

Concept of Pippali (Piper Longum) Verses Heart Diseases

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ABSTRACT

Heart diseases occur due to insufficient and improper oxygen and nutrient supply to the heart muscles by coronary arteries. There are various heart diseases in which heart muscles do not work properly so leads to haridya (heart) shraithilya(exhaustion) further leads to improper working of heart muscles. In case of dilated cardiomyopathy, heart chambers become dilated as a result of muscular weakness. Due to this, proper pumping of blood is not possible. When coronary arteries do not work due to deposition of cholesterol then left ventricle is affected. If there is blood coagulation in coronary arteries, myocardial infarction occurs caused by damage to the heart muscles. In some cases heart muscles become too stiff or too weak to fill and pump properly. Due to valves weakness heart also become weak. All these factors and causative agents leads to improper working of heart muscles so leads to heart exhaustion. Pippali (Piper longum) both small and long contains Piperine which inhibit elevation of total serum cholesterol and total cholesterol to HDL-cholesterol ratio. Here is an effort to describe importance of Pippali for healthy heart muscle functioning.

KEYWORDS - Cholesterol, Haridya shraithilya, Nutrients, Oxygen, Pippali.

INTRODUCTION

Pippali (Piper longum) makes heart muscles strong enough to work properly. It contains Piperine.¹ Due to various causes heart muscles become lethargic, flabby and slacky. Pippali makes them strong in different ways. In Ayurveda Science, heart is called as HRUDAYA. HRU means Harti (to receive from), Da means Datti(to give) and Ya means Yagati (to control). Hrudaya is site for Vata (Air), Pitta (Fire), Kapha (Water), Oja (Natural strength), Mann (Mind), Vata namely Prana vayu (forward moving air), Vyana vayu (outward moving air) , Pitta namely Sadhaka (to accomplish), Kapha namely Avalambhaka(to lubricate and strengthen)². Due to imbalance in all these Doshas, by Vata , blood supply to heart muscles is restricted which leads to oxygen depletion to the heart muscles causing congestive cardiac failure, coronary artery disease and hypertension. Imbalanced Pitta leads to non- accomplishment of functions of Sadhaka pitta and imbalanced Kapha affects the strength of heart muscles.

METHODOLOGY

Method

1. Authentic books.
2. Internet.
3. Review articles.

Pippali

Jeeranjwareagnimandyachshasyategurhhpippali|

Kasajeerananaruchishwashhritpandukrimirognut II

Dwignuahpippalichurnaadgurhhotra bhisjjaam matah II³

This verse shows Pippali is used in heart diseases with Gur (jaggery i.e. Ikshu Vikara) in heart diseases.

Chemical constituents of Pippali-

It contains volatile oils, starch, proteins and alkaloids, saponins, carbohydrates , amygdalin, sylvatine and dieudesmin. No tannins.

Alkaloids and Amides :

Piperine is present in abundance, methyl piperine, ipperonaline, piperettine, asarinine, pellitorine, piperundecalidine, piperlongumine, piperlonguminine, refractomide A, pregumidiene, brachytamide, brachystamide-A, brachystine, pipericide, piperderidine, longamide, dehydropiperonaline & tetrahydropiperine etc. are present in the roots of P. longum.

Lignans:

Sesamin, puvuatetiolo, fargesin are present in fruits.

Esters:

Tridecyl-dihydro-p-coumarate etc.

Fatty acids:

Palmitic, hexadecenoic, stearic etc.

Volatile oils:

Fruits contain caryophyllene and pentadecane (both about 17.8%), bisabolone(11%) etc. An amide in fruit namely dehydropiperonaline having coronary vaso-relaxant activity. It contains constituents that inhibit platelet aggregation as a non-competitive thromboxane A₂ receptor antagonist. It has antihyperglycemic, antilipidperoxidative & antioxidant effects. Methyl piperine inhibit the elevation of total serum cholesterol and the total cholesterol to HDL- cholesterol ratio. Fruit is anti-inflammatory , radioprotective also.

Chemical names of Piperine:

- 1) 1- piperoyl piperidine.
- 2) (E,E) 1-[5-(1,3-Benzodioxol-5-yl)-1-oxo-2,4-pentadienyl]piperidine.

Molecular wt.:

285.33

Percentage composition:

C=71.55%

H=6.71%

N=4.91%

O=16.82%⁴

Shaligram Nighantu also says it is used in heart diseases.

Pippali is :

1. *Yogavahi (catalyst).*
2. *Vatakaphanashaka (balances air and water).*
3. *Aama nashaka(Digestive).*⁵

Do & do not:

1. Use more vit.B₁.
2. Eat Vit. K rich diet.
3. Lower sodium rich diet.
4. Limit fat intake.
5. Add turmeric in diet.

6. Add raw garlic in diet.
7. Drink plenty of green tea.
8. Increase asparagus consumption.
9. Use more cayenne pepper⁶.

Discussion:

- *Pippali* containing above contents helps to cure heart diseases by balancing Tridoshas.

Clears pathway of blood vessels.

Strengthens heart muscles.

Footnotes:

Source of Support: Nil.

Source of Interest: Nil.

CONCLUSION

- Pippali can proved to be a best medicine for heart diseases along with jaggery.
- Further studies can be opted to prove their relevance in curing heart diseases.

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