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REVIEW ARTICLE

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A critical understanding of Hridroga Nidanas and its present relevance

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ABSTRACT

The global burden of diseases is changing from infectious diseases to non-communicable diseases these days. Among them cardiovascular disease is one which is tremendously increasing in this era. Accounting for 17.3 million deaths per year worldwide. Life style modifications like high caloric intake, alcohol consumption, smoking and stress are the risk factors for cardiovascular disease. In Ayurveda all those disease come under the heading of "Hridroga". Acharya Bhela has mentioned Shirohridaya and Urohridaya. Urohridaya has been accepted in correspondence to circulation of Rasa and Rakta .As for any disease to manifest Nidanas are needed hence understanding important because Nidanaparivarjana is the first line of treatment for any disease. Nidanas such as Vega Dharana, Ushnatikshna Ahara, Chinta and Abhighata leads to manifestation of Hridroga. Along with that Hridaya being mula of Rasavaha and Pranavaha Srotas Mula, Dusthi of those also lead to Hridroga. As there are different sets of Nidanas being explained in classics there is a need for critical understanding hence the present write up is aimed to provide an insight into the concept of Nidanas based on classical references and allied modern literature.

Key words: Nidana, Hridroga, Cardiac disease.

INTRODUCTION

Cardiovascular disease is the most important cause of worldwide death, accounting for 17.3 million deaths per year.[1] It is an umbrella term for a number of linked pathologies, commonly defined as coronary heart disease, ischemic heart disease and heart failure. The world health organization estimated that

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over 75% of premature CVD is preventable and risk factor amelioration can help reduce the incidence. All the three Dosas namely Vata, Pitta, Kapha in the normal state maintain the structural integrity of Hridaya. The very same Doshas when in abnormal state derange the function and give rise to disease. It is Moola for Rasavaa and Pranavaha Srotas and is Adhistaana for Chetana, [2] Prana, Mana and Ojas hence has to be well protected. [3,4] Hirdroga is a broad spectrum diseases with various structural and functional abnormalities the Hridaya. Nidana(causative factor) plays a major role in manifestation of Vyadhi that can be divided into Aharaja Viharaja and Manasika Nidana. [5] Diagnosis can be done well with help of Nidana panchaka. Among them Nidana is the foremost component it not only gives the knowledge about the causative factor, but also helps in prevention by avoiding them. Nidanas are the factor which leads to disease either immediately when there is favorable

environment.^[6] Nidana Parivarjana being the first line of treatment our prime intention is to analyzing Nidana which gives the knowledge about differential diagnosis and prognostic aspects.^[7]

AIMS AND OBJECTIVES

- Review of Samanya Hridroga Nidana
- Understanding its relevance in present time

METHODOLOGY

Concepts related to proposed title are collected from classical texts of *Ayurveda*, various published research papers and internet source.

Samanya Hridroga Nidana

Excessive physical exertion that is *Vyayama* (excessive exercise), *Tikshna Dravya Sevana*, *Ati Virechana* (emetic therapy), improper administration of *Basti Karma* (enema) or manifestation of *Basti Vyapad*, *Chinta* (worry), *Bhaya* (fear), *Trasa* (stress), improper management of any disease that is *Gadaatichara*, *Chardi Vegadharana* (controlling of vomiting), *Ama Sanchaya* in the body, *Abhigata* (trauma) that is any injury, suppression of natural urges, consumption of food which is *Ushna* and *Tikshna* in excess quantity, use of incompatible food, eating more quantity of food which is uncooked, unaccustomed and *Gulma Roga Nidanas* are said to be the causes of *Hridroga*.^[8-11]

Nidanas	Ch.Su	Su.Ut	Ma.Ni	Bh.Pr
Vyayama	+			
Atitikshna	+			
Ativirikta	+			
Basti vyapat	+			
Chinta	+		+	+
Bhaya	+			
Trasa	+			
Chardi	+			

Gadatichara	+			
Ama	+			
Shrama	+		+	+
Karshana	+			
Abhighata	+		+	
Vegadharana	+	+	+	+
Ruksha		+		
Virudha		+		
Adyashana		+		
Ajeerna		+		
Atiushna		+		+
Guru Anna			+	+
Atikhashayatikta			+	+
Adhyashana				+
Atimatrasevana		+		

DISCUSSION

Vyayama

Mild to moderate Vyayama or appropriate physical exercise is always good to the body (Ardashakti), but in excess (Ati Vyayama) which causes Shrama (exertion), Mana Shaitilya, Rasadi Dhatu Kshaya, Trishna (thirst) and diseases like Raktapitta (bleeding disorders), Pratamaka Swasa (a type of dyspnoea), Kasa (cough) and Jwara (fever).[12] As there are Tridosas, Rasa, Rakta, Ojas, Mana in Hridaya then Datukshaya, Shaitilya, Swasa caused by above reasons affects Hridaya in long run causing Hridroga. Increased physical activity, exercise training, higher levels of cardio respiratory fitness increases the risk of atrial fibrillation, coronary artery disease and malignant ventricular arrhythmias. In other instance cardiac dilation, hypertrophy either in right or left ventricle leading to diastolic ventricular dysfunction and later dilation of both atria.[13]

