

“PREVENTION & MANAGEMENT OF ARTERIOSCLEROSIS BY AYURVEDA”

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ABSTRACT

Arteriosclerosis (*Dhamani Kathinya*) refers to a thickening and hardening of arteries. Atherosclerosis (*Dhamani Pratichaya- Kaphaj Nanatmaja Roga*)^[1] is a specific type of arteriosclerosis, but the terms are sometimes used interchangeably. Atherosclerosis refers to the build-up of fats and cholesterol (*Apachita Meda*) in and on your artery walls (plaques), which can restrict blood flow. These plaques can also burst, triggering a blood clot. Although atherosclerosis is often considered a heart problem, it can affect arteries anywhere in your body. Atherosclerosis (and the resulting cardiovascular diseases) is the single biggest cause of death in the developed world, accounting for

one in three of all deaths. And it increases day by day due to sedentary lifestyle.^[2] Till early eighties, it was widely believed that heart disease was virtually irreversible. This meant that once developed the disease ran a progressive course until the coronary arteries were completely blocked. But recent studies have proven beyond doubt that not only it is possible to stall the process of artery blockage but also the blockage can be reversed with the help of Ayurvedic drugs. Ayurveda is very much concerned about conservation of health. It describes *Sadavritta* (ethical prompt), *Achaara Rasayan* (normal conduct) *Ahaar* (diet) *Vyayaam* (physical exercise) *Dincharya* (Daily schedule) etc, with the help of them, we can easily prevent and manage atherosclerosis condition.

KEYWORDS: *Dhamani Kathinya, Kaphaj Nanatmaja Roga, Dhamani Pratichaya, Apachita Meda, Sadavritta, Achaara, Rasayan Ahaar, Vyayaam, Dincharya.*

INTRODUCTION

A disease that potentially can be prevented by changes in diet, environment, and lifestyle, is called lifestyle disorder such as heart disease, stroke, obesity, osteoporosis and Type 2 diabetes etc.^[3] Lifestyle diseases characterize those diseases whose occurrence is primarily based on the daily habits of people and are a result of an inappropriate relationship of people with their environment. The main factors contributing to lifestyle diseases include bad food habits, physical inactivity, wrong body posture, and disturbed biological clock etc.^[4]

The World Health Organization (WHO) has warned that more than 270 million people are susceptible of falling victim to diseases linked to unhealthy lifestyles. According to a survey conducted by the Associated Chamber of Commerce and Industry (ASSOC-HAM), 68% of working women in the age bracket of 21-52 years were found to be afflicted with lifestyle ailments such as obesity, depression, chronic backache, diabetes and hypertension. The study 'Preventive Healthcare and Corporate Female Workforce' also said that long hours and working under strict deadlines cause up to 75% of working women to suffer from depression or general anxiety disorder, compared to women with lesser levels of psychological demand at work.

According to *Ayurveda* text, a few vital parts in the body, where life particularly sustains, are known as *Marmas*.^[5] Any injury to these places may lead to a very painful and dangerous condition and even death. Out of total 107 *Marmas*, three vital organs, viz., *Hridaya* (heart), *Basti* (urinary bladder), and *Shira* (head) are the most important because they are the seats of *Prana* (elan vitae)^[6]

Heart takes higher position not only by its vital function but also by its psychological and spiritual importance. Heart is a vital *Marma* and the site of *Chetana* (life, energy), *Ojas*, *Sattva*, *Rajas*, *Tamas* and other *Vatadi Doshas*. All action of heart is done by *Siras* n *Vyana vayu*.

According to *Astanga Hrdaya*: *Mula Siras* are ten in number located in (attached to) the heart. They transport the *Rasa* (first fluid tissue or blood) and *Ojas* to the whole body. All the activities of the body depend on it. These are big at their roots and very small at their tips the veins appear like of a leaf thus divided into small vessels.^[7]

These *Sira* originates from *Mrudupaka* of *Medasa*. The functioning factors in *Mrudu Paka* and the formation of *Sira* are *Agni* (or *Paka*), *Vayu* (Triggering of *Agni* and *Sneha Shoshana*) and *Akasha* (Lumen formation).

