



Women and the Dreaded Heart Ailment: A Case Study

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ABSTRACT: Cardiovascular disease is by far the number one killer in the world. The major cause of heart ailment is genetic predisposition and urbanization with offence. Although heart disease is often thought of as a problem for men, more women than men die of heart disease each year. Indian women are also showing great risk of this ailment. Being aware of personal risk and treatment options can empower a woman to live a long and healthy life. From ancient times herbs has been used in the form of home remedies to cure or prevent heart related problems. In India also there are many medicinal plants which have shown potential in treating cardiovascular ailments, some are known from ancient times, as part of our ethnic knowledge. These plant based drugs would be cost effective due to its abundance and temperamentally quite suiting to millions of our masses as these plants and their remedies are in use from ancient times. With ever increasing demand heart patients in the country, the demand for herbal medicines has tremendously gone up. Efforts have been made to improve their medicinal value in terms of quality and quantity, besides conserving them using tissue culture technique.

Keywords: Cardiovascular; medicinal plants; atherosclerosis; tissue culture.

INTRODUCTION: World Health organization (W.H.O.) gave a report in 2009 that globally cardiovascular diseases are the number one cause of death and is projected to remain so. India has the highest rate of mortality and morbidity from heart attacks in the world (World health Report, 2010). India accounted for 17% of all CVD deaths in the world. In 2013 on World Heart Day the emphasis was on women and children, as heart diseases have emerged as the number one killer for Indian women. It is causing death to one in three women. Indian women account for 15 per cent of the global burden of heart disease which kills about 15 million people every year. Women who suffer the first heart attack run a greater risk of losing their lives as compared to men. Female patients should make lifestyle changes and better select the right medications to help them avoid or treat heart disease. Epidemiologists in India and international agencies, such as W.H.O., have been sounding an alarm on the rapidly rising burdens of CVDs for the past 15 years.

WHO estimated that 80% of the population of developing countries relies on traditional medicines, mostly plant drugs, for their primary health care needs? Modern pharmacopoeia still contains at least 25% drugs derived from plants and many other, which are synthetic analogues, built on prototype compounds, are also isolated from plants. Global resurgence in the use of plant based drugs is an opportunity for India to attain self-reliance and boost the export of herbal

drugs. India is ranked sixth among the 12 mega biodiversity countries of the world. India is equally rich in traditional and indigenous knowledge, both coded and informal. Hence India can be source of a variety of drugs. World Health Organization (W.H.O) has also given emphasis on utilization of herbal medicines due to their benefits, as cost effectiveness and minimum side effects.

Heart attack symptoms for women: Women don't experience the 'classic' symptoms of a heart attack that is severe chest pain. The most common heart attack symptom in women is some type of pain, pressure or discomfort. Women are more likely than men to have heart attack symptoms unrelated to chest pain, such as:

- Neck, jaw, shoulder, upper back or abdominal discomfort.
- Pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- Shortness of breath with or without chest discomfort.
- Other signs such as breaking out in a cold sweat, nausea or light-headedness.
- Right arm pain.
- Nausea or vomiting.
- Sweating.
- Lightheadedness or dizziness.
- Unusual fatigue.

Heart disease risk factors for women: The major cause of heart ailment is the combination of 'Nature' and 'Nurture' (genetic predisposition; nature and urbanization with offence; nurture). Although the traditional risk factors for coronary artery disease; such as high cholesterol, high blood pressure and obesity; affect women and men, other factors may play a bigger role in the development of heart disease in women. For example:

- Diabetes increases the risk of heart disease significantly more in women than in men.
- Metabolic syndrome; a combination of fat around abdomen, high blood pressure, high blood sugar and high triglycerides; has a greater impact on women than on men (Johansson, 1998).
- Mental stress and depression affect women's hearts more than men's. Depression makes it difficult to maintain a healthy lifestyle and follow recommended treatment.
- Smoking is a greater risk factor for heart disease in women than in men.
- A lack of physical activity is a major risk factor for heart disease in women.
- Low levels of estrogen after menopause pose a significant risk factor for developing cardiovascular disease in the smaller blood vessels.
- Pregnancy complications such as high blood pressure or diabetes during pregnancy can increase a woman's long-term risk of high blood pressure and diabetes and increase the risk of development of heart disease in both the mother and in her children.