Atitikshna

Tikshna Dravya Sevana causes Pitta Prakopa, Kaphahara Klesha to Shareera and Manas.[14] The Tikshna quality destroys Ojus, hampers circulatory functions of Dhamanies. It is Dukha Vardaka to Manas. This Tikshna Dravyas can be in the form Kshara, Lavana and Visa Dravyas. In present era cigarette smoking and alcohol consumption can be related to Tikshna Sevana which are the causes of infraction. The chemicals in cigarette smoke cause the cells that line blood vessels to become swollen and inflamed. Nicotine and carbon monoxide appear to play major roles in CVD by altering the myocardial oxygen supply demand ratio and have been shown to produce endothelial injury leading development of atherosclerotic plaque.[15]

Ativirikta

Ativireka (excess of emetics) leads to Aadhmaana (bloating), Parikarta (fissure), Srava, Hridgraha, Jeevadana, Gudabramsha, Sthambha, Klama. [16] When Suddha Rakta is passing out along other Dhatus there will be extreme Klama, Dourbalya and there is every need of emergency care as Rakta is Jeeva. Heart tries to compensate the volume loss by increasing heart rate which on long stand leads to vasoconstriction and can cause cardiac arrest.

Basti Vyapat

In Basti Vyapad Klama, Aadhmaana, Hritpraapti, Urdhvagamana, Pravahika, Shiro arti, Parikarta, Sraava are explained. [17] When Basti is Tikshna Dravyayukta, not given with proper pressure and given without removing the air in the Basti Netra it leads to Hritpraapti. If such Basti is given it gives more pressure on the Hridaya and causes Pida. It causes impediment in the functioning of Hridaya by causing Hritshula and Vayu moves about irregularly in different directions.

Chintabhayatrasa

Hridaya is Sthana of Manas. Therefore, recurrently if patient succumbs to Chinta, Bhaya and Shoka there will be Manasikadosha Dusti which does Dusti to Hridaya. There will be Rajo Guna Vriddi which in turns

affects Shareerika Doshas Vata and Pitta. Stress by external or internal environment will act as stimulus and goes to baro receptors situated in arch of aorta and carotid sinus. This serves as input to the controlled center in the brain in medulla as a result of which there is increased sympathetic and decreased para sympathetic nerve impulse that give increased secretion of epinephrine and nor epinephrine. This cause increased heart stroke volume and heart rate and ultimately leads to increased cardiac output.[18] Vasoconstriction of blood vessels increases systemic vascular resistance. As a response finally blood pressure increases. If this is continued for long time and if uncontrolled then it causes systemic Hypertension leading to heart diseases and other complications.

Gadatichara

Improper management of disease or person not undergoing any treatment can be considered as *Gadatichara*. If a person suffering from disease for prolong period, there will be *Vata Vriddi, Dathu kshaya, Bala Kshaya, Varna Kshaya* at the end causes *Ojokshaya* thus giving *Badha* to *Hridaya*. As heart is an organ that meets demands of all organs, failure or malfunctioning of any organ gives its impact on heart. For example chronic kidney disease people are at a high risk of cardio vascular diseases. Thus if any disease is untreated or mismanaged in long run brings about *Hridroga*.

Chardi

Chardi may manifest as natural Vega as defense mechanism to any gastric irritants, it may manifest as Swatantra Roga or it may be one among symptoms or Upadrava in various diseases. Chardi Vega Udeerana that is Vamana is also a procedure indicated in many disease as a treatment. Therefore excessive vomiting reflex or improper administration of Vamana does Peedana to Hridaya or recurrent Chardi causes Upagatha to Hridaya.

Ama

Due to impaired *Agni* by various *Mithyaahara Vihaara* and *Manasika Kaaranas* lead to formation of *Ama* as

mentioned in Trividha Kuksheeyadyaya.[19] Aahara Rasa which is improperly or less produced in amount will not provide adequate nutrition to the body including *Hridaya*. Due to that Dhatus are also inadequately formed or inadequately nourished. Thus, results in Kshaya of Dhatus, Ojus and Bala or Sama Dosha state is developed may result in diseases like Pandu, Amavata, Grahani Roga, Udara Roga etc. and finally may land in Hridroga. Yogaratnakara said that the person suffering from Ama Vyadhi will have symptoms like Alasya, Tandra and Hridayaavishuddi that is some sense of discomfort in heart region. When we go through the etiology of Ama it is explained as Guru, Singdha, Sheeta Ahara in present days dietary habits such as oily foods, junk goods bakery foods leads in high cholesterol level. This high levels on long run becomes the cause of atherosclerosis which is one among the major risk factor for cardio vascular disease either coronary or infract.

