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## Review Article

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## Review of herbs for Treating Ischaemic heart disease in Traditional Siddha Medicine

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### Abstract

Medicine plants have been discovered and used in Traditional Medicine practices have since pre historic times. Numerous phytochemicals with potential or established biological activity have been Identified. The medicinal plants that is used to attempt to maintain health to the administered for a Specific condition in traditional Siddha medicine. This review paper deals with the single herbs and prepared medicine for treating Ischemic heart diseases. Siddha medicine plays as important role to treat cardio vascular diseases and related symptoms.

**Keywords:** Medical herbs, phytochemical component, Ischemic heart diseases

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### Introduction

Ischemic heart diseases (IHD) refers to a group of disease which include stable angina, unstable angina, myocardial infarction and sudden cardiac death. Atherosclerosis (fatty deposition on inner wall of coronary artery). Total Indian population have 60% of peoples suffered from Ischemic heart diseases. The mortality rate of IHD is slightly increased every year in India. Siddha medicines helps to prevent the risk of Ischemic heart diseases and their complications. The following herbs in siddha medicine to prevent cardio vascular diseases will discuss below

### List of herbs- Treating Ischemic Heart disease

- i) Garlic (Vellai poondu)
- ii) Ginger (Inji)
- iii) Onion (Vengayam)
- iv) Turmeric (Manjal)
- v) Digitalis/Fox gloves (Nari pugaiyelai)
- vi) Black Cumin (Karuncheeragam)
- vii) Sal tree (Kungiliyam/ kukuloo)
- viii) Arjuna Tree (Bark) ( Marutha maram)
- ix) Cinnomon (Kirambu)
- x) Dates (Paerichu)

**Information about Individual herbs Treat IHD**

SI. No	Common Name	Botanical Name	Family Name	Part of uses	Uses in Siddha
1.	Garlic	<i>Allium sativum</i>	Amaryllidaceae		To treat Hyper cholesterolemia
2.	Ginger	<i>Zingiber officinalis</i>	Zingiberaceae	Rhizome	To treat all cardiac disease
3.	Onion	<i>Allium cepha</i>	Amaryllidaceae	Bulb and flower	To treat atherosclerosis, Hyper cholesterolemia
4.	Turmeric	<i>Curcuma longa</i>	Zingiberaceae	Rhizome and roots	To treat atherosclerosis,
5.	Digitalis/Fox gloves	<i>Digitalis purpurea</i>	Plantaginaceae	leaves,seeds	To treat myocardial infarction
6.	Black Cumin	<i>Nigella sativa</i>	Ranunculaceae	Seeds	Reduce BP and triglyceride level
7.	Sal tree	<i>Shorea robusta</i>	Dipterocarpaceae	Bark	Diuretics & Reduce BP
8.	Arjuna Bark	<i>Terminalia arjuna</i>	Combretaceae	Bark	To treat all cardiac disease
9.	Cinnomon	<i>Cinnamomum verum</i>	Lauraceae	Bark	To Reduce Blood sugar level and BP
10.	Dates	<i>Phoenix dactylifera</i>	Arecaceae	Fruits	To treat anaemia and their complications

**1. Garlic – *Allium sativum* [1,3]****Description**

- i) It is the one of the most healthy herbs and spices in the World.
- ii) In Tamil it is called as “**Vellaipoondu**”
- iii) Belongs to Family “**Amaryllidaceae**”

**Types of Garlic**

- i) Wild garlic - *Allium Ursinum*
  - ii) Crow garlic - *Allium Vineale*
  - iii) field garlic - *Allium Oleraceum*
  - iv) Meadow garlic - *Allium Canndence*
- [15]

**Garlic- Pictorial representation**

**Chemical Constituents**

- \* Allicin
- \* Diallyl disulfide
- \* Ajoene
- \* S- Ally Cysteine
- \* Allyl mercaptan
- \* Arachidonic acid Sulfide

**Vitamins**

- Pyridoxine- 15-20%
- Magnesium- 35%
- Selenium- 10-20%
- Vit –c- 30%

**Minerals**

- Phosphate
- Calcium
- Potassium
- Copper

**Medicinal Uses**

- \* It act as a powerful anti oxidants and blood thinner
- \* It is commonly recommended as a cholesterol Lowering agent and has been shown to help lower triglycerided and blood fats.

