



## Guest Editorial

# Concept of Heart Disease in Ayurveda

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Cardiovascular diseases account for far greater morbidity and mortality all over the world than any other ailment. The Coronary artery disease (CAD) is ranked number one killer, The global burden of disease study reported almost 25% out of total deaths (2.3 million) due to cardiovascular diseases [1]. It is predicted that by 2020 there would be a 111% increase in cardiovascular deaths in India [2]. The cause of this increase is said to the epidemiological transition [3].

Ayurveda is a rich heritage and a vast scientific system. The Ancient scholars like Charaka (1500 BC), Sushruta (300-400 AD) and Vagbhata (500AD) have compiled the art and science of Ayurveda practiced at their times. They were in a position to explain Anatomical, Physiological, Pathological and Emergency medical Care with special reference to conservation of heart.

The oldest scripture i.e. Rigveda mentioned the basis of Ayurveda is dependent on the theories of *Triguna*, *Pancha Mahabhuta*, *Tridosha*, *Trimala* and *Sapta Dhatu*; forming the pivot on which the science of Ayurveda revolves [4].

*Vata* is a dynamic or vital force which causes senses to perform their functions, holds together all the elements of the body, assisting adhesion of the particles and is cause of speech, sound and touch perception [10]. *Pitta* prepares the material to be absorbed and metabolized at macro and micro levels i.e. it manifests itself in different forms viz. chemical activities like digestion and assimilation and it generates the heat. *Kapha* on the other hand participates in various secretions of the body, be it

from mucous membranes and other tissues and preserves their functions [5]. It generates strength of the limbs, growth, courage and vitality [11].

Diseases are classified in Ayurveda as *Agantuk* (Adventitious), *Sharirika* (Physical), *Manasika* (Mental) and *Swabhavik* (Natural). Diseases due to the derangement of *Vata*, *Pitta* and *Kapha* result from improper food and mode of living which corroborate with modern medicine. The heart diseases in Ayurveda can be classified as following [6].

**1. Adibalapravrutta:**

Hereditary Cardiovascular Disease

**2. Janmabalapravrutta:**

Congenital Cardiovascular Disease

**3. Doshabala pravrutta:**

Cardiovascular Disease due to *Doshic* vitiation *Vata*, *Pitta*, *Kapha*, *Sannipatika*

**4. Sanghatabalapravrutta:**

Cardiovascular Disease due to (a) Trauma (b) Poisoning

**5. Kalabalapravrutta:**

Cardiovascular Disease due to Environmental or seasonal variations

**6. Upasargaja:**

Cardiovascular Disease due to Infectious diseases e.g. Endocarditis, etc

**7. Swabhavabalakruta:**

Cardiovascular Disease due to Natural ageing process

**8. Adhyatmika:**

Psychological factors leading to Cardiovascular Disease like hypertension

**9. Daivabalakruta:**

Cardiovascular Disease due to Idiopathic or

unknown cause, due to bad deeds of previous lives

How *Dhatus* are affected due to vitiated *Tridoshas* is well described in Ayurveda- The three layer of heart are derived from different *Dhatus* - endocardium from *Rasa* and *Rakta*, myocardium from *Mamsa* and pericardium from *Meda*. Probable diseases of these three layers of heart due to involvement of *Dosha* can be explained based on their *Vikruta Karmas*. [Table 1]

| Layers of Heart | Diseases caused by <i>Vata</i>             | Diseases caused by <i>Pitta</i> | Diseases caused by <i>Kapha</i>      |
|-----------------|--|---------------------------------|--------------------------------------|
| Endo cardium    | Valvular abnormalities                     | Bacterial Endo carditis         | Endo cardial fibro-elastosis         |
| Myo-cardium     | Atrophy / fibrosis and dilatation of heart | Myo-carditis                    | Hypertrophy due to storage disorders |
| Pericardium     | Pericardial constrictions                  | Pericarditis                    | Pericardial effusion                 |

**Table 1** : Probable diseases caused by *Doshic* vitiation

The Vitiated *Vata* in coronary arteries may present as angina pectoris, *Pitta* as inflammation of arteritis and *Kapha* as hardening of arteries due to atherosclerosis, calcification, plaque formation and obstruction [7]. Hypertension is described in relation to *Doshas* as *Vataja*, *Pittaja* and *Kaphaja* variety. In *Vataja* hypertension, the blood pressure fluctuates and rises with nervous tension. Patients may have insomnia and irregularity of pulse. They are prone to get nervous system disorder like encephalopathy, or stroke. The patients with *Pittaja* hypertension have flushed faces, violent headache, photophobia, irritability, anger and nose bleed, where as those of *Kaphaja* hypertension are generally obese, have persistent hypertension, edema, high end lipid levels in blood.