The main function of *Medasa* is to provide *Sneha* to all tissues. In *Mrudupaka* of *Medasa*, *Snigdha Guna* has important role to maintain the elasticity of vessels (*Mrudutva*). Due to *Apathya Ahara*, *Vihara*, and sedentary lifestyle, *Vatadi dhosas Prakopa*, and leads thickening, hardening, and loss of elasticity of the arterial walls that results in impaired blood circulation. This process is called arteriosclerosis. (*Dhamani pratichaya* or *Dhamanikathinya*)

NIDANA OF DHAMANI PRATICHTAYA (ETIOLOGICAL FACTORS)

Dhamani pratichaya is *Kaphaja Nanatmaj* disease. According to *Samanya Vishesa* principal of *Ayurveda* many *Nidanas* described by various *Acharyas* for *Kaphaj roga* can be Classified under four broad categories.^[8]

1. *Aharatmaka*
2. *Viharatmaka*
3. *Manasa Vyaparatmaka*
4. Others

❖ *Aharatmaka Nidana*

Atibhojana(Overeating), *Guru*(heavy), *Madhura*(Sweet), *Sheeta*(cold), *Snigdha*(unctuous), *Navanna Sevana* (Usage of fresh Grains), *Nava Madhyasevena* (Usage of fresh alcoholic preparation) *Gramya Rasa sevana* (Usage of Domestic animal's meat & soups) *Paya Vikara Sevana* (Excessive usages of milk and its preparations) *Dadhi Sevana* (curd) *Sarpi Sevana*(ghee), *Sleshmala Aharasevana*(*Kapha* increasing food), *Mamsa Sevana*(meat), *Shali sevana*(rice), *Godhuma Sevana* (Excessive wheat) *Audak Rasa Sevana* (Usages of aquatic animal's meat & soups).

❖ *Viharatmaka Nidana*

Avyayama(lack of exercise) *Avyavaya*(lack of sex) *Divaswapa*(Day sleep) *Sukha Shaiya Snana Sevana*.

❖ *Manasa Vyaparatmaka*

Mansonivrti (Depression mental tension anxiety disorder,)

❖ Other

Age above 40 years, hereditary etc.

PURVARUPA (PREMONITORY SIGNS)

The disease Arteriosclerosis is not preceded by any premonitory signs and symptoms. Thus the *Avyakta Lakshanas* of Arteriosclerosis can be taken as its Purvarupa.

RUPA (CLINICAL MANIFESTATIONS)

Many times, people with atherosclerosis don't have any symptoms until an artery is 40% clogged with plaque. Symptoms vary depending upon which arteries are affected.^[9]

A. Coronary Artery Disease

Symptoms of coronary artery disease (where the heart arteries are narrowed) are usually brought on by physical exercise, sexual activity, exposure to cold weather, anger, or stress. Common symptoms include.

- Chest pain (generally a heavy, squeezing, or crushing sensation with possible burning or stabbing pains)
- Abdominal, neck, back, jaw, or shoulder/arm pain
- Weakness
- Perspiration
- Shortness of breath

B. Cerebrovascular Disease

Cerebrovascular disease (where the arteries that supply the brain with blood) are narrowed) can cause transient ischemic attack (a sudden loss of brain function with complete recovery within 24 hours) and stroke. Symptoms may include.

- Weakness or paralysis on one side of the body
- Trouble speaking or understanding speech
- Loss of vision in one eye
- Muscle weakness
- Sudden trouble walking
- Dizziness
- Loss of balance or coordination
- Sudden severe headache

C. Peripheral Artery Disease

Peripheral artery disease affects the arteries that supply the arms and legs with oxygen-rich blood. Symptoms may include.

- Pain, aching, cramps, numbness, or sense of fatigue in the leg muscles (intermittent claudication)
- "Bruits" (blowing sounds your doctor can hear with a stethoscope that indicate turbulence in blood flow)
- Hair loss
- Thickened nails
- Smooth, shiny skin surface
- Skin that is cold to the touch
- Gangrene

SAMPRAPTI (PATHOGENESIS)

The *samprapti* or pathogenesis of atherosclerosis can be easily comprehended on contemplating upon the *Samprapti* of *Sthaulya* or *Kaphaj Roga* since they are both analogous to each other. The use of specific dietary factors like *Atimadhura*, *Atisnigdha Ahara* and lifestyle factors like *Avyayama*, *Divaswapa* etc. lead to a *Jathargni dushti* which results in diminished digestive power. This further leads instigates the formation of *Ama Anna rasa* and subsequent *Ama Rasa Dhatu*.^[10] The *Ama Rasa Dhatu* leads to *Medodhatvagnimandya*. The above consumed factors due to their affinity for *Medo Dhatu* cause a direct increase in the *Asthayi Medo Dhatu*.

Similarly factors termed as *Adrishtavashat* denotes a genetic preponderance leading to *Khavaigunya* in the *Medovaha Srotas*. *Avarana* of *Vata* by *Medo Dhatu* attributable to secondary conditions like Diabetes mellitus, Hypothyroidism also results in a state of *Khavaigunya*. This *Khavaigunya* further assists *Medodhatvagnimandya* which results in the *Vridhhi* of *Ama Asthayi Medo Dhatu* (Hyperlipidaemia) or *Ama Sthayi Medo Dhatu*(excessive adipose tissue) or both. The increase in *Ama Sthayi Medo Dhatu* results in *Atisthauya* or Obesity whereas an increase in the *Ama Asthayi Medo Dhatu* would lead to conditions like *Ama Asthayi Dhatu Vridhhi* (Hyperlipidaemia) or *Prameha*. (diabetes mellitus)

The *Ama Asthaya Medo Dhatu* if untreated, on further progression causes *Margavarana* by *Vata* leading to the *Shoshana* and *Kathinya* of the *Sthanika Medo Dhatu*. This results in a condition termed as *Dhamani Pratichaya*.