Vega Sandhrana

Vegas are the natural reflexes or physiological output which are due to somatic reflexes, psychological reflexes. Like in Udgaara Vega Dharana causes Hikka, Swasa, Aruchi, Kampa, Hridavarasa Vibhanda, This is caused due to Vata Vaigunya. Pipasa Vega Dharana leads to Kantasya Sosha, Badhirya, Shrama, Saada and Hridhi Vyatha.[20] Mula of Udakavaha Srotas is Talu and Kloma. [21] According to some authors Kloma it is situated just below to Hridaya and any Dusti to that causes Hridhi Vyatha. On long stands causes dehydration further hypovolemia and shock. If oxygen demand is not fullfilled then leads to ischemia and coronary heart diseases. If it is for prolong period then this vigorous physical stress brings early heart disease. Here Praana Vata and Vyana Vata Avarodha causes Hridroga. Shukra Vega Nigraha causes Shula in Medra, Vrushana, Angamarda, Hridhi Vyatha. Here pain over genitals brings severe agony to the patient. Shukra is one among the vital Dhatus which is equivalent to life. So, it has impact on Hridaya though not related directly. The possible side effect in people who delay or avoid ejaculating when sexually aroused is epididymal hypertension.

Karshana

Karshana (emaciation) which means becoming lean or emaciated. It is mainly caused by Apatarpana. In which it leads to Dusti of Vayu and Agni leads to insufficient production of Rasa dhatu. Upasoshan of Rasa Dhatu takes place leading to Dhatu Kshaya. [21] Hence the patient suffers from indigestion and malabsorption which on long run causes low immunity and increases the risk of infectious disease and auto immune disease. Karshana most of the times is considered as protein malnourishment and in few researches, they have concluded by saying that low protein diet has an effect on cardiac metabolic and structural changes. In addition, very low levels of animal protein intake have been associated with a significantly increased risk of hemorrhagic stroke. [22]

Abhigatha

Hridaya is a Sadyopranahara Marma. [2] If there is any injury in *Hridaya* then it causes sudden death. If injury occurs to the areas surrounding to Hridaya then it causes Kaalanta Pranaharana or Vaikalya in Avayavas. Abhigata may be due to Dosabhigata, Bhutabhigata, or Shastrabhigata. If Abhigata is due to Dosha or Bhutabhigata there will be Ojokshaya giving Hridroga. The reduction in blood volume during acute blood loss causes a fall in central venous pressure and cardiac filling. If compensatory mechanisms are unable to sufficiently restore arterial pressure, irreversible shock can occur. This leads to reduced cardiac output and arterial pressure. In other instance it leads to hypotension further resulting from hypotension causes myocardial hypoxia and acidosis, which depress cardiac function and causes arrhythmias.

Ruksha

Ruksha is a Guna and also one among Shadvidhopakram which is a line of treatment for Santarpana Vikaras. This Ruksha Guna does Vata Prakopa, Kharatva and Shoshana. On continues intake causes Rudhi of Vata and leads to Apatarpana and Karshana.

Ati Ushna, Kashaya and Tikta Rasa Sevana

Ushna Padarthas always cause Hrit Klesha, Hrit Daha and Pitta Prakopa. The very nature of Kashaya Rasa is to inactivate taste sense of tongue and does Hrit Kanta Peeda and Karshana. [23] Kashaya and Tikta causes Roukshyata by Kleda Vishoshana. It does Prakopa of Vata Dosha. Due to its Atisevana it causes Hrudayashula. Tikta Rasa if used in excess causes Datukshaya, Murcha, Glani, Shrama, Brama, Vatavyadi and Roukshata Parushyata. [24] It leads to Vata Prakopa therefore Kapha Kshaya causing Ojo Kshaya does Hridbhadha.

CONCLUSION

Cardiovascular disease being the major cause of mortality in present era its prevention is need of the hour. Prevention can be done properly only when we come to know the causative factors and its path physiology involved in the disease formation. Varied etiology has been explained by different Acharyas and categorized under dietetic factor, somatic factor and psychological factor. Contemporary science on the other hand, based on clinical and experimental evidence puts the blame on food containing large amounts of saturated fat and increased cholesterol which can be considered as Guru Bhojana, sedentary life style (Ama, Adhyashana, Atimatrasevana, Ajeerna), stress (Chinta, Trasa, Bhaya), excessive physical exhaustion, strains of modern sophisticated life (Ativyayama, Vegadharana), improper treatment (Basti Vyapat), cigarette smoking and alcoholism (Atitikshnaushna, Atikhasaytikta Rasa Sevana) leads to cardiovascular disease. When we understand these factors, we can avoid in our daily routine. As presently everyone is very much aware of exercise benefits but fail to know its limitation and end up in a disease. Even while giving treatment, one must be very careful and should have an idea of its adverse effect.

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