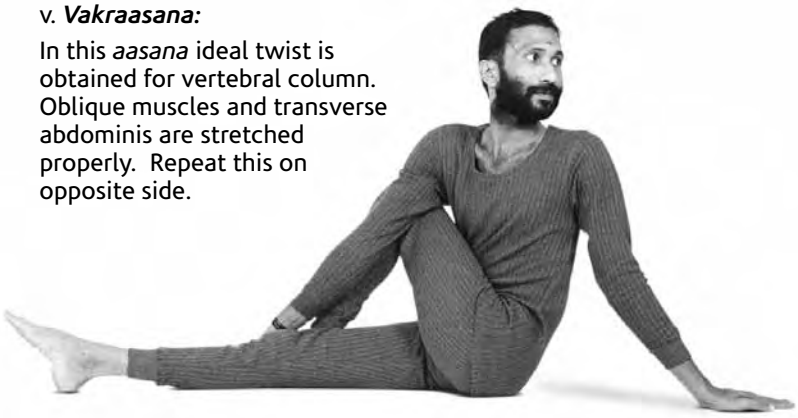
In this posture, the neck muscles are stretched properly. The vertebral segments are bent backwards. Continue in the final position with ease for sometime.



*Photos: R. Anilkumar*

v. ***Vakraasana:***

In this *aasana* ideal twist is obtained for vertebral column. Oblique muscles and transverse abdominis are stretched properly. Repeat this on opposite side.





vi. ***Sasaankaasana:***

Exhale while bending forwards and inhale while bending backwards. Repeat this for five times.

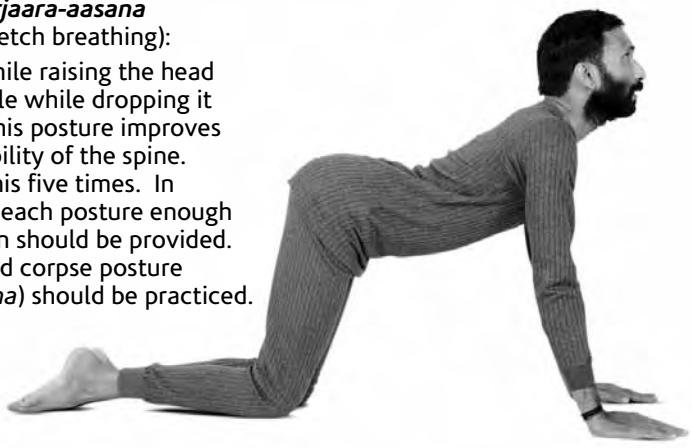


vii. ***Ardha-ushtraasana:***

The muscles of the abdomen, chest, and neck are stretched gently. Stretch backwards only up to the level of comfort. There is no need for repetition.

viii. ***Maarjaara-aasana*** (Tiger-stretch breathing):

Inhale while raising the head and exhale while dropping it down. This posture improves the flexibility of the spine. Repeat this five times. In between each posture enough relaxation should be provided. At the end corpse posture (*savaasana*) should be practiced.



4. **Chronic stage:**
In chronic stage even after primary subsidence of disease, the activities that require special skills are restricted. *Aasana* should be practiced just like that of a healthy person. Special training is also required to regain the lost functional ability.

## *Praanamayakosa:*

Excessive exertion of the human body, work in wrong posture and excessive rest can lead to an imbalance in the flow and utilization of *praana*. This would lead to excess contraction of paravertebral musculature and serious disorders of the spine.

Management: The diseases of *Praanaamayakosa* can be treated by avoiding the etiology and through yoga techniques giving due importance to *Praanaayaama*.

## *Mano-maya-kosa:*

The mental turbulence often affects the structure and functions of the body. Such stress stimulates the limbic system which leads to an imbalance in the function of the autonomic nervous system. Moreover it leads to the contraction of the paravertebral musculature. It derails the immunity and would promote autoimmune reactions leading to origin of diseases like arthritis. Degeneration of bone could also result from these causes.

Management: The diseases of the *mano-maya-kosa* can be tackled by reducing mental stress. In the process, meditation (*dhyaana*) and relaxation techniques should be given due importance.

## *Vijnjaana-maya-kosa*

Indiscriminative acts for satisfying over ambition makes man a victim of various diseases. All wrong lifestyles also invite the diseases of the spine.

Management: Restructuring the disease-causing lifestyle must be the protocol in the diseases of *vijnjaana-maya-kosa*. For this the proper understanding of yoga principles would be highly fruitful.

## *Aananda-maya-kosa*

The personality of the individual has definitely an important role to play with respect to manifestation of diseases.

Management: To deal with *aananda-maya-kosa* efforts must be directed towards gaining the knowledge of real self and performing *karma yoga*.

## Points to be considered:

a. The yogic postures should be modified according to the condition of the patient.

b. The stage of the disease is important rather than the perfection of the *aasana*.

c. The extent of performing a posture is the level up to which the patient can execute it comfortably.

d. Avoid strenuous postures.

e. Avoid jerky movements.

f. Make yoga practice a part of daily routine. ■

# Ayurvedic palliative care for cancer patients



**Dr. K. B. Sudhikumar M.D.(Ay.)**
Professor, Dept of salyatantra,
Govt. Ayruveda College, Thrippunithura, Kerala

Cancer the challenge undefeated still after 21st century techno era, always accompanies unpredicted group of miseries for a patient. Along with the disease the treatments like chemotherapy and radiotherapy make the body weaker in cellular level. Psychologically the patient as well as the family is badly affected and it ruins the life. Hence for these kinds of patients Ayurveda can offer following modalities of treatment that can be selected according to the demand of the situation.

1. **Mitigation *(s̲amana)* therapy** - Ayurveda is based on humoral principles. The equilibrium of the three humors causes health. *S̲amana* therapy is oriented to balance all humors mainly by internal medication. Different medicines can be selected for the affection of different parts and according to the humor involved. It can be-

- Humor based (depending upon the vitiated humor)
- Reservoir (*aas̲aya*) based (depending upon the visceral organ involved)
- Condition (*avasthaa*) based (according to the prevailing signs and symptoms)

Humor based therapy mostly intends cure. Reservoir based therapy aims at correcting the pathology in the involved reservoir. Condition based therapy is symptomatic treatment for relieving the prevailing complains. In all these modalities various dosage forms such as decoctions, powders, medicated ghees and oils, medicated jams, fermented products (*aasava* and *arisht̲a*) are prescribed. Most of the Ayurvedic preparations have multi-system effect and hence have a major palliative role in different body systems at a time. Mostly it may help to correct digestive and respiratory conditions and



deficiency of immunity. Ill effects of therapies may be neutralized with these medicines. Ayurvedic drugs can be effectively and safely utilized mostly in the following conditions faced by severely ill patients.

1) Anorexia

2) Constipation

3) Vomiting

4) UTI

5) Cough

6) Respiratory distress etc

2. **Purification (*sodhana*) therapy**- Though ayurvedic principles never support cleansing therapy in severely ill patients, in chronic conditions vaata is more aggravated. Here, mild unctuous laxation may be very useful.

3. **Rejuvenation *(rasaayana)* therapy** - It can be both curative as well as palliative for the patients. According to the choice of *rasaayanas* in different conditions they can impart rejuvenation. Important *rasaayana* formulations for curative purpose are:-

*Bhallaataka rasaayana*

*Silaajatu rasaayana*

*Guggulu rasaayana*

*Rasa-maanikya and*

*Vajra bhasma*

These drugs have effect on controlling the metastasis of the disease. *Rasaayanas* are thought to effect in cellular level of the body. They enhance the cellular strength, nutrition and act as antioxidants. Some of them are immuno-modulators and may help in augmenting the level of immunity. As mitigatory or energizing preparations the following formulations can be utilized.

*Cyavanapraasa*

*Braahma rasaayana*

*Vasanthakusumaakara rasa*

*Medhya rasaayana*

*Triphalaa rasaayana*

*Suvarnamaalinee vasantha*

4. **Therapeutic procedures *(kriya-karma)* and five fold therapy *(panca-karma)***

a) Unction and sudation : It can be very effective in reducing the regional pain; a tranquilizing effect may obtain after proper oleation and sudation in whole body. A proper oil massage to palms and soles may help in eliminating insomnia.

**Cancer extends its clutches strongly over the world day by day. The remedies for the malady has limitations and side effects too. The severity of disease, hazardous side effects and the prohibitive cost of treatment will badly affect the patient and his family. In such a panic a strong mental support has much to do. Ayurveda believe in the active involvement of mind in the pathogenesis and relief of diseases and giving palliative care to severly ill cancer patients in Ayurvedic lines will definitely work. Here are some effective tips in that perspective by Dr. Sudhikumar.**

b) Scalp irrigation (*sirodhaara*): It provides mental calmness and good sleep to the patient

c) Enema (*vasti*) is a good option for pain relief and is good for mitigating generalized increase of vaata causing sleep disturbances, neurological deficits etc. A purification enema (*sodhana vasti*) can help in maintaining a proper digestive system.

d) Gargling and retention of medicine in mouth (*kabala-gandoosha*) aid in combating oral diseases, bad smell etc.

e) Local irrigation can do the same as *snehana-sodhana* in regional level

f) Local retention of oil such as spinal retention (*katee-vasti*) and chest retention (*uro-vasti*) may give better relief from pain and will provide anti-vaata conditioning at the region.

5. **Wound management**

The surgical branch of Ayurveda (*Salyatantra*) has got a better understanding of wound management. Susruta's approach in wound healing, bed sore management and unhealing ulcer management are found to be very effective.

6. **Yogic postures *(yogaasana)***

The yogic postures are evaluated in many centers in different parts of the globe and are found to be effective in palliative care. Without much physical management many goals of exercise can be obtained by simple respiratory excercises (*praanaayaama*). The postures may be selected to suit the physical condition. Meditation (*dhyaana*) can add tranquility to minds. It has been shown that yogic respiratory exercises (*paranaayaama*) can even reduce the healing time of wounds, can modulate immunity and improve the quality of life (QOL) in cancer patients.

7. **Wholesome and unwholesome things (*pathya-apathya*)**

Ayurvedic norms of do's and don'ts in various conditions can be helpful in attaining better results and can be employed even as a part of treatment and are the best in palliative care.

8. **Psychological assistance (*maanasika cikitsa*)**

Ayurvedic holistic approach in psychological treatment is highly important. Along with yoga it can strengthen the patient to fight against stress, anxiety etc., It is helpful in social health of the individuals as well as the family.

