

**A REVIEW ON MAHARASA DRAVYA AS HRUDYA****Ambika S.\*<sup>1</sup>, Neha Semwal<sup>2</sup> and Gazala Hussain<sup>3</sup>**<sup>1,2</sup>Post Graduate Scholar, <sup>3</sup>Associate ProfessorDepartment of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara  
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Hassan-573201.**ABSTRACT**

In Ayurvedic pharmaceuticals Rasaushadhi are well known for treating various chronic diseases. These formulations are a combination of mercury, minerals, metals, precious stones, calcium and alkaline compounds. Minerals are again classified into maharasa, uparasa and sadharanarasa- based on its utility in processes of Parada (Mercury). Maharasa dravya have rasayana (Rejuvenating) and yogavahi (Synergistic) property which aid in giving action as hrudya (Beneficial to heart). Hrudroga can be correlated to heart diseases or cardiac disorders. Hence an attempt was made to analyze the role of maharasa in Hrudroga based on its attributes.

**KEYWORDS:** Rasaushadi, Maharasa, Hrudroga, Rasayana, Yogavahi.**INTRODUCTION**

Rasaushadi are well known for its quick action, it is effective even in smaller doses. Also these preparations are palatable and have longer shelf life compared to other herbal drugs.<sup>[1]</sup> In Rasashastra along with mercury many other minerals, metals, precious stones, alkaline compounds, calcium compounds are in use for various pharmaceutical formulations.

Hrudroga can be correlated to heart diseases or cardiac disorders. As per Ayurveda treatise, cardiac disorders are classified into five types. First four types are based on the predominance of dosha in its genesis as well as signs and symptoms hence named vataja (Vata dosha dominant), pittaja (Pitta dosha dominant), kaphaja (Kapha dosha dominant) and sannipataja (all tridoshas dominant) while fifth type is referred as krimija, which is attributed to infestation of worms in the individual. Vataja Hrudroga can be referred as ischemic heart

disease. Krimija Hrudroga can be co-related to anemia of cardiac origin or endocarditis of infective origin.<sup>[3]</sup>

Cardiovascular diseases include diseased vessels, structural problems and blood clots. Congestive Cardiac Failure (CCF) is the disease where ventricle's are unable to maintain proper cardiac output as per requirement of cells and organs due to decreased force of contraction of myocardium or increased cardiac load. The main two causes of CCF are Right ventricular failure and Left ventricular failure. This may be due to the decreased force of contraction due to myocardial damage (MI, myocarditis) and increased cardiac work (mitral stenosis, aortic stenosis, etc. Ischemic heart disease is the condition caused due to blockages, which may be because of atheroma.

Abhraka (Mica), Vaikranta (Tourmaline), Makshika (Copper pyrite), Vimala (Iron pyrite), Adrija (Black bitumen or Asphaltum punjabinum), Sasyaka (Copper Sulphate), Chapala (Selenium) and Rasaka (Zinc oxide) are the eight maharasa widely accepted and followed.<sup>[2]</sup> Out of these Abhraka (Mica), Vaikranta (Tourmaline), Vimala (Iron pyrite), Adrija (Black bitumen or Asphaltum punjabinum), Makshika (Copper pyrite) and Sasyaka (Copper Sulphate) are mentioned as hrudya rasayana.

In this paper an attempt is made to analyze the role of maharasa in Hrudroga.

## MATERIALS AND METHODS

An extensive search was carried out in both print and digital media to collect the details of maharasa with special reference to its action on Hrudroga.

## OBSERVATIONS AND RESULTS

Table 1: Attributes of maharasa.

