

**ACTION OF PRABHAKARA VATI AND HRUDAYARNAVA RASA IN
CARDIOVASCULAR DISEASES****Pradnya Patil^{1*} and Pallavi Kadam²**

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ABSTRACT

Hrudroga is a broad term dealing with all the structural and functional abnormalities of hrudaya. In the manifestation of Hrudroga, nidana plays a vital role such as atiushna guru, kashaya, tikta rasa atisevana, atishrama, abhighata, adhyashana, atiprasanga, vegadharana, and adhika chinta, leading to tridosha prakopa, sthanshmshraya in hrudaya, and does dushana of hrudayagata doshas causing the disease Hrudroga. The term hrudroga covering all the cardiovascular diseases. According to current studies, 17.5 million people die each year from cardiovascular diseases (CVDs), with an estimated 31% of deaths worldwide. Among them, 7.4 million are due to coronary heart disease and 6.7 million are due to stroke; hence, it is needed to discover the effective drugs that can prevent the death due to CVDs. Congestive Cardiac Failure (CCF) & Ischemic heart diseases (IHD) are the 2 most commonly seen diseases which needs out attention. CCF is the

condition where ventricles fail to maintain proper cardiac demands as per requirements of cells and organs due to decreased force of contraction of myocardium or increased cardiac load, which might present as right ventricular failure, left ventricular failure, or both. IHD is the heart disease, caused by decreased blood supply to myocardium by obstructed coronary arteries due to atherosclerosis mainly. Ayurveda, being the ancient science of life, provides a range of formulations that can take care of CVDS without any complications. Prabhakara vati and Hrudayarnava rasa are two such formulations indicated classically in hrudroga. Prabhakara vati has ingredients like Swarna makshika bhasma, Loha bhasma, Abhrak

bhasma, Shuddha Shilajatu, and Arjuna swarasa. All these ingredients having rasayana properties, hence it can be indicated in condition like CCF where increasing strength of myocardium is crucial. Contradictory to this Hrudayarnava rasa contains ingredients like Tamra bhasma, Shodhita Parada, Shodhita Gandhaka, triphala kwath, and Kakamachi swarasa. In this formulation, most of the drugs have lekhana and karshana properties, hence helping to remove the atheroma or thrombus and to prevent further progression of disease.

KEYWORDS: Hrudayarnava rasa, Prabhakara vati, CCF, IHD, CVD.

INTRODUCTION

Hrudroga is the disease where there is a hampered function of the heart producing different types of pain. This is broadly compared with cardiac diseases. With the increase in sedentary lifestyles, the prevalence of cardiovascular diseases is also increasing. Cardiovascular diseases are the No. 1 cause of death globally. 17.5 million people died in 2012 from CVD, which is 31% of all deaths globally. In that, 7.4 million were due to coronary heart disease, and 6.7 million were due to stroke. Hence, there is a need to discover the drugs preventing CVD's and future deaths.

Hrudroga is the disease of the heart, either due to structural or functional damage. Because of the causative factors like atiushna guru, kashaya, tikta rasa atisevana, atishrama, abhighata, adhyashana, atiprasanga, vegadharana, adhika chinta causes tridosha prakopa, reaches hrudya, and does dushana of hrudayagata rasa and causes amautpatti further causing avarodha of srotas (Atherosclerosis, coronary artery disease, plaques), atipravutti of vata (Fibrillation, vessel enlargement, palpitations), hence produces the disease hrudroga.^[1]

Ayurveda, being the ancient science of life, provides various formulations that can take care of CVDS without any complications. Prabhakara vati and hrudyarnava rasa are the two formulations indicated for the hrudroga classically in different texts. Because of the high prevalence and severity of the disease, the effort has been made to understand the probable action of Prabhakara vati and Hrudayarnava rasa in CVD's and to know its clinical application.

Method of preparation**1. Prabhakara vati^[2]**

Ingredients: Swarna makshika bhasma, Loha bhasma, Abhrak bhasma, Suddha shilajatu 1 part each, Arjuna swarasa QS.

Method of preparation: Swarna makshika bhasma, Loha bhasma, Abhrak bhasma, Vamshalochana, and Suddha Shilajatu are taken in khalva and subjected to bhavana with arjuna twak kashaya and prepare 2 valla size vati and dried in shade.

Physical characteristics

Gandha: Shilajatugandhi

Varna: Raktabha

Rasa: Tikta

Indication: Hrudrogas

Anupana: Madhu.

Matra: 2 valla (2ratti)

2. Hrudyarnava rasa^[3]

Ingredients: Tamra bhasma: 1 tola, Shodhita Parada, Shodhita Gandhaka Kajjali: 2 tolas each, Bhavana dravya's: Vara kwath & Kakamachi svarasa or kwath.