9. ***Mantra* therapy**

This can enhance the mental strength of patient as well as family members.

10. **Self-study (*svaadhyaaya*)**

Reading of good books and discussing spiritual aspects can provide a positive stroke in mental state. Many Indian philosophical approaches can strengthen the mind of the patient to face death bravely in terminal cases.

11. **Fire sacrifices (*yajnja*)**

Fire sacrifices imparts a spiritual effect on the whole family as well as its members. ■

# Opening new frontiers on debate



**Dr. Manmohan**
Medical Superintendent, AyurvedaGram

How permissible are we to arguments and debates? One of the major features that led to the sidelining of the science of Ayurveda from mainstream system of medicine in post-Independent India is the lack of inherent research mentality among its practitioners. What was said in the ancient past was accepted by most with a sense of pride and applying them with unabashed ease in practice. Seldom did a physician or an organization bothered to check the veracity of the dictums scripted or followed by hearsay since thousands of years. Least did anyone care to check the very genesis of this science and the lineage or identity of the highly evolved intellectual race that conceived the principle of this "way of living".




How effective were these principles in a world, where every theory that is postulated required meticulous probing by techniques that technology of the day offered, was never thought of either individually or collectively. In fact what was conveniently forgotten is that, in order to gain comprehensive acceptance in a world that was going on a development spree kick-started by the Industrial Revolution and thereby to a market driven economy in which quality and cost-effectiveness of a product or service were the ultimate criteria that consumers would swear on, is the scientific proof to establish the credentials of the commodity (in this case, ayurvedic products and services) that were up for sale.




Even when we are offering the products of this wonderful and effective philosophical science for free, and practicing its principles for charity, it is binding on the learned ayurvedic physician to know the scientific credibility of what he is offering so that he could answer or clarify the pertinent doubts arising within himself as well as those of the person whom he is healing. Many times we see much to our horror the experienced (in terms of years spent as a practitioner) among us groping in the dark to find a



## Laurels from Chairman Mr. Ramesh Vangal

1. **Dr. I.P. Sreeraj:** Outstanding OP and IP consultation.
2. **Dr. D.R. Sadath:** Excellence in OP consultaion.
3. **Dr. G.R. Chandran:** Excellence in OP consultaion.
4. **Dr. K. Vasanthakumari:** Excellence in all round performance.
5. **Dr. Aparna Das:** Outstanding contribution to growth of the clinic.

plausible explanation to an astute and often analytical question from a not so naïve client. It does not matter as to who our clients are. Young or old, poor or rich, celebrity or the man on the road, educated or illiterate we have an inherent obligation towards each of them to be clear on what we base our diagnosis and treatments on. Moreover the frequency at which we enrich and refresh our knowledge constantly matters in building the much needed self-confidence to find solutions to new and unheard of pathologies that modern lifestyle offers.


3

It matters on what we read and how we approach and take forward a new line of thought that one of our colleagues brings forth in a scientific article. It does matter what we discuss, how we discuss, where we assemble to discuss the different opinions among us pertaining to clinical and non-clinical aspects of Ayurveda. Sadhana is conceived by Kerala Ayurveda Limited as an occasion and opportunity for doctors with the company to freely express their views on how to help ourselves to be the only ayurvedic company that are offering scientifically authenticated products and services.

The 2010 edition of Sadhana was held at AyurvedaGram in May. Seasoned teachers and experts rubbed shoulders with the new and the bold for two days to share the intellectual knowledge gained between them especially during the last one year by simply marrying the ancient scriptures with modern technology and analysis. For some, the outcome was rewarding in having a renewed and more confident sense of belonging. For others it was an eye-opener to the enormous potential of Ayurveda, which can be made the prime motivator of the masses in modern age society to help them adopt and acquire a healthy body and mind. AyurvedaGram provided the perfect venue for such a forum and offered its serene settings to make each debate that happened over those two days healthy and revitalizing.

Each of the participants touched base on what they perceived as the immediate requirement for the fraternity and how effectively they could be implemented. The goals were prioritized and delegated. They welcomed whole heartedly the value and importance accorded by the company on scientific research of the age-old principles and theories as the need of the hour and which would go a long way in spreading the gospels of this science far and wide as well as gaining acceptance among the masses. ■


4

## KAL - SOP Manual release



A manual for Standard Operating Procedure (SOP) has been published by KAL. It aims at standardizing the activities and treatments in KA clinics. The manual consists of two parts - one describing the SOP for the functional part and the other dealing with therapies. Through its proper implementation the customers of KA clinics around the globe will experience the same high standards of customer care and services. It is the first of its kind in the whole industry. The manual was released by Dr. K. Anilkumar, Executive Director, on 23rd June 2010, at Kerala Ayurveda Academy, Aluva.

## A Quality training for Quality Control





The 2nd session of 5 days QC certificate training program was organized by Research & Development Department of Kerala Ayurveda Ltd., Athani. This event was supported by Ayurveda Medicine Manufactures' Organization of India (AMMOI) Ernakulam District Committee. Dr. K. Anilkumar (Executive Director, KAL) inaugurated the session. The training program comprised of various aspects like Pharmacognosy, Phytochemistry, Microbiology, Pharmaceutics, Quality Control, Product Development, Pharmacology (including Clinical research) as per WHO directives and Drug & Cosmetics Act. The training program was conducted in two batches, the 1st batch was held from 3rd to 7th may 2010 and 2nd batch was held from 24th to 28th May 2010. The classes were conducted by R&D/ QC personnels of Kerala Ayurveda Ltd. There were 11 participants representing different Ayurvedic manufacturing units of Kerala. ■

# Nonagenarian on an ayurvedic pilgrimage

Documentation and research

Dr. T.R. Jayalakshmy

Among the Ayurvedic elite of Kerala, we have good practitioners, good manufacturers and a few good teachers. But good writers in Ayurveda belong to a rare species. Vaidyabhooshanam K. Raghavan Tirumulpad *(pronounced as Raaghavan Tirumulpaat)*, Chalakudi, a legend of Ayurveda, who was recently enrolled as a nonagenarian is the leader of the handful men of letters in the field of Ayurveda in Kerala, the God's own country and the cradle of the science.

On 23rd May 2010, Kerala celebrated the 90th birth day of Sree Tirumulpad. The media was celebrating the event a bit early to pay due reverence to the veteran author physician. The Gopalakrishna auditorium Chalakudy, where an august gathering assembled to celebrate the birthday was packed with who revere the Aacaarya, young and old mostly from the field of Ayurveda.

On 13th June 2010 afternoon a team from Kerala Ayurveda Vaidyam visited Rajavihar, the residence of Sree Tirumulpad with the intention of interviewing the doyen of Ayurveda. It consisted of Dr. K.Anilkumar (Managing Editor), Dr. C.R.Agnives (Editor-in Chief) and Dr. T.R. Jayalakshmy (Editor), Prasadh N. Krishnan (Designer) and R. Anilkumar (Photographer). Dr. K.Murali, Professor, Govt. Ayurveda College, Trippunittura, son of Dr. Tirumulpad was also present there when the team reached the house. Incidentally, the day happened to be the real birthday of Sree Tirumulpad as per birth star. An intimate circle of friends and relatives were departing after the feast in connection with the ceremony.

In fact the interview was just a friendly visit and the team had no intention to conduct a hairsplitting session to unravel facts. That was totally unwarranted as the media has already published all that is available about his life history, ideals, modus operandi, personality, authorship so on and so forth. Our friendly talk began with the reminiscence of Sree Tirumulpad on Ayurvedaacaarya K.G.K. Panicker, the founder of Kerala Ayurveda Limited and father of Dr. K. Anilkumar in the team. Sree Thirumulpad remembered that Vaidyan Panicker was a man of merit who provided encouragement to those who wored in the field of Ayurveda and that both of them maintained close ayurvedic friendship. Sree Tirumulpad also remembered the occasion when Kerala Ayurveda Limited honored him as part of its founder's day celebrations in 2001. The citation read at the honoring ceremony was brought before us and it brought with it a myriad of memories.



Photo : R. Anilkumar

Explaining his mode of treatment Sree Tirumulpad mentioned that he is more a prescribing physician than one who is intent in procedures. He complained that today Ayurvedic professionals are more interested in procedures. He opined that procedures are mostly unwarranted in many cases and are thrust upon patients mainly for fiscal reasons than medical causes. In his day to day practice he is managing well medicines and seldom resorts to procedures. In treatment pathya (wholesome diet and regimen) is more important than anything else and if this is not adhered to treatment will not provide good results. He showed as his printed prescription form bearing wholesome regulations are put on black and white at the reverse side of the page. Simple decoctions and other medicines which are cost effective can work wonders if judicially employed. For example when we feel like giving an enema (vasti), oral administration of a simple decoction like Gandharva-hastaadi will do the job. If so why should we trouble the patient with an enema?

*Dr. Agnives: After 60 years of ayurvedic practice, what do you feel about the status of Ayurveda?*

**Sree Tirumulpad:** Not very satisfactory. No body is studying the science with deep dedication. Physicians are money minded and resort to and insist on unwanted procedures. They are not giving importance to wholesome practices (*pathya*) and mitigation therapy (*samana cikitsaa*).

*Dr. K.Anilkumar: What about the lifestyle diseases?*

**Sree Tirumulpad:** It is mainly propaganda of modern medicine. They create fear in the mind of people. Wrong notions are continuously published in the media.

*Dr. K.Anilkumar: What about the dietary habits of people?*

**Sree Sree Tirumulpad:** Eat only when you are hungry. Hunger is the basis of health. Drink water only when you are thirsty.

**Dr. K.Anilkumar:** It seems that production of the undigested factor (*aama*) is the root cause of many diseases prevalent today.

**Sree Sree Tirumulpad:** Whatever we eat should digest properly. Instead of two times a day, people consume food many times a day. This is technically called *adhyasana*. It will weaken the digestive fire and cause *aama*.



*Dr. Agnives: What about Ayurvedic education in colleges today?*

**Sree Sree Tirumulpad:** I have been an examiner to many universities. I feel that the defects of the college education can be remedied. Today teachers are teaching for the salary they get. That is not good. There should be more sincerity in teachers.

*Dr. K.Anilkumar: What should be added to the present syllabus?*

**Sree Sree Tirumulpad:** You mean text or subject? To teach any subject we need text. The surety of science that we obtain by studying Ashtaanga-hrdaya cannot be had from learning Caraka-samhitaa. This is because Ashtaanga-hrdaya is a well written book. Now the colleges teach the texts and not the subjects. This is a defect. Students are interested only in passing the examination. They do not aim at in depth knowledge of the science.