SI No.	Maharasa	Rasa	Guna	Virya	Vipaka	Karma	Doshaghnata	Rogaghnata
01	Abhraka (Mica)	Kashaya (Astringent), Madura (Sweet)	Snigdha (unctuous)	Sheeta (cold)	Madura (Sweet)	Rasayana (rejuvenative)	Tridosahara (Alleviates all tridoshas)	Sarvaroga (All diseases)
02	Makshika (Copper pyrite)	Madura (Sweet), Tikta (Bitter), Kashaya (Astringent), Katu (Pungent)	Snigdha (unctuous)	Sheeta (Cold)	Katu (Pungent)	Rasayana (Rejuvenative), Jeevaniya (Health and life promoting)	Kapha pitta hara (Alleviates kapha and pitta dosha)	Pandu (Anemia), Prameha (Diabetes)
03	Vaikranta (Tourmaline)	Shadrasa-Madura (Sweet), Amla (Sour), Lavana (Salty), Katu (Pungent), Tikta (Biter), Kashaya (Astringent)	Guru (Heavy), snigdha (unctuous)	Sheeta (Cold)	Madura (sweet)	Balya (Strengthening), Rasayana (Rejuvenative)	Tridosahara (Alleviates all tridoshas)	Rajayakshma (phthisis), Visha (Poisoning)
04	Shilajatu (Asphaltum punjabianum)	Katu (pungent), Tikta (bitter)	Laghu (light), Ruksha (dry)	Ushna (Hot)	Katu (Pungent)	Rasayana (Rejuvenative)	Kapha hara (Alleviates kapha dosha)	Pandu (Anemia), Rajayakshma (Phthisis)
05	Vimala (Iron pyrite)	Katu (Pungent), Tikta (Bitter),	Snigdha (Unctuous), Guru (Heavy)	Sheeta (Cold)	Katu (Pungent)	Rasayana (Rejuvenating), Vajikarana (Aphrodisiac)	Vata pitta hara (Alleviates vata and pitta dosha)	Pandu (Anemia)
06	Tuttha (Copper Sulphate)	Kashaya (Astringent), Katu (Pungent)	Laghu (Light), Ruksha (Dry), Tikshna (Sharp)	Ushna (Hot)	Katu (Pungent)	Rasayana (Rejuvenative), Lekhana (scraping)	Tridosahara (Alleviates all tridosha)	Hrdruja (Heart-pain crushing), Visha (Poisoning), Arsha (Hemorrhoids), Kushta (Skin diseases)
07	Chapala (Bismuth)	Madura (Sweet), Tikta (Bitter)	Guru (Heavy), Snigdha (Unctuous), Tikshna (Sharp)	Ushna (Hot)	Katu (Pungent)	Vajikarana (Aphrodisiac), Lekhana (Scraping)	Tridosahara (Alleviates all tridoshas)	
08	Rasaka (Zinc Carbonate)	Kashaya (Astringent), Katu (Pungent), Kshara (alkaline)	Ruksha (Dry), Tikshna (Sharp)	Sheeta (cold)	Katu (Pungent)	Chakshushya (Beneficial for eye diseases)	Kapha and pitta hara (Alleviates kapha and pitta dosha)	Prameha (Diabetes)

**Table 2: Classical Formulations having maharasa as ingredient and indicated in Hrudroga.**

Sl. No.	Name of the formulation	Ingredients	Dose
01	Prabhakara vati	Swarna makshika bhasma- 1 tola (12g) Lauha Bhasma- 1tola (12g) Abhraka Bhasma- 1 tola (12g) Vamshalochana- 1 tola (12g) Shuddha Shilajatu- 1 tola (12g) Arjuna kwatha ( Decoction of arjuna) – bhavana dravya	2 valla (750mg)
02	Trinetra rasa	Parada, Gandhaka and Abhraka Bhasma-equal quantity. Bhavana dravya- Arjuna Kwatha(Decoction of arjuna)	1 masha (1g)
03	Arogyavardhini rasa	Parada (1 part), gandhaka (1 part), lauha (1part), tamra( 1part) Abhraka (1 part), triphala (2 parts each), shilajatu (3 parts each), guggulu (4 parts each), chitrakamula (4 parts each) and katuki(18 parts each) Bhavana dravya- nimba vruksha dala rasa(Juice of neem leaves)	1 pill (6gm)