Types of cardiovascular disease:

Coronary artery disease (CAD): It is a condition in which the heart muscle receives an inadequate amount of blood because of an interruption of its blood supply. Generally the symptoms manifest themselves when there is about 75% narrowing of coronary artery lumen. Two of the principal causes of CAD are atherosclerosis and coronary artery spasm (Johansson, 1998).

Antherosclerosis: It is the medical term for hardening or thickening of the artery walls. It is a situation characterized by the narrowing of the arterial wall with large number of smooth muscle cells and deposits of cholesterol and other substances in the portion of the vessel wall closest to the lumen. In a very destructive and painless process the symptoms of antherosclerosis affects the cardiovascular system in general.

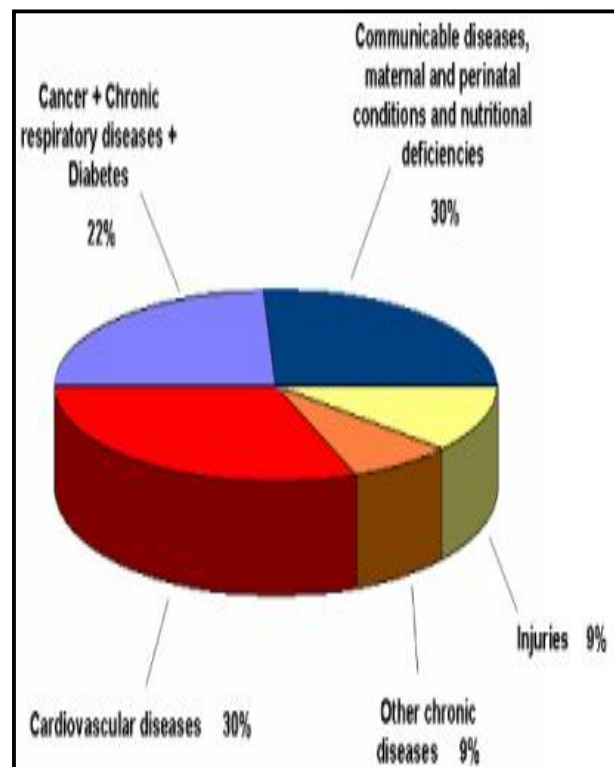
Coronary artery spasm: It is a condition in which the smooth muscle of a coronary artery undergoes a sudden contraction, resulting in vasoconstriction

Hypertension: It is high blood pressure, which occurs when the pressure in the arteries is consistently higher than normal, indicating that the heart is working harder to pump blood through the circulatory system. People suffering persistently high blood pressure are at a risk of a heart attack or stroke and even kidney failure.

Peripheral Arterial Disease (PAD): It is a form of atherosclerosis involving the arteries in the arms, legs, neck, kidneys and lower abdomen This can cause pain and difficulty in walking.

Heart Attack: It occurs when the blood flow to part of the heart is blocked, usually by a blood clot or a piece of dislodged plaque. If the blood flow to the heart is either blocked or significantly reduced for more than a few minutes, the part of heart muscle begins to die.

Stroke or Transient Ischaemic Attack (TIA): It occurs when a blood vessel feeding the brains becomes clogged, or bursts. As a result, that part of the brain and the part of the body controlled by it ceases to function.