Dhamani Pratichaya or Atherosclerosis causes lesions in all the three *Maha Marmas Hridaya, Shira and Basti* which is evident as coronary heart disease, cerebrovascular diseases and renal insufficiency.

SAMPRAPTI GHATAKA

Dosha : *Kapha Pradhan Tridosha.*

Dushya : *Rasa, Rakta, Meda, Sarvasharia.*

Srotasa : *Rasa vaha srotasa, Prana vaha srotasa.*

Srotodusti symptoms : *Sang, Khavaigunya, Vimarga gamana.*

Adhistan : *Dhamani*

Agni : *Dhatvagnimandya*

UPASHAYA (TREATMENT)

A) Prevention

- *Nidana Pariverjana* is best treatment of all diseases.
- Stop smoking. Smoking damages your arteries.
- Restrict your alcohol intake.
- Exercise at least 30 minutes a day, 6 days a week.
- Eat healthy foods, such as fruits, vegetables, and whole grains that are low in saturated fat and high in fiber
- Daily drink 1 glass of lukewarm water after lunch and dinner
- Maintain a normal weight (or lose weight if you need to).
- Reduce stress
- *Ayurveda* presumes that improper dietary habits give rise to various disorders. With practice of dietary measures recommended in *Ayurveda* will definitely help with respect to quantity, processing and cooking combination One can improve lifestyle and manage unnecessary stress by following *Sadavritta, Achaara Rasayana, Dincharya, Ashtavidha Ahaar Visheshha Aaytana, Yoga, Pranayam and other Vyayaam*
- If you have high blood pressure, high cholesterol, diabetes, or another chronic condition, work with your doctor to keep it in check.

B). Management

- *Dhamani Praticaya* is a *Santarpanjanya* condition as stated earlier. Hence its *Samanya Chikitsa* comprises of *Apatarpana*.
- Measures like *Ullekhana*, *Raktamokshana*, *Vyayama*, *Upavasa*, *Dhuma*, *Swedana*, *Sakshaudra Ahara*, *Abhayaprasha*, *Rukshanna Sevana*, different types of *Churnas* and *Pradehas* can all be employed as *Aptarpana Chikitsa*^[11]
- There are some effective natural measures for regulating and strengthening the heart , describe in *Ayurvedic* text viz., *Lekhaniya Dipaniya*, and *Hridya Mahakashaya's* drugs.^[12]
- Use of *Panchakarma* in proper way.

Some important herbs are useful in the management of *Dhamni Kathinya*^[13]

1. **Guggul** (*Commiphora mukul*, 3 - 6 g per day) -- Guggul is used in Ayurvedic medicine to treat high cholesterol levels. Scientific studies have found mixed results -- guggul appears to work in Indian populations, but not in people who eat Western-style, high-fat diets. Guggul may have estrogen like effects and therefore may be of concern in people with hormone-related cancers or taking hormone medications, such as birth control drugs. Guggul may interact with many medications, including but not limited to blood-thinning medications.
2. **Hawthorn** (*Crataegus monogyna*, 160 - 1,800 mg per day in 2 - 3 divided doses) -- Hawthorn contains the polyphenols rutin and quercetin, and was used traditionally to treat cardiovascular diseases. Animal and laboratory studies show that hawthorn has antioxidant properties that help protect against the formation of plaques and may help lower high cholesterol and high blood pressure
3. **Garlic** (*Allium sativum*, 900 mg per day of garlic powder, standardized to 0.6% allicin) -- Clinical trials have shown that fresh garlic and garlic supplements may lower cholesterol levels, prevent blood clots, and destroy plaque.
4. **Olive leaf extract**(*Olea europaea*, 1,000 mg per day) -- One study found that people with mild high blood pressure (hypertension) lowered cholesterol and blood pressure by taking olive leaf extract, compared to those who took placebo.
5. **Red yeast rice** (*Monascus purpureus*, 1,200 mg 2 times per day with meals) -- Several studies indicate that a proprietary form of red yeast (Cholestin) can lower cholesterol levels, and that the herb acts like statin drugs (See "Medications" section).

6. **Psyllium** (*Plantago psyllium*, 10 - 30 g per day in divided doses taken 30 - 60 minutes after meals) -- Taking psyllium, a type of fiber, helps lower cholesterol levels as well as blood sugar levels.

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