## DISCUSSION

Abhraka (Mica) bhasma possesses snigdha (unctuous), sheeta veerya (cold potency), kashaya (astringent), madhura (sweet) rasa, sarva dhatuposhaka (nourishing to all dhatu), netrya (diseases of eyes), medhya (brain tonic) and rasayana (rejuvenating) property.<sup>[4]</sup> With its snigdha (unctuous), kashaya (Astringent), madhura (Sweet) rasa and dhatuposhaka karma (nourishing to all dhatu), Abhraka bhasma proves to be useful in hrudya roga. It helps to strengthen the muscles of heart to overcome the weakness of heart muscle. Abhraka bhasma proves to be useful in strengthening pranavaha srotas and also acts as a rasayana (Rejuvenating). Because of its action on pranavaha srotas, it is indicated in rajayakshma (tuberculosis), shwasa (asthma) and kasa (cough) which is caused due to weakness of heart muscles. Abhraka bhasma by its dhatuposhana (nourishing to all dhatu) and rasayana (rejuvenating) action helps in correcting the circulation which is caused due to thinning of blood vessels of heart valve.

Vaikranta (Tourmaline) possess madhura rasa (Sweet), sheeta (Cold) virya and madhura (Sweet) vipaka, helps to increase saptadhatu (body nutrient fluid, blood, flesh, fat, bone marrow, vital essence, semen), clarifies the sense organs, and imparts vigor and complexion.<sup>[4]</sup> Due to its rasayana (rejuvenating) karma, it helps in strengthening of heart muscles.

Makshika (Copper pyrite) bhasma possesses tikta (Bitter), madhura rasa (sweet taste), sheeta (cold), laghu guna (light), sheeta (cold) veerya, katu (Pungent) vipaka, tridoshaghna (alleviates all the three dosas) and Kaphapittahara (alleviates kapha and pitta) and is said to have balya (strength), yogavahi (synergistic), rasayana (rejuvenation of body) and Vrishya (Aphrodisiac) property.<sup>[4]</sup> Use of this bhasma in pandu (anemia) is effective. Due to the presence of loha (iron) in swarnamakshika bhasma, it enhances the strength in person, suffering difficulty in blood circulation due to decrease in blood count and weakness of heart muscles.

Vimala (Iron pyrite) bhasma possesses snigdha (unctuous), guru (Heavy) guna, pittahara (Alleviates pitta dosha), vrishya (aphrodisiac) and rasayana (rejuvenative) properties. Due to its snigdha (unctuous) and guru guna (Heavy) it acts as Vrishya (Aphrodisiac) and Rasayana (Rejuvenating)<sup>[4]</sup> Hence this bhasma helps in the strengthening of heart muscles.

Shilajatu (Black bitumen) is madhura (Sweet), tikta (bitter), katu (Pungent) rasa, katu (Pungent) vipaka, vata pittahara (Alleviates vata and pitta dosha) and has rasayana (Rejuvenating) and yogavahi ( Synergistic) properties. Due to its rasayana (rejuvenating) and yogavahi (synergistic) action, it is indicated in hrudshula (pain in heart muscles). It also helps in strengthening the heart muscles.

Sasyaka (Copper sulphate) bhasma possesses katu (Pungent), kashaya (Astringent) , madhura (Sweet) and kinchit kshara rasa (Slight Alkaline), laghu (Light), guru guna (Heavy), ushna veerya (Hot), katu (Pungent) Vipaka and tridoshashamana (Alleviates kapha, pitta and vata) and lekhana (Scraping) karma. Due to its lekhana (Scraping) karma it helps in removing the blockages in vessels of heart which in turn helps in proper blood circulation.