Method of preparation: Prepare Kajjali by adding shuddha parada and shuddha gandhaka in khalva yantra. Add tamrabhasma and do mardana till it becomes homogenous, then give bhavana of triphala kwath followed by mardana for 1 day, then give bhavana with kakamachi svarasa followed by mardana for 1 day, and prepare 1 Chanaka, i.e., 250 mg tablets, and dry in shade.

Physical properties

Gandhi: Rasayanagandhi

Varna: Krushnavarna

Taste: Kashaya

Indication: Hrudroga

Anupana: Madhu

Matra: 1 chanak (2 ratti)

Indication: Hrudroga

Discussion on prabhakara vati

CCF is the disease where ventricles are unable to maintain sufficient cardiac output due to decreased force of contraction of myocardium in diseases like Myocardial Infarction or Myocarditis. These diseases damages myocardium and affects function of myocardium resulting into poor cardiac output. The other important reason of CCF is increased cardiac load. The conditions like mitral stenosis, aortic stenosis etc workload to myocardium increases which also contribute for development of CCF. As disease progresses it leads to hypertrophy of myocardium (Left ventricular hypertrophy or Right ventricular hypertrophy or both) which eventually results in failure (Right ventricular failure, left ventricular failure) causing death.

Left ventricular hypertrophy (LVH) causes decreased cardiac output which causes decreased blood supply to brain and other vital organs of body. The main organ which gets affected by this is Kidneys. Reduced blood supply to kidneys causing renal ischemia leading to activation of renin angiotensin aldosterone system, which facilitates reabsorption of sodium and water and try to revert the pathology by increasing blood volume. As a consequence of which fluid overload takes place which present as oedema, Dyspnea etc. Right ventricular hypertrophy (RVH) causes accumulation of blood in right atrium & venous system. Which cause accumulation of blood in hepatic sinusoids resulting into portal hypertension and present as splenomegaly, esophageal varices, ascites etc.

The ingredients of Prabhakar vati has specific properties which can benefits to increase strength of myocardium preventing further damage to myocardium. Suvarnamakshika bhasma is indicated in Palpitation due to agantuja nidana (Krodha), palpitation, excess sweating, sarvanga kampa, chronic cardiac disease, valvular heart disease, Cardiac edema. Loha bhasma is indicated in shwas associated with hrudvyatha, yakrutavruddhi, Sarvanga shopha. Abhraka bhasma is indicated in Exertional dyspnea, Impaired blood circulation, Bradycardia, Irregular pulse, Cardiac edema, Arjuna swarasa is indicated in hrudroga. In both the conditions of CCF what we need is to give strength to myocardium and to treat the underline cause. Hence by considering the actions of ingredients, Prabhakar vati is best indicated in CCF².

Discussion on hrudyarnava rasa

IHD is the condition caused by decreased blood supply to myocardium by obstructed coronary arteries. The important reason for the obstruction in coronary arteries is

atherosclerosis. Atherosclerosis is a complex inflammatory process characterized by accumulation of lipids, macrophages & smooth muscle cells in initial plaques in large & medium sized pericardial coronary characterized by intimal lesion called atheroma which protrude into vascular lumen narrowing lumen of coronary artery as a result of which myocardium receives insufficient blood supply affecting function of myocardium and resulting into IHD. Hyperlipidaemia, smoking cigarettes, diabetes, and hypertension are prime reasons for the development of atherosclerosis. These etiological factors damage endothelial cells also excess LDL enters the endothelial cell of coronary artery, and the cell becomes foam-like, this makes cell surface rough and facilitates platelet aggravation and produces atheroma (avrodha) with decreased lumen of the coronary arteries, resulting into reduction in blood supply to the myocardium mostly during exertion, which is known as angina pectoris. As pathology progresses, obstruction increases, giving continuous symptoms of ischaemia, causing chronic HD. Further, the pathology progresses, causing complete obstruction of coronary arteries; resulting into stoppage of blood supply to the myocardium, which causes MI.

In Hrudayarnava rasa, kajjali, tamrabhasma, triphala, kakamachi are the main ingredients. As Kajjali is sarvarogahara, it may correct hrudayasthit vyana vayu dushti and give strength to cardiac muscles by its rasayana property. Tamrabhasma is having actions like lekhana and karshana; it will help to remove the platelet aggravation, Triphala is having shoshana and rasayana properties. Kakamachi swarasa is having actions like Bhedana, Hrudya, Kaphahara, Pittahara, Rasayana, and Vatahara. Hence, triphala and kakamachi will also act in the same way to stop the further progression of the disease. Hence, by considering the action of specific drugs, hrudyarnava rasa can be given in IHD³.

CONCLUSION

Hence, by virtue of the specific actions of the drugs of Prabhakar vati, it is indicated in congestive cardiac failure which require strength to the myocardium, like left ventricular hypertrophy and right ventricular hypertrophy. But in case of IHD, we need to concentrate on the removal of blockages, which may be because of atheroma; hrudyarnava rasa will work better by removing the blockages and by preventing further accumulation.

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