Report of W.H.O, 2009 on Human

Mortalities caused by different dis-

Table 1: Some Common Cardiac Tonic & Blood Purifier Herbs in India

Latin Name	Common Name	Uses
<i>Abrus precatorius</i>	Gunjha, Gunchi,	Leaves and roots good for blood purifier
<i>Acroptilon repens</i>	Vasak	Whole plant as blood purifier
<i>Ajuba bracteosa</i>	Neel-kanthi	Blood purifier
<i>Allium cepa</i>	Onion	It works as a hypotensive and also reduces cholesterol
<i>Allium sativum</i>	Garlic	Helps in elimination of fats and cholesterol; it has blood pressure lowering effect
<i>Amaranthus spinosus</i>	Kanta-bhaji	Whole plant is used as blood purifier
<i>Andrographis paniculata</i>	Chirata, Chiretta, Kalamegh	Leaves and roots as blood purifier
<i>Asparagus officinalis</i>	Garden asparagus "Shoot mool"	Diuretic (roots); marked sedative effect on heart contraction (shoots)
<i>Atropa belladonna</i>	Black cherry, deadly nightshade	Helps in irregular heartbeat, relieves spasms and relaxes muscles of the heart.
<i>Bacopa monnieri</i>	Brahmi	Calms the heart, Helps guard against heart attack
<i>Boerhaavia diffusa</i>	LalPunarnava,	Roots act as blood purifier and cures heart diseases
<i>Cassia absus</i>	Chaaksu	A cardi tonic, lowers down hypertension
<i>Cinnamomum camphora</i>	Kapur , cempfire	Works for weak heart, rheumatism
<i>Commiphora mukul</i>	gugul	Prevents hardening of arteries and formation of clots in the blood.
<i>Convallaria majalis</i>	Lily of the valley	A remedy for heart palpitations and weak heart, improves hearts efficiency
<i>Cuscuta reflexa</i>	Dodder, Amarbel,	This is given for purifying blood
<i>Digitalis lanata</i>	Foxglove, Digitalis, Hiritpatri	Leaves contain <i>digitoxin</i> and various other glycosides used for treatment of cardiac ailments; promotes and stimulates activity of all muscle tissues; improves the tone and rhythm of the heart beats making the contractions more powerful and complete; facilitates blood flow into coronaries; aids and improves circulation & nutrition of heart muscle.
<i>Elettaria cardamomum</i>	Cardamom, Chhoti Elaichi	Cardiac stimulant
<i>Hemidesmus indicus</i>	Country Sarsaparilla,	Root decoction is used in hypertension
<i>Jasminum arborescens</i>	Jasmine, Chameli	Leaves blood purifier, good for heart and eyes
<i>Ocimum sanctum</i>	Sacred Basil, Tulsi	Leaves and seeds are cardiac stimulant, blood purifier
<i>Plantago ovate</i>	Spogel seeds, Ispaghul	Seed embryo oil contains <i>linoleic</i> acid (50%) which prevents arteriosclerosis
<i>Rauwolfia serpentina</i>	Sargandha	Helpful in treating hypertension and high Blood Pressure
<i>Swertia angustifolia</i>	Indian Gentian,	Whole plant blood purifier
<i>Taraxacum officinalls</i>	Dandelion, Crow parnish, Kanphul	Leaves and roots blood purifier and tonic
<i>Terminalia arjuna</i>	Arjun Tree, White Murdah, Arjuna	Fruits and root cardiac tonic
<i>Tinospora cordifolia</i>	Guduchi	as a powerful longevity enhancer rasayan
<i>Tylophora asthmatica</i>	Country Ipecaucuanha,	Leaves and root as blood purifier
<i>Vaccinium myrtillus</i>	Bilberry	Contains flavonoids which helps in capillary fragility
<i>Vitis vinifera grape</i> <i>Withania somnifera</i>	Angoor Ashwagandha	The phenolic compounds present in it protect the body from bad cholesterol, used as a cardi tonic and helpful in Antherosclerosis

There are some lifestyle changes that can be undertaken to reduce the risk of heart diseases: like Exercise, taking proper rest and sleep, reduce intake of saturated and trans-fats, taking more of omega 3 fatty acids, reduce the intake of salt and sugar, a diet loaded with vegetables and fruits and getting regular check-ups after the age of 35 years. Some alternative methods like natural supplements and herbs for heart disease treatment have been found to be very useful. Herbal drugs are preferred over allopathic drugs on account of their efficiency, easy availability and are also said to be free from side effect.

CONCLUSION: Keeping in view the menace of heart ailments especially for women at global level, the correct knowledge of this silent killer disease and the importance of medicinal and aromatic plants growing in various agroclimatic regions for their usage in herbal medicine, has been realized by scientist, entrepreneurs, NGOs. In this direction efforts have been made to improve their medicinal value in terms of quality and quantity besides conserving them using tissue culture technique. Awareness about this ailment and sustainable utilization of the herbal resources will insure a step forward to effectively control cardiovascular ailments.

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