Abhraka, Vaikranta, swarna makshika, Vimala and Shilajatu helps in myocardial damage condition because of its rasayana (Rejuvenating) and balya (Strengthening) action, which helps in strengthening the heart muscles.

Tuttha, by the virtue of its lekhana (Scraping) karma not only helps in the removal of blockages, but also helps in preventing the further accumulation as well.<sup>[5]</sup>

### **Action of Prabhakara Vati and Hridayarnava Rasa in Cardiac Diseases**

In Prabhakara vati- a khalviya rasayana has, Swarna makshika bhasma, Loha bhasma, Abhraka bhasma, and Shuddha Shilajatu and Arjuna kwatha as ingredients.

Swarnamakshika bhasma is indicated in Palpitation due to agantuja nidana (krodha), palpitation, excess sweating, sarvanga kampa (Tremors all over the body), sarvanga daha (Burning sensation in all over the body), chronic cardiac disease, valvular heart disease. Loha bhasma is indicated in palpitation due to anemia, shwasa, plihavrudhhi (Splenomegaly), yakrutavruddhi (Hepatomegaly), sarvanga shopha (oedema). Abhraka bhasma is indicated in exertional dyspnea, impaired blood circulation, bradycardia, irregular pulse, cardiac edema, Arjuna swarasa is indicated Hrudroga. In both the conditions of CCF (LVF OR RVF) need is to give strength to myocardium and to treat the underline cause. Hence by the specific actions of the drugs of Prabhakar vati, the CVD's which require strength to the myocardium like Left Ventricular Hypertrophy and right ventricular hypertrophy Prabhakara vati will work better.<sup>[5]</sup>

### **Efficacy of Prabhakar Vati in the Management of Hridaya Roga- A Clinical Study**

Present clinical study was conducted on hridaya roga (Cardiac disorders) in which total 50 ailments were registered on the behalf of inclusion and exclusion criteria and symptoms rating score are used to assess the severity of symptoms like absent, mild, moderate and severe. The trial medicine Prabhakara vati was given in dose of 2 ratti (250mg) morning and evening with lukewarm water for 3 months to 50 patients and raw data were gathered and organized for analysis and all registered patients were grouped in three sections i.e., vataja, pittaja and kaphaja on the basis of their prakriti, after that each parametric and nonparametric data are compare to each other and interpreted by applying chi-square and 't' test etc. Prabhakara vati was administered 2 ratti (250mg) morning and evening with lukewarm water for 3 months was extremely significantly effective in improving the symptoms of vaivarnya (Discoloration), murchha (Fainting), jwara (fever), kasa (Cough), hikka (Hiccup), shwasa (Dyspnoea), kaphotklesha (Aggravation of kapha) only significant ( $P < 0.01$ ) in vama (Emesis) and trishna (Thirst) and it is also similar effective in hematological, biochemistry (Lipid profile) and ECG findings. The therapy was well tolerated by all patients and no unwanted effect was reported during the trial period. Hence the drug trial is safe, easy available and cost effective and can be recommended to the patients of hridayaroga.<sup>[6]</sup>

### **Trinetra rasa: a literary review**

Trinetra rasa is a khalviya rasayana reference of Yogaratnakara has mentioned of parada, gandhaka, abhraka bhasma with Arjuna twak as bhavana dravya. As Abhraka bhasma is having balya and rasayana action helps in strengthening the myocardium and Arjuna dravya

is hridya, it gives a synergistic effect to the formulation and this formulation is indicated in all types of hridroga.<sup>[7]</sup>