*Dr. K.Anilkumar: What about gaining experience in practice under a Guru after obtaining the academic credentials?*

**Sree Sree Tirumulpad:** We cannot go back to the *Gurukula* of the old days. There are three conventional means of gaining knowledge. You may serve the *Guru* and gain knowledge. You may give money and gain knowledge or you may barter knowledge by giving knowledge. There is not a fourth method to attain knowledge.

*Dr. K.Anilkumar: What is your opinion about new dosage forms?*

**Sree Sree Tirumulpad:** I don't think that new dosage forms are a taboo. For example the capsules; there is nothing wrong with them. We need not limit ourselves to certain dosage forms. There is no such stipulation in science.

*Dr. Agnives: Are you satisfied with your practice?*

**Sree Tirumulpad:** I do not think that all patients should come to me. I try to give relief to those who



*Photo: R. Anilkumar*



come to me. I am not converting my practice into a business. Treatment should not be mere business. Medicines are essential for treatment and they involve money. But money should not be the sole intention of treatment.

*Dr. K.Anilkumar: What about the global proliferation of Ayurveda?*

**Sree Sree Tirumulpad:** Medicines are proliferating globally. The science is not proliferating. No body is interested in wholesome regimens.

*Dr. Agnives: How can we stipulate universally wholesome regimens?*

**Sree Sree Tirumulpad:** The enhancement of bio-fire is the aim.

*Dr. K.Anilkumar: What about making a platform of Ayurvedic scholars to think and discuss about the science?*

**Sree Tirumulpad:** But who will lead the discussions? There will be ego clashes. Seminars are good.

**Dr. Agnives:** But they too have deteriorated. Now seminars are for the sake of seminars and not for the science.

**Dr. K.Anilkumar:** A usual question to veterans is about their message to the youngsters. Let us also ask the same question.

**Sree Tirumulpad:** The youngsters should think. Thinking has almost ceased in the Ayurvedic field. Study the science well, especially Ashtaanga-hrdaya. Think logically and arrive at conclusions. I have studied logic (*tarka*) and Sanskrit before studying Ayurveda. This has helped me a lot in understanding Ayurveda. Hence think, think logically.

## Tirumulpad as a physician

As a physician Sree Tirumulpad is unique in his methodology. He mostly resorts to mitigating therapy and does not prescribe procedures such as pancakarma and Kerala special therapies like *pizhiccil* and *njavarakizhi*. He believes that internal medicine is sufficient in most of the cases. His prescriptions are simple and cost effective. Most of the medicines can be home made. He even thinks that costly procedures are preferred by many physicians just for fiscal gains. He demands no consulting fee from his patients. At the same time he accepts and is satisfied with whatever *dakshina* presented by them. He has developed many formulations from his clinical experience. He insists on the importance of *pathya* (wholesome regimen and diet). If *pathya* is not adhered to treatment is futile. If proper *pathya* is observed medicines can be minimized. Considering his meritorious career, the honorable Government of Kerala has awarded him with its highest title and recognition in Ayurveda namely Ashtangaratna Award in the year 2007 when the award was first instituted.

## Tirumulpad as a Person

As a person Tirumulpad is far from the maddening crowd. He is a solitary ideologist, a Gandhian to the core. He leads a simple life without any craving for luxury. He wears only rough cotton khaadi dress – a single dhoti and a cotton shawl. He is a strict vegetarian. He does not drink milk. Even at this age he walks for a while everyday. He is still a student and a voracious reader. Anything under the sun is in his agenda of reading and study. He speaks with utmost humility but he is interested always in scientific debates.
His Socratic philosophical disposition loves dialogues and he successfully utilized this dialectical means to extract new ideas. As an Ayurvedic writer he is unparalleled. He writes in three languages Malayalam, English and Sanskrit. His penning is not confined to the arena of Ayurveda. As you can verify from the short list provided, he is a person of varied interests and an expert in the art of writing prose and verse. As a translator he has translated *Bhagavad-Geetaa*, *Dharma-padam* and *Tirukkural* to Malayalam verse. This testifies his moral disposition.



*Kerala Ayurveda Vaidyam honoring Legendary physician*

## Health of Tirumulpad

Sree Tirumulpad had experienced various life threatening health problems in his early quarter of life. The ill-effects of the diseases showered upon him in his late adolescence and early youth were completely cleared out with the proper administration of Ayurvedic drugs. As he usually advocates, usage of mere internal medicines for a particular period of time with strict accompaniment of dietery and behavioral regimen helped to cure the disease and make him healthy. That particular instance made his mind commited to absorb the secret code of the science of healing. Thence, simply by following the daily regimen as per Ayurvedic norms, he prevents the chances of being ill. He propagates the same idea to his desciples and patients. Even at this age of ninety he walks for a while everyday. He is a living example for the cent percent effectiveness of Ayurveda. As per the science, old age is the period of vaata. To pacify its influence on health, he applies pure gingelly oil collected from Guruvayur temple, on his body. As this temple is the famous spiritual centre for pacifying vaata, the oil has a dual effect of purity and divinity. Above all, his perpetual penance on Ayurveda is the core secret of his health. ■

### BIO DATA



Vaidyabhooshanam K. Raghavan Tirumulpad

**Date of Birth** : 20.5.1920

**Place of Birth** : Cingoli, Alappuzha Dt. Kerala.

**Parents**

Mother : K. Lakshmikkutty Nambishtaatiri

Father : D. Narayana Ayyar

**Address** : Rajavihar, Palace road, Chalakkudy, 680 307, Trissur Dt., Kerala.

**e-mail** : info@thirumulpad.com

**Web site** : www.thirumulpad.com

**Family**

Wife : Late Smt.Visalakshi Tampuratty

**Education**

**School** : Govt. High School, Chalakkudy

**Ayurveda** : (1944-1949) Gurukula education under Sri. P. Vasudevan Nambeesan. Passed Vaidyabhooshanam examination of The Department of Ayurveda, Cochin Govt. in 1950

**Internship** : (1950-1951) – Rama Varma Central Ayurveda Hospital

**Sanskrit** : Under P.S. Subbarama Pattar, professor, Kerala Varma College

**Logic** (*tarka*) : Under Konot Krshna Varrier

**Astrology** : Under Mandamparampat Narayanan Nambootiri

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# Authentic, safe and pure Ayurveda for the US



*Students of Kerala Ayurveda Academy at Bastyr University, Seattle.*

The Kerala Ayurveda Academy in the US, with more than 200 students trained annually across five locations in the United States of America, is the largest vocational school for Ayurveda training in the USA. The Kerala Ayurveda Academy in the USA offers courses for students wanting to study Ayurveda in a scientific manner retaining all its authenticity and purity. These programs are certified by the Vocational school boards of the states of Washington and California.
By obtaining the certification from the Academy, a graduate is able to assist family, friends and clients in creating healthier bodies and lifestyles, thus eventually lowering health care costs. This is in alignment with Kerala Ayurveda's aim to establish Ayurveda as an effective and affordable healthcare system – making it a global choice for better health. This is especially important in a country like the US. KAL's mission has been "Evolving Ayurveda" with substantial investments in research, systems and processes so as to adapt it to the requirements of the modern world without losing its original tradition and goodness – ensuring that India's ancient and oldest form of traditional medicine, Ayurveda, is promoted globally in an authentic manner for the benefit and wellness of humankind. The US really needs such an authentic Ayurvedic program.



*Sirodhaara at Seattle*

In just over two years, Kerala Ayurveda's KALPAM Clinic at Seattle has established itself as one of the foremost Integrated Ayurvedic Wellness Centers of its kind in the Seattle region. This is a multi-modal polyclinic wherein we offer a wide range of healthcare solutions – ranging from Ayurvedic consultations and treatments (*abhyanga*, *pancakarma*, *sirodhaara*, *udvartana*, *vasti*), skin & beauty care treatments, cranio-sacral treatments, naturopathic services, yoga, *praanaayaama*, acupuncture and colonic therapies. The practitioners here – our KALPAM partners - have skillfully integrated their Ayurvedic training and knowledge (acquired at the KA Academy) with their core medical license (Naturopathy, Massage Therapy, Acupuncture) and have made a tremendous impact on the community by offering "wellness naturally". This refreshing and expanded approach to healthcare is supported unanimously by their clients and patients.

Today, Kerala Ayurveda has created a large community of followers through our Online Social Networks. Our Twitter platform features daily updates and information on Ayurveda with a following of over forty thousand people. On Facebook, we have witnessed a large surge of people interested in Ayurveda with over fifteen thousand friends. We also feature a full library of educational videos on Ayurveda on You Tube where we have over two thousand friends and subscribers. We also feature several Blogs where we share educational information on Ayurveda. In essence, with the help of technology we have been able to expand our outreach and teach the principles of Ayurveda to a larger audience. We will continue to broadcast our message of natural healing and wellness and bring this extraordinary science to every corner of the world. You may preview some of our Social Media Platforms by following these links:

Our You Tube Channel of Online Videos:

http://www.youtube.com/user/ayurveda2009

Our Main Blogging Website:

http://www.ayurvedaprograms.blogspot.com

Our Ayurveda Resources Page:

http://www.squidoo.com/ayurveda-school

Our Introduction into Ayurveda Page:

http://hubpages.com/hub/Ayurveda-School

We have many other Blogs and Information Pages Online. We will continue to share the principles of Ayurveda Online and hope that you will join us as we move together to a healthier future for everyone. To join one of our Facebook Accounts Please click on:

http://www.facebook.com/group.php?gid=107292937998

To Follow us on Twitter you may join one of our accounts here:

http://twitter.com/Ayurveda Academy ■

# Rejuvenation therapy for youthfulness

**Dr. Resmi**

Youth is the prime time of human life, characterized by a strong body and mind, proper digestion, aggression, better sexual life and is comparatively unaffected with diseases.

Rejuvenation therapy (*rasaayana cikitsaa*) is a very important section of Ayurvedic treatment modality that helps in maintaining youthfulness and providing quality to life. Rejuvenation of all systems is the aim of this therapy. It is considered as the means for obtaining optimal tissues. (A.H.U.39.2)

Toxins, accumulated in the system due to erroneous lifestyle and daily wear and tear, are eliminated and functional efficacy of the system is brought forth by the modalities of rejuvenation therapy. Maintenance of proper lifestyle, stipulated regimens and observance of moral etiquette are as important as medicines during this treatment.