- \* Garlic plant bulb mix with jeeragam and Ginger paste prepared as a soup prevents Cardiac problems.
- \* In ancient period people use Garlic as a Treatment for Hypercholesterolemia

**2. Ginger - *Zingiber officinalis* [1,3]**

**Description**

- \* Ginger is a flowering plant whose Rhizome Ginger root (Or) Simply ginger used as spice (or) Folk medicine

- \* In Tamil It is called as “Inji” [13,14]
- \* It is also referred as “Smart mans Aspirin”

**Ginger- pictorial representation**



**Chemical Constituents**

- Gingerol
- Shegol
- Zingiberol
- Zingerme

**Food**

- Carbohydrates 50-70%
  - Lipids 3-8%
  - Terpenes- 3-4%
  - Phenolic Compounds- 1-2%
- [13]

### Medicinal Uses

- \* It act as a powerful ant oxidant.
- \* It is a natural blood thinner and prevents the risk of cardio vascular problems
- \* It has same action of blood thinner like Aspirin (Acetyl Salicylic acid) and Coumadin (Warffarin) in modern medicine.

### 3. Onion - *Allium cepa* [1,4]

#### Description

- \* Onion is a Bulbous plant which is used as a food and folk medicine.

- \* In siddha medicine Ginger plays an Important role to prevent hyper cholesterolemia.
- \* Ginger pastes mix with hot water no prevent all heart problems.

- \* In tamil It is called as “Vengayam”
- \* It belongs to family Amaryllidaceae

#### Onion- pictorial representation



#### Chemical Constituents

Oil- 20.4%  
Allicin- 50.60%  
Quercetin- 20-30%  
Allyl propol disulfide

#### Nutritional Values

fiber- 22.40%  
Crude Protein- 24.8%  
Calcium- 175 mg/100gm  
Potassium- 1010mg.100mg  
Sodium- 11.2mg/100mg

#### Medicinal Uses: [6]

- \* It reduces Blood pressure and their risks
- \* Sulfur and Quercetin plays an Important role as Anti oxidants and Anti inflammatory action

- \* In Siddha Onion bulb mix with salt as Internal to treat Blood pressure( Kuruthi Azhal Noi)

#### 4. Turmeric - *Curcuma longa* [1,5]

\* Turmeric is a rhizomatous herbaceous perennial flowering plant of the ginger family.

- \* In tamil It is called as “Manjal”
- \* It belongs to the family “zingerbaceae”

#### Turmeric- Pictorial representation



#### Chemical Constituents

Curcumin- 70-80%  
 Demethoxy Curcumin- 30-40%  
 Bis- Demethoxy Curcumin  
 Eugenol- 8%  
 turmerone- 22.7%

#### Nutritional Values [15]

Carbohydrates- 60-70%  
 Water- 6-13%  
 Proteins- 6-8%  
 Fats- 5-10%  
 Dietary minerals- 3-7%  
 Essential Oils- 3-7%  
 Dietary fibers- 2-7%  
 Curcumanoids- 1-6%

#### Medicinal Uses:

- \* Curcumin act as a Effective antioxidants and anti- Inflammatory action
- \* Curcumin not only helps to support healthy Bp and prevents Blood clots from heart.
- \* Researchers in Japan have found Curcumin helps to prevent Cardiac hypertrophy and Heart failure.
- \* In siddha It act as a powerful antioxidants and prevent cardio vascular diseases.
- \* Traditionally it is used as a hypercholesterolemia in ancient periods.