The *Vyanvata* imparts movements in *Rasa Dhatu* and is driving force for electrical activity i.e. impulse generation and transmission from SA node to Purkinje fibers and to bring about the mechanical activity. The vitiation of *Vyanvata* may be responsible for tachyarrhythmias / brady-arrhythmias and heart

blocks.

Variety of symptoms experienced by the patients have been described in Ayurvedic literature (*Rugviniscaya*) [6], like stiffness in cardiac region (*Hradayayama*), stabbing pain in cardiac region (*Hradaya dirana*), heaviness in heart (*Hradaya Gaurava*), weakness of heart (*Hradaya Kshobha*, *Hradaya Klama*), Cutting pain in heart (*Hradayapatna*, *Hradayasphotna*), pericardial discomfort (*Hradaya Pidana*, *Hradayatoda*, *Hrdgraha*, *Hrdruk*, *Hrdshula*), pain and discomfort in heart region (*Hrdadayaruja*, *Hrddayavyadha*, *Hrtpada*), feeling emptiness of heart (*Hrdsamyata*), pericardial suppression (*Hrdstambha*), heaviness of the heart (*Hrtstyana*), burning sensation (*Hrdadaha*), fluttering of the heart or palpitation (*Hradya Nirmathana*), Tachycardia (*Hrdvega*), Precordial twitching + tachycardia (*Hrtkamp*) etc. Modern medicine relates cardiac disease to changed lifestyle, sedentary habits, type of food, smoking, hypertension, hyper-lipidemia, increased waist-hip ratio, diabetes mellitus, alcoholism and stress resulting in athero-sclerosis, plaque formation in the coronary arteries and ultimately clogging. This leads to ischemic damage to cardiac muscle and subsequently the cardiac dysfunction.

Ayurveda puts forth -

अत्यादनम् गरुस्निनग्धं, चिन्तनम चेश्टनम् ।

निद्रा सुखं चाम्यधिकम् कफ हृद्रोगकारणम् ।।

Over eating, heavy and fatty meals, worries, sedentary habits and over indulgence in sleep are the causes of cardiac diseases due to *Kapha*. The person desiring to be protected from the adverse effects upon his heart, coronary blood vessels, and the contents thereof should particularly avoid all that causes of mental affliction [12].

Besides above mentioned causes various other causes are mentioned in Ayurveda includes Excessive consumption of food having heavy, dry, frozen, bitter and astringent qualities; Excessive physical exertion; Excessive purgation and enema; Anxiety; Fear; Mental stress; and Side effect of wrong medication; Suppression of natural urges; External Injury. Ayurveda views atherosclerosis as degeneration of the blood vessels caused by

increased *Vata* in the blood vessels, which make them hard, thin, and rough. Deposits of lipids and calcium represent increase in *Kapha* (water & earth element) in the degenerated vessels resulting in irregular thickening of blood vessels. Ayurveda therefore concludes that cardiac disease is caused by an increase of *Vata* and vitiation of *Kapha* in the blood vessels.

In a recent study [7] of 300 subjects who underwent angiography were diagnosed to be suffering from CAD, it is reported that majority of them belonged to *Vata* and *Kapha Prakriti* i.e. *Vatakapha* (62.3%), *Vatapitta* (17%), *Kaphapitta* (15.7%) and *Kapha* only 5%. That suggests individuals with *Vata* and *Kapha Prakrit* are more prone to develop such a disease. It was also noted that hypertension was highest in *Vatakapha* group (48.1%) comparing the others (*Vatapitta* - 36, 2%, *Kaphapitta* 27.5%. and *Kapha* 26.7% the same group had strong correlation with diabetes, hyper-lipidemia and insulin resistance.

Ayurveda diagnosis thus depends upon knowing the *Prakriti* of individual along with clinical feature and examination of pulse. The gadgets in modern medicine are the best available tools electrocardiograph, CT / MR angiography as non invasive procedures and coronary angiography, Blood tests for CK-MB and troponin which indicate damage to the myocardium.

The first randomized Heart Trial due to lifestyle causes by Ornish et. Al. in USA [8] and in India by Manchanda et. al., & Satish Gupta et. al. [9] were demonstrating usefulness of yoga and allied life-pattern changes in reversing atherosclerosis in patients with mild to moderate coronary artery disease.

Despite spectacular advancement in the knowledge, technology and devices the morbidity and mortality in CAD remains high. Moreover after angioplasty and even coronary bypass surgery, the chances of recurrence remain high. There should be integration of modern medicine; with concepts of

heart diseases and its management mentioned in Ayurveda in order to protect the heart and improve the quality of life.

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