*Model: Sarath, Photo: R. Anilkumar*

Medicines used for rejuvenation (*Rasaayana*) help in augmenting immunity status and enriching health. Rejuvenation therapy provides good complexion, clarity of voice, sexual prowess, intelligence, memory, better nutritional status, acuity of sense faculties, proper digestive power, eloquence, attractiveness etc. (A.H.U.39.2). It also helps the growth of hair.

There are different modes of administering *rasaayana* drugs. It may be taken in larger doses with strict regimen and hospital stay or can be taken in smaller doses without many restrictions in terms of food and activities as out patient.

These medicines are administered only after proper cleansing (*sodhana*) of the body by purification therapies like emesis, purgation, enemata and errhines. The expected results are achieved only when the medicines are given after detoxification of the body by purification and the channels of the body are made patent.

Some of the widely used *rasaayana* formulations are Cyavana-praasa, Naarasimha-rasaayana, Ajamaamsa-rasaayana, Brahma-rasaayana, Agastya-rasaayana and Ksheerabala. *Triphalaa* – the combination of three fruits viz. Emblica officinalis, Terminalia chebula and Terminalia bellerica is considered a very effective medicine for rejuvenation indicated for regular use.

A person who is truthful, self controlled, pious, peace loving and moral is believed to be deserving of *raasayana* treatment at any time. If such a person is subjected to this treatment, he can achieve quality and longevity of life. ■

# A case of Irritable bowel syndrome



**Irritable bowel syndrome (IBS), is a psycho-somatic life style disorder. Every authentic reference has a similar opinion of no cure to the condition eventhough there are some treatments that attempt to relieve the symptoms. In this situation a successful Ayurvedic treatment experience have its own room to be presented proudly infront of the medical community. Here Dr. Sadath have done it.**



**Dr. D.R. Sadath**
Sr. Medical Officer, KAL Clinic, Ernakulam

(*Samgraha-grahanee*)

NAME: Mrs.Varma

Age: 44 years, Female

Op No: 4339

Marital status: Married

Occupation: Bank officer

## Presenting complaints with duration

- Frothy loose motion -15yrs
- Alternate constipation and diarrhea -15yrs
- Flatulence -15yrs,
- Abdominal bloating - 15years
- Abdominal pain which is relieved by defecation -15yrs
- Loss of appetite 16yrs
- Under weight ie 40 kg since 10 yrs
- Mental stress - 5yrs

## History of presenting complaints

The patient is lean. The complaints aggravates on taking food from out-side. Any change from her regular diet leads to sudden onset of loose motions. As a result, her total lifestyle is badly affected. For the past 10 years her body weight remains constant at 40 kg. The patient was in a frustrating condition because of the poor quality of life and she became depressive and finds difficulty in coping with the symptoms. She took Allopathic and Ayurveda treatment from several hospitals and did not get any notable relief. For the last 15yrs her life was a journey from one hospital to another.

## History of past illness

- Recurrent urinary infection
- Occasional back pain
- Lethargy

## Gynaec history

- Menarche at the age of 14yrs
- Regular Menstrual cycle with 30 days interval
- Normal bleeding

## Family history

No family history of the above complaints

## Personal history

- Diet - Vegetarian, Takes only small quantity of well boiled rice with curd and boiled vegetables. Since 15 yrs
- Appetite - Reduced
- Sleep - Disturbed
- Exercise - Moderate
- Bowel - alternate constipation and diarrhea, flatulence
- Bladder-Normal
- Addiction - Nil
- Menstruation - Normal cycle

## Examination

### General examination

- Pulse rate - 66/minute
- BP -110/70 mm of Hg
- RR-15/mt
- Temp - Normal

*Ashṭa sthaana pareekshaa*

- Pulse (*naaḍee*) - Vaatika
- Urine (*mootra*) – abnormal (*vikṛtaṃ*)
- Stools (*malaṃ*) – Alternate constipation and diarrhea (*muhuḥ baddhaṃ muhuḥ dravaṃ*).
- Tongue (*jihvaa*) - coated (*upaliptataa*)
- Voice (*śabdaṃ*) – weak (*ksheeṇa*)
- Touch (*sparśaṃ*) – Neither hot or cold (*anushṇaaśeetaṃ*)
- Eyes (*dṛk*) - NAD (*saamaanya*)
- Shape (build = *aakṛtih*) – lean (*Kṛśaṃ*)

### Examination of channels (*Sroto-pareekshaa)*

The symptoms indicate that the channels of food essence, water, food and mind (*rasa-vaha-srotas, udaka-vaha-srotas, anna-vaha-srotas* and *mano-vaha-srotas*) are affected.

### Constitution (*prakṛti*) -

*Vaata-pitta-prakṛti*

***Dosha*** **-** Trihumoral (*sannipaata*)

***Aama*** **-** present

### Systemic Examination

- CVS -NAD
- Respiratory - NAD
- Skin - NAD
- GIT - affected, alternate constipation and diarrhea
- CNS - NAD
- Urogenital – Reccurent Urinary infection
- Gynaec – Normal
- Locomotory-Normal

## Provisional Diagnosis:

IBS - IRRITABLE BOWEL SYNDROME (*Grahaṇee*)

## Lab Investigations

### Blood

- Hb-10.5 gm/dl
- FBS-82 mg/dl
- Urea-17 mg/dl
- SGOT-19 U/L
- SGPT-31 U/L
- Cholesterol-149 mg/dl
- LDL-92 mg/dl
- Triglyceride-95 mg/dl

### Urine

- Sugar – Nil
- Albumin – Nil
- Pus cells – 1-2 /HPF

**Stool -** No parasites

### Thyroid function test

- TSH-3.29 mIU/L

### Ultrasound sonography

- Solid organs of the abdomen appear sonologicaly normal
- Normal sized Retroverted uterus
- Few luminal small gall stones in gall bladder.

### Colonoscopy

- Normal
- No Tuberculus colitis
- No Malignancy
- No Ulcerative colitis

## Etiology (*nidaana*)

1. Dyspepsia (*agni-maandya*) from the childhood itself
2. Vitiation of *apaana-vaayu* due to improper food habits and dyspepsia.
3. Vitiation of bio-fire (*agni-dushṭi*) caused by physical and mental factors.
4. Pollution of the channel for stools (*pureesha-vaha-sroto-dushṭi*).
5. Aggravation of vaata in the large intestine (*pakvaaśaya vaatakopa*) due to incompatible food (*viruddha-aahaara*) and constipating food (*vishṭaṃbhi-aahara*)

## Differential Diagnosis

1. Ulcerative colitis – Colonoscopy reveals that it is not ulcerative colitis.
2. Tuberculus Colitis – Colonoscopy rules out tuberculus Colitis.
3. Malignancy – Colonoscopy rules out this also.
4. Amoebiasis- Microscopic examination of stool reveals that there is no amoebiasis or other intestinal parasites
5. IBS- Cardinal signs and symptoms of IBS are clearly present in the patient. i.e.

- Continuous or recurrent symptoms- more than 10 years
- Altered stool passage- straining, urgency and tenesmus.
- Abdominal pain relieved by defecation.
- Abdominal distension.
- Passage of mucus.

Symptoms of *grahaṇee* due to vaata, pitta and kapha are seen together in this patient. So it is trihumoral *grahaṇee*.

Symptoms of *Saṃgraha grahaṇee* like tenesmus, frothy loose motion, and diarrhea occurs in day time and seldom at night, abdominal cramps and prolonged nature are present in this patient.

## THEORY

### Symptoms

The stools may be digested or undigested.There may frequent constipation alternating with loose motions. (A.H.Ni.8.17,18)

### Etiology

Vaata is aggravated by food that is acrid, astringent and insufficient. Starvation, walking long distances, suppression of urges or excessive coitus mask the bio-fire and cause the disease. (M.N.Grahaṇee.5)

### Role of digestive-fire in *Grahanee-roga*

*Grahanee roga* is caused by weak digestive-fire. Even after diarrhea is relieved the patient may continue to have weak digestive-fire. If he eats unwholesome food in this convalescent period again digestive fire will get vitiated and generate the disease *grahanee*. (M.N. Grahanee. 1)

Digestive fire (*jatharaagni*) is the chief among all the categories of bio-fires. The other divisions of bio-fire depend on it and their increase and decrease depend on the increase and decrease of the digestive fire. Life and strength (including immunity) also depend on this fire. Hence the digestive fire is to be protected by proper food and drinks. (C.Ci.15. 39,40) .

The bio-fire is responsible for life, colour, strength, health, enthusiasm, nutritive status, reflection of light on skin (*prabhaa*), immunity, other factions of bio fire and respiration (*praana*). Extinction of the digestive fire leads to death. Therefore digestive-fire is considered to be the root or the most important sustaining factor of living beings. (C.Ci.15. 3,4)

### Etiopathogenesis

Though the exact cause is not known the available evidence suggest that IBS is primarily a motility disorder of intestine. The walls of the intestine are lined with layers of muscle that contract and relax as they move food from stomach through intestinal tract to rectum. Normally these muscles contract and relax in a coordinated rhythm. But in IBS the contractions may be stronger and last longer than normal. Food is forced through the intestines more quickly causing flatulence and diarrhea. In some cases however the opposite occurs. Food passes slowly and stools become hard and dry. Hence it can be seen that abnormal motility of the intestine is the decisive factor in the pathogenesis of IBS. Gut- function is mainly regulated locally in the gut. Emotions affect motility and secreting function of every part of the bowel. Neuro-anatomical circuits between the hypothalamus and raphe nucleus along with Vagus nerve regulate the gastro-intestinal functions. The emotional link is provided by their interaction with cortex, subcortex and the neuro transmitters which are subservient to mental functions.

### Triggering factors of IBS

1. Emotional factors – Immature, rigid and perfectionist behavior is more



frequently associated with IBS. Anxiety neurosis and depression worsen the bowel symptoms

2. Dietary articles such as acidic fruits, salads and tomatoes may act as luminal spasmogens and trigger off an attack.

3. Some cases may follow episodes of infective colitis and amoebiasis.

### Pathogenesis (*sampraapti*)

The digestive and pelvic factions of the humor vaata (*samaana* & *apaana*) are mainly involved in IBS. The intestinal movements and absorption are mainly undertaken by these factions of vaata. IBS is mainly a functional motility disorder. The mobility and lightness of vaata and flowing and liquid nature of pitta are mainly involved in the diarrhea phase of IBS. In case of constipation phase of IBS dryness and coldness of vaata are mainly involved. Along with the humor vaata, pitta also has an important role in IBS. Pitta is vitiated along with vaata and kapha causing weak status of digestive fire.