## 5. Digitalis - *Digitalis purpurea* (fox gloves) [15]

### Description

- It is a herbaceous perennial shrubs
- It is commonly called as “fox gloves”

### Digitalis- Pictorial representation



### I. Chemical constituents

It has 2 cardiac glycosides

- Digitoxin
- Digoxin

### VI. Medicinal Uses

- Digoxin & Digitoxin act as a powerful cardio glycosides [6]
- It is used medication for heart failure

### II. Other components

- Digoxigenin
- Ouabain

- It reduced Dropsy (edema) – Increased urine flow and had powerful effect on heart
- In traditional medicine it is used to treat myocardial Infarction and their risks

## 6. Black cumin - *Nigella sativa* [1,3,5]

### I. Description

*Nigella Sativa* is an annual flowering plant in the family “**Ranunculaceae**” native to south and South West Asia

In tamil it is called as “**Karuncheeragam**”  
It belongs to the family “**Ranunculaceae**”

### Black cumin- Pictorial representation



**II. Chemical constituents**

Linoleic acid  
Oleic acid  
[13]  
Palmitic acid  
Trans anethole

**III. Aromatic compounds like**

- Thymoquinone
- Dihydrothymo quinone
- p-cymene
- Carvol
- thymol

**IV. Medicinal Uses**

- In traditional siddha medicine *Nigella sativa* has benefit on lowering systolic diastolic blood pressure

- Black seeds can reduce Triglyceride and LDL level and total cholesterol level while increasing HDL level

**7. Sal tree – *Shorea robusta* [1,3]****I. Description**

- Shorea Robusta is also known as Sal, Sakhua (or) shala tree
- It belongs to family “**Dipterocarpaceae**”
- It is well grow in Himalayas, Myanmar, Nepal, Bangladesh and Assam, Bengal, Odisha in India
- In tamil it is called as ”**Kungiliyam** (or) **Gugloo**”

**Sal tree- Pictorial representation [13]****Religious Significance**

In Hindu tradition Sal tree is said to be favored by lord Vishnu

**Types of kungiliyam in Siddha medicine**

- i. vellai kungiliyam - Conkany resin - *Boswellia Serrata glabra*
- ii. Karrppu kungiliyam - Black Damar - *Canarium strictum*
- iii. Poonai kan kungiliyam - Cat eye Resin - *Pistacia lentiscus*
- iv. Gugglu - Indian bdellium - (*Balsamodendron roxburghii*)
- v. Seemai kungiliyam – (Australian Dammar) – *Agathis Australia*

**II. Chemical Constituents**

- i. Ursolic acid
- ii. Asiatic acid
- iii.  $\alpha$ - Amyrin
- iv. Bentaic acid/pomolic acid
- v. Uvaol

**III. Medicinal uses**

- Bark Decoution reduces obesity and hyper cholesterolemia
- Bark mix with pepper as a Decoution to treat hyper sweating, palpitation, chest pain in myocardial infarction
- It also reduces LDL and TGL level

## 8. Arjuna – *Terminalia arjuna* [1,3]

### I. Description

- *Terminalia Arjuna* is a tree of the genus Terminalia
- It is commonly known as

English-	Arjun tree
Telugu -	Thella maddi
Singala-	Kumbuk
Tamil	- Marudha maram
Malayalam	- Neer Marathu

### Arjuna- Pictorial representation



### I. Chemical constituents

- Tannins
- Triterpenoid Saponins (Arjunic acid, Arjunolic acid, Arjunigenin)
- Flavonoids
- Gallic acid

### Nutritional Values

- Carbohydrates – 15%
- Proteins - traces
- Fat – Traces

### Minerals

- Mg-25%
- Ca- 10%-15%
- Iron- 5%

### II. Traditional uses[6]

- Traditionally prepared as a milk decoction to treat chest pain
- It is also called as “Guardian of heart”
- In Siddha medicine the bark decoction is used to treat all cardiovascular diseases
- Bark mix with Garlic as a decoction in Sri Lanka to treat hypertension (Kuruthi Azhal Noi)