### **Cardio protective Activity of Trinetra rasa in experimental model**

Cardiovascular diseases are described under Hrudroga in Ayurvedic classics. Trinetra Rasa is a Herbo-mineral formulation explained in the context of Hrudroga. The present study was aimed to evaluate cardio protective activity of Trinetra rasa against Isoprenaline induced cardiac damage in rats and attempt to understand the mechanism of its therapeutic effect with respect to biochemical markers, ECG and Histopathological changes. Albino rats of Wistar strains of either sex between 150 to 250g randomly divided into 6 groups, 8 rats in each group. Group 1- control group given tap water 10 ml/kg. Group 2 – Isoprenaline control group – 100mg/kg. Group 3- Standard group given propranolol-10mg/kg, group 4- Honey (Vehicle control/Anupana) 10ml/kg (Test-1), Group-5 Trinetra rasa in therapeutic dose along with Honey 750 mg/kg(Test-2) and group-6 Trinetra rasa in 2 times the therapeutic dose with honey 1500mg/kg(Test 3) were administered according to the body weight of the animals by oral route to respective groups at morning hours and continued for 20 days. On 19<sup>th</sup> day ECG was recorded to assess the Myocardial infarction and 1<sup>st</sup> dose of Isoprenaline injection (s/c) was given, on 20<sup>th</sup> day after 24 hours of 1<sup>st</sup> dose, 2<sup>nd</sup> dose of Isoprenaline injection was given (s/c) and ECG was recorded. Biochemical and Histopathological assessment was done. In biochemical parameters better effect was observed with test 2 groups but Histopathological profile showed good effect at test 3 group highest dose level. This study provided the evidence of cardio- protective activity of Trinetra Rasa against Isoprenalin induced cardiac damage in rats.<sup>[8]</sup>

### **Arogyavardhini Vati: A theoretical analysis**

According to Rasa Ratna Samucchaya, Bhaishajya Ratnavali and Bharata Bhaishajya Ratnakar the drug Arogyavardhini vati possess the pharmacological action like Kusthanashaka (can alleviate all types of skin disorder) – indicated for 1 mandal (14 days). Tridosha jvara nashaka (fever arising due to involvement of three humours) - indicated for 5 days. Also the drug having the properties like- pachani (digestive), dipani (appetizer), pathya (wholesome for channel), hridya (cardio protective), medonasaka (can alleviate the diseases arising from hyperlipidemia), malashuddhikari (cleaning of waste materials from body), increase kshudha (appetizer), Sarvaroga prashamani (can alleviate all types of disorders from



body). It is beneficial for heart as it brings about the strengthening of heart or cardiac muscles.<sup>[9]</sup>

### **Study of Arogyavardhini vati (AV) with special reference to its toxicity study**

Hridya (Cardio protective) – AV is very useful in chronic cases of heart disease with weakness and oedema; it empowers heart, by removing excessive water content through urination (diuresis). AV acts as hrudya (cardio tonic) in pandu (Anaemia) & Hepatomegaly. AV is medonasaka (can alleviate the diseases arising from hyperlipidemia).<sup>[10]</sup>

### **CONCLUSION**

Maharasa dravya are having rasayana (rejuvenating), balya (Strengthening) and yogavahi (Synergistic) property. Cardiac disorders specially caused by diseased vessels, structural damage and blood clots. Diseased vessels are nothing but thinning of blood vessels which leads to difficulty in circulation, in this condition swarna makshika and abhraka can be used. Balya (Strengthen), rasayana (Rejuvenating) and dhatuposhaka (nourishing to all dhatu) property of abhraka and loha present in swarna makshika helps in vulvar diseases. Congestive cardiac failure is the condition caused by myocardium damage where balya (Strengthen) and rasayana (rejuvenating) action is needed for strengthening the myocardium. This action is done by abhraka, Vaikranta, Vimala, shilajatu helps based on its balya (Strengthen) and rasayana (rejuvenating) action. Ischemic heart disease is the condition caused by blockages in this condition lekhana karma (Scraping) is needed. Tuttha has scraping action by this it helps to remove the blockages. Hence, maharasa dravya based on their properties can proved to be useful in the chronic condition of diseases where nourishing properties are required. Also helps in strengthening the weakness of heart muscles in the condition of congestive cardiac failure caused due to weakness of myocardium and Ischemic heart diseases due to atheroma.

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