Even though the individual takes wholesome food in moderate quantities at proper times, mental exertion like over thinking, grief, fear and anger will inhibit digestion and the ingested food will not undergo complete digestion due to weakness of digestive fire. This dyspepsia may further lead to diarrhea and constipation.

The main site of pitta is in between the stomach and large intestine (*pacyamaanaasaya*) where membrane of pitta (*pittadharaa kalaa*) or *grahanee* are situated. Any defect to these will result in the vitiation of the food essence which forms the first tissue (*rasa*) and finally the vitiation of the GIT. When a channel is vitiated excessive action, obstruction or extra-vasation of the content of the channel may occur. In IBS excessive action (peristalsis) and obstruction are seen.

### Diagnosis : Irritable bowel syndrome (*Samgraha Grahanee*)

Most of the symptoms of the patient are similar to *Samgraha Grahanee*. Marked tenesmus, frothy loose motion, diarrhea occurs in day time and seldom at night, abdominal cramps, prolonged nature are present in this patient which are the symptoms of *samgraha grahanee*. (M.N.Grahanee. 20,21)

**Prognosis:** *Grahanee roga* is considered to be a major disease (*mahaa-roga*). So it is difficult to cure. But fortunately in this case after 18 months of treatment the patient got complete relief. So prognosis is curable (*saadhya*).

## TREATMENT

The first and foremost aim of the treatment was to improve the digestive power and to ignite the digestive fire. Ciruvilvaadi kvaatha is prescribed for this. The physical strength of the patient was very poor and to improve that Indukaantam kvaatha was prescribed. The immunity of the patient also was improved by this.

Along with these, medicines having arresting, carminative and vaata corrective properties like Kutajaarishta, Musta-arishta and Kumaaryaasava were prescribed.

To relieve Emotional stress, anxiety, hyper-sensitivity of the gut and for securing perfect mental health Maanasa-mitra-vataka and Saarasvataarishta were prescribed which gave marked relief to the patient.

In the beginning, all the medicines were given in a lower dose because of weak digestive power. The dose was increased gradually in tune with the increasing digestive power.

| MANAGEMENT | | | | |
|---|---|---|---|---|
| **DATE** | **MEDICINE** | **DOSE** | **TIME& MODE OF USE** | **REMARKS** |
| 02/08/2006 | Indukaanta kvaatha + ciruvilvaadi kvaatha + Maanasamitra vataka | 7.5 ml + 7.5ml + 60ml water + 1tab | 6am & 6pm before food | Body wt-40kg. These kvaathaas were given in low doses because the *sareerabala* and *agni bala* were very poor |
| | Kutaja-arishta + Musta-arishta + Kumaaryaasava | 20ml | 3 times daily after food | |
| | Daadimaadi coorna with honey/water | 5g | | only at the time of diarohea |
| **After 2 months:** Flatulence, stomach pain, frequency of diarrhea and constipation were reduced. Slight improvement in appetite. Stress reduced. | | | | |
| 3/10/2006 | Indukaanta kvaatha + ciruvilvaadi kvaatha + Maanasamitra vataka | 10ml + 10 ml + 60 ml water + 1 tab | 6am & 6pm before food | |
| | Musta-arishta + Kumaaryasava + Saarasvataarishta | 25 ml | 3 times daily after food | |
| | Vilvaadi lehya | 1/2 tsp | 3 times daily after food | |
| **After 3 months:** Pain in the stomach is completely relieved,No loose motion,Appetite increased,Flatulance reduced Body weight-41.5kg | | | | |
| 20/1/07 | Indukaanta kvaatha + ciruvilvaadi kvaatha + Maanasamitra vataka | 10ml + 10 ml + 60 ml water + 1 tab | 6am & 6pm before food | |
| | Musta-arishta + Kumaaryasava + Saarasvataarishta | 25 ml | 3 times daily after food | |
| | Vilvaadi lehya | 1/2 tsp | 3 times daily after food | |
| | Iogen syrup | 10 ml | 2 times daily after food | |
| **After 3 months:** Regular normal motion, no flatulence, started to take normal food, normal digestion, Body wt increased-43 kg | | | | |
| 10/4/2007 | Indukaanta kvaatha + ciruvilvaadi kvaatha + Maanasamitra vataka (dose of MMV reduced) | 10ml + 10 ml + 60 ml water + 1 tab (tab. in morning) | 6am & 6pm before food | |
| | Musta-arishta + Kumaaryasava + Saarasvataarishta | 25 ml | 3 times daily after food | |
| | Vilvaadi lehya | 1/2 tsp | 3 times daily after food | |
| | Iogen syrup | 10 ml | 2 times daily after food | |
| | Indukaantam ghrta | 2.5gm (low dose) | bed time | |
| **After I month:** Indukaanta ghrta was digested fully.Therefore decided to increase its dose | | | | |
| 11/5/2007 | Vilvaadi lehya stopped | | | |
| | Indukaanta ghrta | 5gm | bed time | |
| **After 2 months:** Strength of the patient improved remarkably. Normal digestion. Body wt increased to 44kg all arishtas were stopped, and kvaatha continued daily once | | | | |
| 14/7/07 | Daadimadi ghrta | 5 gm | bed time | |
| | MMV | 1tab | bed time | |
| | Indukaanta ghrta | 5 gm | 6am before food | |
| **After 4 months:** Patient was normal. Started to take all types of food. Mental stress relieved completely. Physical strength increased. Body wt increased to 46kg | | | | |
| 20/1/08 stopped all medicines except Daadimaadi ghrta 5gm bedtime | | | | |
| **After 4 months:** The patient became perfectly healthy. Bowel condition normal. Body wt increased to 47 kg | | | | |

## Follow Up

After stopping all treatments the patient was given Daadimaadi Ghrita alone and was advised to come once in every two months for follow up study. Follow up is still continuing and the patient is perfectly healthy.

## Wholesome instructions:

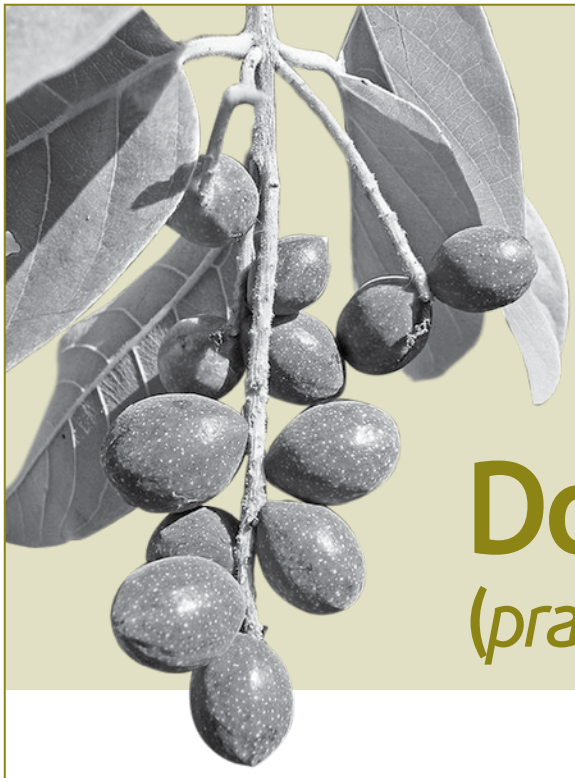
**Food:** Consume adequate quantity of fat free, easily digestible fluid diet. Gradually increase the fiber content of food.

**Activities:** Yoga, *praanaayaama*, moderate exercise, positive thinking, timely food.

## Restrictions

Food: curd, milk, chocolate, refrigerated food, deep fried food items, spicy food, incompatible food, alcohol and carbonated drinks.

**Activities:** Late sleep, improper dietary habits and stressful job. ■



# Donor of life
## (*praanadaa*)

*Praanadaa* is a synonym of chebulic myrobalan, a member of the 'three fruits'. The term means 'donor of life'. *Abhayaa* (that which wards off fear), *hareetakee* (that which cures all diseases), *vijayaa* (victor) and *pathyaa* (wholesome) are other popular synonyms of this drug in Sanskrit. These synonyms suggest the importance of the drug.

Chebulic myrobalan is having all the five tastes except salt. It is predominent in astringent taste. But it is sweet in metabolic effect (*vipaaka*). It is hot in potency and is a good and safe laxative. It is dry (non-unctuous) and is the drug of choice when we want a dry laxative. It is light. It improves the intellectual faculties and enhances the acuity of sensory faculties. It is indicated in skin diseases, discoloration of skin, hoarseness of voice, chronic fever, periodic fever, eye diseases, diseases of the head, anemia, heart disease, jaundice, irritable bowel syndrome, edema, emaciation, diarrhea, obesity, fainting, vomiting, worm infestation, asthma, cough, excessive salivation, piles, enlargement of spleen, distention of abdomen, gas trouble and anorexia. In general, the drug combats diseases caused by the humors kapha and vaata.

It is suggested that the fruit may be used in each season with a different additive to attain rejuvenation. The special additives are listed below.

1. Rainy season - Rock salt
2. Falls - Sugar
3. Early winter - Dry ginger
4. Late winter - Long pepper
5. Spring - Honey
6. Summer - Jaggery

The following are some important formulations containing chebulic myrobalan as main ingredient.

*Abhayaa modaka*

*Abhayaa-arishta*

*Pathyaadi kvaatha*

*Agastya hareetakee*

*Gomootra hareetakee*

*Dasamoola hareetakee*

*Dantee hareetakee*

*Citraka hareetakee*

*Vyaaghree hareetakee*



Some common uses of the drug are noted below.

• Tooth decay, Pyoria and Gingivitis – Use the powder for brushing teeth.

• Ulcer due to burn – Paste with juice of dhub grass [*doorva*, Cynodon dactylon(Linn.) Pers.] can be applied over the affected area.

• Cracking of heel – Apply paste of chebulic myrobalan

• Dyspepsia – Consume 3g powder with 6g jaggery daily before food.

• Stye – Dried tender fruits made into paste with honey is applied over the stye.

• Powder of chebulic myrobalan with equal quantity of powder of emblic myrobalan consumed regularly will cure bleeding disorders and diabetes.