## 9. Cinnamon – *Cinnamomum verum* [1,6]

### I. Description

- Cinnamon is a spice obtained from the inner bark of several tree species from genus *Cinnamomum*
- It is called as **Kirambu** (or) **Lavanga pattai** in Tamil
  - It belongs to “**Lauraceae**”



### Cinnamon- pictorial representation



### II. Chemical Constituents [13]

- Chinnamoaldehyde -  $C_9H_8O$
- Cinnamol alcohol -  $C_9H_{10}O_4$
- Caryophylline
- Proanthocyanidine

#### Nutritional Value

Carbohydrate - 81gm  
 Fat - 1.2gm  
 Proteins- 4gm  
 Dietary fibre - 53gm  
 Sugar- 5gm

#### Minerals

$K_2$  - 431mg  
 Na -10mg  
 Calcium - 100%  
 Iron - 46%  
 Magnesium - 15%

#### Vitamins

vitaminA-5%  
 vitaminC-6%

### III. Medicinal uses

- i. Cinnamon reduces blood sugar level and TGL level prevent the risk of CVS
- ii. Cinnamomum bark decoction reduces atherosclerosis and prevent the risk of heart attack
- iii. It is a powerful antioxidants and anti inflammatory action

### IX. Dates – *Phoneix dactylifera* [1,3,6]

#### I. Description

- *Phoneix dactylifera* is a flowering plant species in the palm family
- It belongs to family **arecaceae**
- In tamil it is called “**Paerichu**”

### Dates- Pictorial representation



**Nutritional Value**

Carbohydrate – 75gm  
 Dietary Fibre – 8gm  
 Sugar – 63gm  
 Proteins – 2.5gm

**Minerals**

K<sub>2</sub> – 656mg  
 Cr – 3%  
 Mg – 10%  
 Iron – 5%

**Medicinal uses**

- i. It is the one of the kayakarpa medicine in Siddha
- ii. Karchoor karpa – Mix with honey as a kayakarpa to treat myocardial Infarction

- iii. Dates treat anemia and prevent the risk of cardio vascular problem

**List of Siddha medicine treat IHD**

S.No	Name of the medicine and their physical form	Main ingredients Common name Tamil name as bracket	Uses	Text Reference
1.	Karchoor karpam	<i>Phoneix dactylifera</i> (paerichu)	Treat myocardial infarction, anemia and its complications	Sirappu maruthuvam
2.	Marutham pattai kudineer	<i>Terminalia arjuna</i> (Marutham pattai)	Treat chest pain, palpitation, hyper sweating	Gunapadam mooligai
3.	Vellaipoondu kudineer	<i>Allium sativum</i> (Vellai poondu)	Treat hypercholesterolemia and hyper tension	Gunapadam mooligai
4.	Thamaraga kudineer	<i>Nigella sativa</i>	Treat cardio vascular diseases	Bharathathil siddha marunthugal seimurai
5.	Karuncheeraga kudineer	<i>Nigella sativa</i> (Karuncheeragam)	Reduce TGL and LDL level prevent the risk of hyper tension	Bharathathil siddha marunthugal seimurai
6.	Kungiliyarpam	<i>Shorea Robusta</i>	Reduce hyperlipidemia	Gunapadamooligai
7.	Thamaragathi aristam	<i>Terminalia arjuna</i> (Marutha pattai)	Reduce all cardio vascular diseases	Siddha marunthugal seimurai villakkam
8.	Hiruthaiya Shanthi	<i>Allium Cepha and Terminalia arjuna</i>	all cardio vascular diseases	Herbal Wikipedia

**Conclusion**

Siddha medicine are well functioning to treat cardio vascular diseases like myocardial infarction, hypercholesterolemia, Anemia associated cardio problems..., etc in the modern scientific world. The following herbs not only treat cardio vascular diseases but also a good rejuvenator for heart. So it concluded that the medicine preparation documented centuries by our

great siddhars are relevant even today which is evedent through the in-vitro studies carried out with universal parameters.

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