• Charr the fruit powder and mix with the milky juice of coconut. Consuming this will cure diarrhoea with blood and tenesmus. ■





# Case of the bi-month

Clinical Team KA Hospital Aluva

A 51 year old female patient was admitted with the complaints of severe pain, swelling and burning sensation on the right knee, with a duration of 45 days in Kerala Ayurveda Hospital, Aluva on 09.02.09. She also had pain on the right heel and both elbow joints. The detailed history revealed that pain in her heel had started one year back and gradually affected other joints. She is a known case of hypothyroidism.

The patient was diagnosed to have inflammatory poly-arthritis and was under allopathic management with analgesics at the time of admission. T. Etova, T. Rantac, T. Neurobion, Cap. Indocap SR and T. Meftal forte were the medicines prescribed to her.

### At the time of admission

Loco-motor examination

Sacro-iliac joint: internal and external rotations were not painful.

Right knee: flexion and extension were painful.

SLR: Positive for both limbs.Pain at 60˚

Weight: 64.5 Kg.

Other systems: NAD.

MRI – right knee joint (27/12/08): A tear in posterior horn of the right medial meniscus, joint effusion

RA Factor: Negative

Serum Calcium: 8.5 mg/dl

01/01/09

ASO Titer: 169 IU/ml (Normal upto 200 IU/ml)

RA Factor: Negative

TSH: 6.8 µl/ ml

## Panel consultation

Initially the case was diagnosed as *sandhigata-vaata* (osteo arthrosis) and was treated as an OP case in a clinic of KAL (Palarivattom). For hospitalisation she was referred to Aluva hospital. The case was discussed in panel consultation and the opinion emerged was to correct the hypothyroidism by balencing the *dhaatvaagni*, along with the treatments for joint diseases. Another point was to consider some features of *vaata-rakta* in this case because of its spreading nature and meniscus tear. The treatment was mainly intented to correct the vitiated vaata and pitta and to reduce *aama*.

## Treatment

### Internal medication

Considering the opinion of the panel she was put on

1. Raasna-pancaka kvaatha (which is having ability to correct the vaata vitiation in *Asthi* and *Majja*.) at 6am and 6 pm
2. Gulgulu-tiktaka ghṛta along with milk as *anupaana*. At bed time.
3. Haṃsapathyaadi kashaaya (which is found very effective in dysfunction of the thyroid gland) at 4 pm
4. A mixture of Pancakola coorṇa (1/2 tsp) and Niṣaa coorṇa (1/2 tsp) with water after lunch to correct hypothyroidism.

## Therapeutic procedures

### Considering the state of indigestion (*aama-avastha*) therapy was started with

1. acetic irrigation incorporating the ten roots (*Dasamoola-kaancika-dhaara*) (seven days).
2. Coating (*lepa*) with Naagaraadi coorṇa to reduce the swelling.
3. Leaf pouch fomentation (*patra-poṭala-sveda*) was started on 8th day.
4. Along with this fomentation, local irrigation on knee joint with Piṇda-taila was also done.

After 5 days of irrigation she felt good relief from pain. The irrigation and fomentation continued for 9 days and patient was discharged. By the end of the course of treatment the pain scale inclined from 7 to 2. The swelling subsided completely. She was advised to use the following medicines for two weeks

1. Raasnaa-saptakaṃ kvaatha at 6 am and 6 pm
2. G T Capsule 1 at bedtime
3. Pancakola coorṇa (1/2 tsp) + Haridra coorṇa (1/2 tsp) + water after lunch
4. Piṇda-taila + Karpooraadi taila for external application
5. Haṃsapathyaadi kvaatha at 4 pm

She was instructed to consult the physician who reffered the case for further follow up. The case was discussed in detail with him. As per the discussion the patient was suggested to undergo another course of treatment after six months.

After eight months, the patient came for the second course of treatment. In general she was feeling better. But the pain of the knee reappeared gradually. Other joints were better than before. No swelling. The hormonal level became quite normal.

The investigations as on 12/05/2010

T3 – 88.03mg/dl

T4 – 8.5 mg/dl

TSH – 1.91 ml/ul

Uric acid – 5.3 mg/dl

Weight: 69.8 kg (over weight by 10 kg)

Unfortunately she was unable to spend enough days to undergo a complete course of treatment. She had only seven days to spare.

Treatments were more or less the same as it was before.

1. Acetic pouch fomentation (*dhaanya-amla-kizhi*) 7 days
2. Oil Irrigation with Pinda taila– lower body
3. Coating with Naagaraadi coorna + karuttavattu

By seven days of treatment the pain subsided.

**The following medicines were prescribed for one week as discharge medicines.**

1. Amrtottaram kvaatha at 6 am
2. Raasnerandaadi kvaatha at 6 pm
3. Pinda-taila for external application
4. Karuttavattu for local application
5. Pancakola coorna + Nisaamalaka coorna (1/2 tsp each) with water after lunch and supper. ■




*Model: G. Sreekanth, Photo: R. Anilkumar*

# Self confidence



**D. Sasikumar**
Sr. Manager (Public relations)

Self-confidence is an indispensable attribute of a successful person. We must have confidence that we will accomplish the task, that we will travel the path to our destination. Without hope for a successful conclusion, there can be little enthusiasm for the journey. The early explorers, who left Europe to sail west in search of new lands, were filled with confidence. They had faith that they would not fall off the edge of the world. They were confident of their destination and of their ability to reach the destination. As a result, they discovered a new world of wonder and wealth.

This world is like a big ocean and you are like a small boat sailing in it. You can neither conquer this world nor escape. But you can sail only if the ocean keeps the boat afloat and does not enter into the boat. The same ocean can help you to sail or to kill you. It all depends on how well you have learnt to sail the boat. Upon mastering the self, you continue to live in the world.

Without self-confidence we are tossed on the stormy seas of confusion and doubt. Without that deep faith in ourselves, we are driven from port to port, never finding the rest we seek. Even material progress is based on faith in ourselves, in our own ability to accomplish a task. We achieve little if we are swayed by the criticisms of the crowd. We must chart a course and then hold to it, undisturbed by the



inevitable ups and downs along the way. Like the early explorers, we may not find exactly what we expect, but we are sure to expand our horizons.

An engineer who plans to build a tall building knows the importance of a strong foundation. To reach great heights, we must first dig down to a firm base in the earth. It would be foolish to build upon shifting sands, for the structure would soon topple. When we have confidence in ourselves, our progress is assured. Great achievements grow from confidence and a plan. Little is accomplished without formulating a plan and adhering to it. We may not always choose the quickest path, but we learn along the way. No progress is made without some mistakes. Obstacles help us develop strength and stamina. With time and experience, we reach the goal.

People around you, may treat you as good or bad, successful or unsuccessful. Some times you may have a smooth ride and at other times very tough, but you would still remain steady to sail through this world and reach destination. Setting and achieving goals is a key part of building self-confidence. Looking at our goals identify the skills required to achieve them. Learn to handle failure, accept mistakes when they happen.

Self realization is the ultimate stage of self-confidence. It is the conclusion of self-development. No one is born with confidence. It is acquired and developed. Self-confidence is extremely important in almost every aspect of our lives. People who lack self-confidence can find it difficult to become successful. Self-confident people inspire confidence in others. Gaining the confidence in others is one of the key ways in which a self-confident person finds success. Self-confident people are generally more positive. They believe in their selves and their abilities and they also believe in the wonders of living life to the full. As long as we have the focus and determination to carry things through, the things we do will be successful.

In order to gain self-confidence you need to believe in yourself. If you believe in yourself you can succeed in anything you put your mind to. You may not succeed the first time you try, but you have to keep trying until you succeed. Quick success does not exist in our society. Achievements only come to those who strive hard to get them. You get nowhere in life if you do not push yourself. You need to create a lifestyle that is right for you and nobody else. Do not settle for anyone else's lifestyle or for a lifestyle that is beneath your standards. Self confidence is a vicious circle. The more you lack self confidence the more difficult it is to succeed. A low success rate will further lower your self confidence. That's what makes gaining self confidence a very difficult task, since you have to push yourself to break the low self confidence habit.

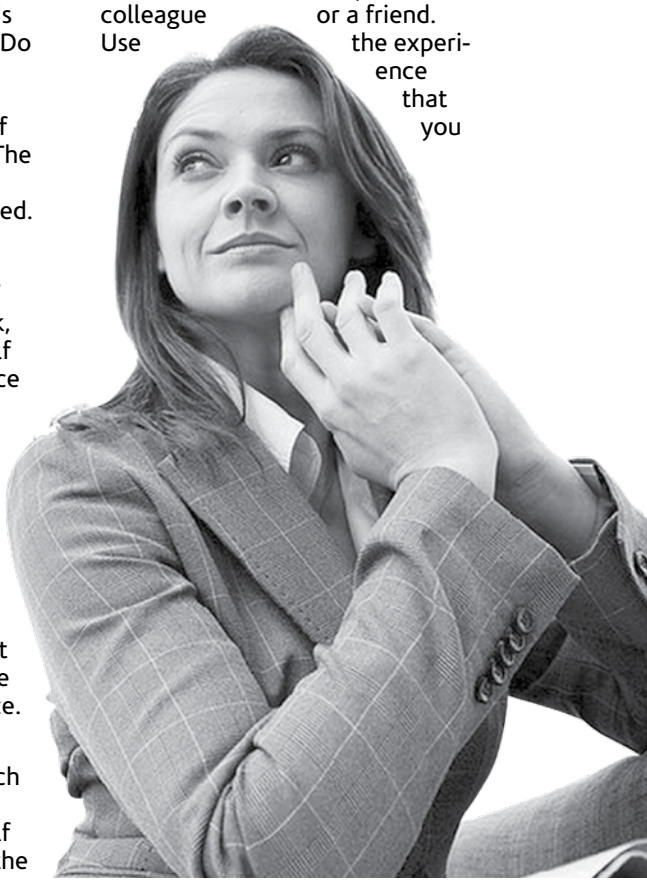
It's very hard to increase your self confidence. It is not something that you will get overnight. You have to try hard and more than once. Gaining self confidence is a challenging exercise for everyone at first. But if you put enough effort, you will manage to increase your self confidence.

Several tips are suggested to gain self confidence all of which help you in different ways to break the chains of the low self confidence vicious circle. But the tip I find most useful is the following.

Identify something that you feel you are good at. It can be playing an instrument, practicing a sport or may be you have excellent writing skills. After you find what you are good at, start a conversation with a close friend of yours or may be a family member, about what you are good at and mention your abilities. Make sure that you explicitly mention that you are good at doing that particular thing, giving evidence by showing a sample of your work, for example.

The fact that you managed to discuss something about you, something that you are good at is a very positive achievement. After doing the above exercise you will feel more confident of your abilities, since you feel the backup of those who have agreed with you.

The next step is to get out of the comfort zone of your family members or close friends and go out and talk about your abilities with someone else, maybe a colleague or a friend. Use the experience that you have obtained from previous similar discussions by focusing on the statements that were the most convincing. It will work for sure as it has worked when you have addressed your close friends and family members.



As you can see, gaining self confidence is an exercise that you should repeat frequently. Each time you should push yourself further. The more you talk with other people, the more people will appreciate your skills and value your knowledge. ■



# Matter that matters



**Dr. C.R. Agnives**
Editor in chief, Kerala Ayurveda Vaidyam
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## Introduction

In Ayurvedic pharmacology the term *dravya* means drug. Essentially drug is a substance made up of the five existents (*pa*n̲*jca bhoota*) viz. earth, water, fire, air and ether. In a broader sense the term *dravya* has two connotations – one at a philosophical level and other at a physical level.

At the philosophical plane *dravya* includes even time, direction, mind and soul which are nonmaterial concepts. Usually the term *dravya* is translated as substance. In Indian philosophy a substance need not be essentially a material. This concept is from the Vai*s*̲eshika philosophy. According to the definition in Vai*s*̲eshika philosophy, a *dravya* is anything which has property and or action and which can be the material cause. Time, direction, mind and soul satisfy this definition and enter into the category of substance. Vai*s*̲eshika system identified nine things as casual substances that generate effective substances. The nine casual substances are the five existents viz. earth, water, fire, air and ether and the four nonmaterial concepts referred above. From the western point of view even ether, one among the five existents is not a material. But from such a perspective even the other four existents are not materials as they are conceptual entities



**All materials have some medical use in Ayurveda. A material used internally or externally to cure or prevent disease is called DRUG. To be designated as drug the material should satisfy certain criteria. These criteria are discussed in this article.**



attributed with existence. Hence, on the philosophical plane all the nine substances are conceptual.

When we come to the physical plane, *dravya* is any substance that we deal with, in day to day life. Thus sugar, salt, water, air, iron etc. are *dravyas*. Note that all of them are materials and according to the majority of Indian philosophies they are made of all the five existents at varying proportions. As Ayurveda holds that there is no substance which is not a drug, all gross substances are drugs or medicines. This means that any material can be put to some medical use either as medicine or medicament.

But even conventional medicinal formulations cannot be designated as medicines unless there is a proper prescription by a qualified doctor. In the process of prescription the doctor has to consider many factors of the patient such as the humor involved, the tissues involved, the region affected, strength and immunity, the condition of the bio-fire, constitution, age, mental strength, habituation, diet and specific condition of the disease. The strength of the drug, time of administration, season and time of appearance of

the disease, dose of drug to be administered, season and time of collection of the drug, the region of origin of the drug etc. also are to be considered. Thus only when a doctor prescribes a substance after all these considerations the substance could be designated as a medicine.

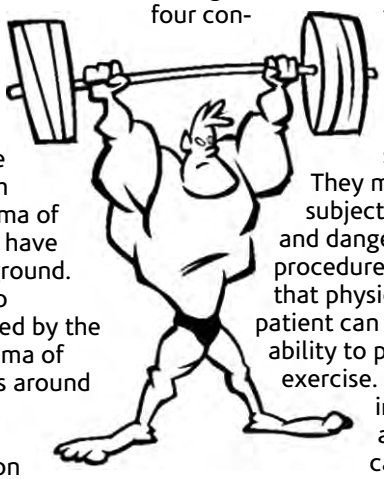
## Humor

As Ayurveda is based on the three humor theory, to interpret anything we should consider it in terms of the humors. Hence in each disease and its different stages the predominance of humor and the accompaniment of humor, if any, are to be considered in selecting the drug. For example in intense internal unction it is stated that if the disease is caused purely by pitta ghee should not be given. But in conditions where vaata and pitta associated ghee is the fat of choice. Another example is the use of garlic. Garlic is a very good drug to combat vaata. But it should not be given in conditions where pitta is predominant or is an accompaniment.



## Region

Region has two implications in Ayurveda. They are the anatomical region and the geographical region. Headache and stomach ache are different diseases though both of them are aches. Edema of foot and edema of face may have different pathological background. Edema of foot may be due to circulatory impairment caused by the inefficiency of heart but edema of face, especially the puffiness around the eyes (periorbital edema) usually suggest a kidney problem. Hence consideration of anatomical region is very important. There are vital areas in our body. They are called *marma* in Sanskrit. If even a trivial disease occurs in some *marma*, the disease might turn incurable or fatal. Hence an enquiry into the region as to whether the disease has occurred in any vital area is important. This comes under the purview of anatomical region.



The humors have specific abodes in the body. Treatment of a humor stationed in its own abode and migrated to other abodes is different. Hence to prescribe such anatomical considerations are also essential.

The consideration of geographic region where the patient was born, brought up and affected by disease is also important. Some diseases are endemic to certain regional pockets. For example sickle cell anemia is met with in high ranges of Kerala and especially among the tribes. Elephantiasis is mostly seen in Thiruvananthapuram, Chertala and Talassery regions of Kerala. Hence even a mild foot edema in a patient from these regions may be suspected as filarial. Epidemics also exhibit regional preferences due to various factors. Now that people travel a lot, a patient who was exposed to a disease in a region may manifest the disease in another remote region when the incubation period is over. Hence in such disease the regions visited by the patient in near past are to be enquired. Ayurveda has classified geographical region into three viz. arid (*dhanva, jaangala*), marshy (*aanoopa*) and common (*saadhaaraṇa*). Such a consideration is also important in diagnosis as well as prescribing drug, diet and regimens.

## Strength

Strength (*bala*) should be understood in four contexts. The physical strength of the patient is one. Weak patients cannot be given strong medicines. They may not be subjected to surgery and dangerous diagnostic procedures. Ayurveda states that physical strength of a patient can be assessed by the ability to perform exercise. Strength also implies immunity as it is stated categorically that it is the strength (*bala*) that combats the disease. Hence it is important to consider the immunity status especially the history of allergic reactions in prescribing. The strength of the disease also is to be considered. A disease may be mild or severe. Both require different medication. In very mild cases even drugs may not be necessary. For example, a mild headache may vanish with rest or sleep. Here prescribing drugs is a sin unless the headache is a regular phenomenon. Now the strength of the drug also is to be considered. There are strong medicines and mild drugs. We consider this in prescribing and proper precautions are to be taken during administration of very potent drugs to avoid side effects and adverse reactions. Thus under the head of strength we should examine the physical strength, immunity status, strength of disease and the strength of the drug.



## Time

Time is yet another multifaceted factor. The time of onset or augmentation of a disease is important. We know that humors have diurnal and seasonal cycles. Thus vaata is more in the evening and at the last phase of night. This humor gets accumulated in summer, gets aggravated in the rainy season and subsides in the falls. Hence diseases due to vaata also may exhibit such changes in intensity of the disease. For example an evening (afternoon) headache is essentially with vaata predominance. Diseases due to vaata show a tendency to aggravate during the rainy season. Another consideration of time is the time of medication (*aushadha-kaala*). It is of two types – by the clock (*kshaṇaadi*) and condition of disease (*vyaadhyavasthaa*). When a doctor prescribes a drug sixth hourly he is following the clock. But when he prescribes a drug to be consumed 'when there is

pain', he is prescribing by condition of the disease. Prescription of medicines also may be in relation with food such as before food, after food etc. This also implies time as we have specific times for food. Time of collection of drugs is also important. For example the latex of cactus for preparing caustic thread (*kshaara-sootra*) is to be collected before sunrise. After sunrise the active principles in the latex will be less. Specific seasons are stipulated for collection of specific drugs and parts of herbs. This is to ensure optimal effectiveness of herbal drugs. Relative period of collection of drugs of animal origin also is specified. Period of storage of raw materials and prepared drugs are also important. Generally raw herbal materials stored more than one year lose their potency. Prepared drugs have date of expiry. These things are to be remembered during prescription.

## Bio-fire

Another important factor is the strength of the bio-fire of the patient. When the bio-fire is weak heavy drugs that require strong bio-fire to digest should not be prescribed. Many diseases involve the undigested factor called *aama*. *Aama* is the product of weak bio-fire. Here medication is usually contraindicated. Attempts for removing *aama* such as fasting are to be done first. Only after attaining the digested stage (*niraama-avasthaa*) drugs are to be administered. This factor overlaps with another factor namely the condition of the disease.

## Constitution

The constitution of the patient is another important factor in treatment. There are various constitutional considerations in Ayurveda. Yet the humoral constitution is the most important one as it embraces other constitutional criteria too. For example the constitution by the five existents (*bhoota-prakṛti*) can be included in the humoral constitution. The earthy and watery constitutions come under kapha constitution, the fiery constitution comes under pitta constitution and the airy and ethereal constitutions come under vaata constitution. Mental constitutions also come under the humoral constitutions as each humoral constitution has specific temperamental traits. Identification of the constitution of persons has gained popularity recently among people, as the importance of constitution is stressed in recent ayurvedic literature especially in English. Patients now request the ayurvedic doctors to identify their humoral constitution so that they can regulate their regular diet and activities. Drugs, diet and activities suited for one constitution may not be suited for another. Certain drugs and food materials may cause allergy to people with pitta constitution. Formulations containing garlic and marking nut are not suitable for people having pitta constitution. As constitutions have a say on bio-fire (*agni*) and the condition of the gut (*koshṭha*) and both these factors are to be considered in prescribing. For example those who are having pitta constitution will have soft gut (*mṛdu-koshṭha*) and they will tend to have loose motions even with milk. On the other hand persons with vaata constitutions are with cruel gut (*kroora-koshṭha*) and they require strong and unctuous purgatives to effect purgation. Hence it is evident that the doctor should consider the constitution and nature of the gut while prescribing a purgative or laxative. Not only purgatives, actions of other drugs also are modulated by these factors.



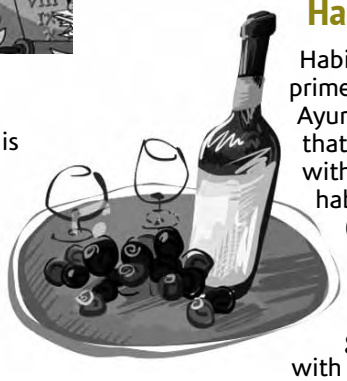
## Age

Needless to add, age of a patient is an important factor in diagnosis and prescribing. Age determines the dose, type, course and strength of the drugs and procedures. Some diseases are specific for infants and children. Some diseases are specific to youth and there are diseases occur in old age. For example measles is uncommon in adult males. Maturity onset diabetes manifests after reaching the age of forty years even though the genetic predisposition is right from the beginning. Cataract usually affects the old age. Though there is physiologic change in the refractive index in the crystalline lens of the eye throughout life, the change reaches a threshold affecting near vision by surpassing the level of accommodation resulting in presbyopia only by the age of forty years. Small doses and mild drugs are preferred in children and old age. On the other hand certain drugs well tolerated by children may not be tolerated by the adult.



## Mental strength

Mental strength is yet another factor to be considered. Though it can be included under the head of physical strength, it is mentioned separately because of its practical significance and clinical application. Persons are broadly classified into three viz. weak minded, strong minded and mediocre. It is an identified fact in Ayurveda that mental diseases occur mostly to weak minded persons. Again, patients with a prominent psychic factor might confabulate or exaggerate their version about the disease. It is the duty of the doctor to find out the real needle of disease from the presented haystack of verbosity. Weak minded persons are reluctant to accept treatment and follow long courses of treatment. Hence a wise doctor should be strategic in prescribing medicines and procedures to weak minded persons.

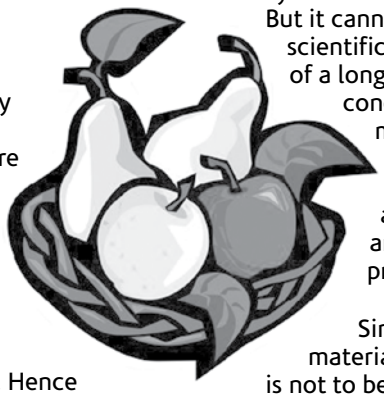


## Habituation

Habituation is of prime importance in Ayurveda. Anything that goes smoothly with the person is habituated (*saatmya*). If anything reacts unfavorably and denies going smoothly with the person it is not habituated (*asaatmya*). For example, when we consume certain food, if it is digested, absorbed, metabolized and finally thrown out from the body without any difficulty that food is wholesome and habituated to us. If the material is not readily digested, absorbed, metabolized and eliminated it

is not habituated. All diseases are caused by substances which are not habituated or cannot be habituated. They are considered as toxins. All the diseases have a toxicological bearing as they involve intrinsic or extrinsic toxic substances which cannot be habituated. This aspect is repeatedly mentioned in Ayurvedic treatises and hence the doctor has to find out what are habituated and not to the patient on prescribing.

## Diet



Diet of the patient is very important. Formerly ayurvedic physicians were meticulous in detailed prescription of the diet for the patient and this has been instrumental for the unpopularity of Ayurveda among people who preferred a fast life. Hence physicians too changed tune and became almost liberal in prescribing dietary restrictions to maintain clientage. Both the traits are wrong. The diet should be optimal. Unwanted restrictions should not be insisted. For example a patient taking the powder of the three acrids need not be prescribed a non-spicy bland diet. Treatment has three modes – drugs, diet and activities. Hence it should be ensured that the diet of the patient is supplementing and agreeable to the drugs and activities and is conducive to cure.

In Ayurveda, treatment is according to the condition of the disease. It is not fair to make a fixed protocol for treating any disease. Systematized protocol is the style of modern medicine. If we make rigid protocols for treatment of diseases, invariably there will be no difference between the approaches of Ayurveda and modern medicine and the goodness and independence of Ayurveda will be lost. Hence treatment according to Ayurveda should be very flexible in tunes with the condition of the disease. One could easily understand that how treatment should change with condition of the disease from the treatment of fever itself. Instead, a tablet or decoction for all conditions of fever will be the most unscientific thing according to Ayurveda. But unfortunately this is what the researchers and authorities of Ayurveda are attempting. The equation, Disease + Drug = Cure or Health is not applicable in the case of Ayurveda. The Ayurvedic physician should be able to appreciate this and should change his prescriptions whenever necessary. In Kerala, there was a practice of prescribing decoctions to patients for very long courses such as six months or one year. This may have its merits. But it cannot be considered very scientific as during the course of a long treatment the condition of the patient may change considerably and the doctor should make appropriate amendments in his prescription.

Similarly even when a material used as medicine, it is not to be considered as a medicine unless it is prescribed in a specific dosage form. For example ginger is a herbal material used as drug. But it can be considered as medicine only when there is medical instruction to consume it as a whole drug, juice, paste, jam, medicated ghee etc. or in combination with other materials.

Ayurvedic concept of a drug is primarily based on herbal drugs. But in Ayurveda we use drugs of herbal, mineral and animal origin. In many formulations all these three types of materials are incorporated. All these are materials.

The action of the drug is the most important factor. It is for the pharmacological action that we utilize materials as drugs. Drugs with drastic action are mostly preferred as medicines whereas slow acting materials are generally used as food materials. It is stated that materials with importance of taste (*rasa-pradhaana*) are used as food materials and materials with importance of potency (*veerya-pradhaana*) are used as medicines. Always this is not true. Bland or sluggish materials (*manda-dravya*) are also used as medicines. Similarly potent substances such as ginger and black pepper are used as food materials.

In a drug there are five pharmacological principles namely taste (*rasa*), property (*guṇa*), potency (*veerya*), metabolic effect (*vipaaka*) and special potency (*prabhaava*). The action (*karma*) of the drug depends on these five principles. Including the drug and action we may concisely enumerate seven pharmacological principles. Much is talked about these principles in the ayurvedic field but it seems that not only ayurvedic students and the lay public but also ayurvedic elite are rather confused about these principles. Because of this confusion these principles demand a closer observation for clarity. ■


# SOLICITED

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# The dice fruit *(aksha)*

*Aksha* is belliric myrobalan, a member of the group 'three fruits'. It is called *aksha* because the dry fruits are used as dice in gambling. This is also known as *vibheetakee* which means 'that which wards off fear'. *Karsha-phalaa* and *kali-drumaa* are other popular synonyms of the drug. The term *kali-drumaa* means wicked tree and the wickedness is its employment in gambling. The average weight of the fruit is 12g or one *karsha*. Hence the name *karsha-phalaa*.

Belliric myrobalan is astringent in taste. But it is sweet in metabolic effect (*vipaaka*). It is hot in potency but cold to touch and is a good and safe purgative. It is considered that the half ripe fruit is purgative where as fully ripe, dry fruit is constipating. It is dry (non-unctuous) and light. It aids the growth of hair and is wholesome to the eye. It is indicated in cough, worm infestation and hoarseness of voice. In general, the drug combats diseases caused by the humors kapha and pitta. The cotelydons of the fruit is useful in thirst, vomitting, and in diseases of vaata-kapha. They are light and astringent. Eaten in excess they cause intoxication.

Some important formulations containing belleric myrobalan are

1. *Vibheetaka taila*
2. *Triphalaa coorṇa*
3. *Phalatrikaadi kvaatha*
4. *Taaleesaadi coorṇa*
5. *Lavangaadi vaṭi*



## Indian gooseberry
### *(Aamalakee)*

Indian gooseberry or the emblic myrobalan is a rich source of vitamin C and is an accredited antioxidant. It is the main ingredient of *Cyavanapraaśaa*, a formulation noted for its rejuvenation efficacy. Indian goose berry is similar in properties to chebulic myrobalan, but it is more useful in diabetes and bleeding disorders like scurvey. Along with turmeric it is considered as the best drug for diabetes. It is an ideal aphrodisiac. It is considered to combat all the three humors. By virtue of its sour taste it reduces vaata. As it is sweet and cold it reduces pitta. It is dry and astringent and thus reduces kapha.

Important formulations

1. *Braahma rasaayanaa*
2. *Cyavanapraaśa*
3. *Dhaatree-rasaayanaa*
4. *Dhaatryarishṭa*
5. *Dhaatree lauha*
6. *Triphalaa coorṇa*




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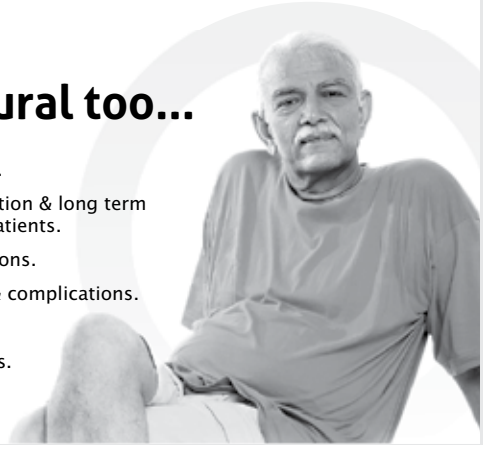
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# *Ksheeree* (Milk porridge)



*Ksheeree* is milk porridge. *Ksheeree* with rice is made with half cooked milk. In Hindi it is known as kheer. A porridge (*vilepee*) made with milk is known as *paayasa* in Ayurveda.

## How to prepare:-

Put rice moistened with ghee in half cooked milk and boil to cook. When the rice is cooked well add sugar and ghee. Serve warm. This is *ksheeree*. *Ksheeree* or *ksheerikaa* strengthens the body and nourishes the tissues. It will mitigate pitta, bleeding disorders (rakta-pitta) and vaata. But it is heavy and is difficult to digest. It may cause stasis in the gut. It will reduce bio-fire.

## *NAARIKERA KSHEEREE* (Coconut Burfy)

Scrape coconut and put in cow's milk. Add sugar and cow's ghee. Cook in low flame. This is called *Naarikera ksheeree*. If concentrated to solidity it is called coconut burfy.

*Naarikera ksheeree* is unctuous, cold and is very nutritive. It is very sweet, heavy and is an aphrodisiac. It mitigates vaata and bleeding disorders (*rakta-pitta*).

## *SEVIKAA* (Noodles or Vermicelli)

Make dough with wheat flour (*samitaa*) and prepare noodles (*sevikaa*) by pressing it in a special press for the purpose. The noodles are dried. The dried noodles are to be cooked with milk. Ghee is added to it. (Usually sugar is also added.) *Sevikaa* is nourishing, strengthening, heavy and mitigates vaata and pitta. It generates appetite. It helps union of fractures. It is constipating. This should not be consumed in large amounts. ■







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