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The Role of Ayurveda in Cardiology (Evidence based clinical trial)

Research article

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Abstract

Ayurveda is the most ancient science of life and life is said to be the combination of mind, body, soul and senses. It deals not only with management of diseased conditions but prevention of disorder and proper hygiene of wellbeing. Coronary disease is more a result of disorder of life style. In present era, due to changing life style, food habits and increasing stress the aging process becomes so fast. Due to these specific reasons, clinical issues associated with Heart diseases (Hypertension, Coronary disorder) within a age; are arising enormously in society. We can correct these conditions with help of herbal medicines, *Sadvritta palan* Achar *rasayan* and *Yoga* along with *Ayurvedic* preparations. With the help of ayurvedic perspectives we can successfully prevent or prolong the Heart Diseases e. g. - chest pain (*Doshabalapravrutta Lakshane*), congenital heart disease (*Janmabalapravrutta Hrudroga*), Angina Pectoris (*Hrudshoola*) coronary thrombosis (*Stotorodhajanya Hrudroga*) cardiac arrhythmias (*Hrudgati vikruti*) Hypertension (*Rakta vega vrudhi*) Etc.

Key Words: - Heart disease, *Sadvritta palan*, Achar *rasayan*, Hypertension

Introduction:-

Life is fully filled of a lot of stress, food habits & busy schedule to earn income. The effect of stress is directly hampered to heart. As per BMJ 20% patient died in world due to complication of Heart disease, MI (Myocardial infarction) & not a Proper treatment. We can save the heart of 80% pt. with the help Ayurvedic preparations, *Sadvrutta*, Achar *Rasayan*, and *Yoga*.

Milestones in cardiology in modern science is based on evidence vs inventional. In last few decades cardiology has progressed by leaps & bounds with the inventions of:-

- 1) Stethoscope: - by Theophile Hyacinthe Laennec (1781-1826)
- 2) E. C. G.: - Einthoven in 1903
- 3) Angiocardiology: - Dr Werner Forssmann 1929

4) Cardiac Catheterization: - Dr Werner Forssmann 1929

5) Echocardiography:-Dr Hertz of Sweden in collaboration with Dr Inge Edler in 1953

(Evidence based clinical trial)

Literature Review:-

Doshas & Heart:-

PRANA VAYU:-Is used as 1) Oxygen & 2) functional component of nervous system controlling respiration. Coronaries carry oxygen & nutrients to heart. In thrombosis of coronary artery disorder. Oxygen supply to heart is blocked leads to myocardial infarct.

VYANA VAYU:- Controls all voluntary as well as involuntary movement of heart. It represents by autonomic nervous system & central nervous system. It controls contraction, relaxation & rhythmicity of heart. It also maintain tone of blood vessels, which is responsible maintaining Blood pressure. It represents the entire nervous control of circulation. e g Simultaneous increase in heart rate along with increased body activity occurs due to action of *vyanvayu*. Excessive contraction of arterioles leads to hypertension. Excessive relaxation of arterioles can result in a state of shock. Disturbance of *vyana vayu* can leads to feeble or forceful contraction of heart & all disturbances of rhythm. e. g. extrasystole, heart block, auricular & ventricular fibrillation etc.

Movement of all valves in the heart & blood vessels are also controlled by *vyana vayu*. Spasm of coronary artery by abnormal *vyan vayu* leads to anginal attacks. Increased blood pressure may lead to bleeding episodes.

SADHAKAPITTA:- represents enzymes in the heart e. g. SGOT, aldolase etc Intracellular digestion of nutrients brought by coronary arteries in the function of *sadhak pitta*, proper function of heart and indirectly circulation and function of

Nervous system like intelligence etc. are depend on *sadhak pitta*. Disorder of *sadhak pitta* leads to weak action of heart and ultimately heart failure

AVALAMBAKA KAPHA:-It represent intracellular *kapha* molecules as well as interstitial fluid in the heart, lungs, & mediastinum, namely pericardial & pleural fluid as well as the fluid in the cavity of chest. Heart & Lungs are working continuously. Hence maximum activity & *vata vrudhi* in the body takes place in the heart & chest. *Avalambaka kapha* provides the necessary lubrication & strength to the heart for its continuous work. It help to prevent friction between two cells as well as between heart & mediastinum. The location of *para oj* is heart (important marma). Matra is 8 bindu. Patient died in emergency due to *nash of para oj*

Causes of Heart Disease:-

- 1) *Vegaorodha*
- 2) *Chinta*
- 3) *Improper panchakarma. :-Vaman Atiyog,*
- 4) *Excess intake of Lavana & Kashaya rasa*
- 5) *Viruddha Aashan:-18 factors*
- 6) *Causes of Rasavaha Strotas & Pranavaha*
- 7) *Causes of Raktavaha Strotas & Mansavaha*
- 8) *Ojakshaya Karan*

Classification of heart disease:-

Heart disease is classified as:-

Sr no	Ayurveda	Modern science
1	<i>Adibalpravrutta</i>	Hereditary heart disease, metabolic disease
2	<i>Janmabala pravrutta</i>	Congenital heart disease
3	<i>Doshabala pravrutta</i>	<i>Vataj, pittaj, kaphaj,</i>

		<i>sannipataja</i>
4	<i>Sanghatbala pravrutta</i>	Traumatic, poisoning
5	<i>Kalabal pravrutta</i>	Environmental, seasonal
6	<i>Upasarga</i>	<i>Pishachchadikrutta</i> , infectious disease e. g. endocarditis, myocarditis
7	<i>Swabhava balakrutta</i>	Natural, aging, death
8	<i>Adhyatmika</i>	Psychological factor leading to hd
9	<i>Daibalakrutta</i>	Idiopathic;- badluck due to bad deed in life

In addition, Disease of each organ are classified & treated according to tissue and *doshas* affected. ...Embryologically,

Endometrium is derived from *rasa* muscular tissue & pericardium is derived from *meda* i.e. fatty and connective tissue. Each of them can be affected one or all of three *doshas*.

- 1) The *vataja* disease of endometrium leads to vulvular affections like Aortic & Mitral stenosis & regurgitation.
- 2) The *pittaja* disease include Bacterial Endocarditis.
- 3) The *kaphaja* disease of endometrium includes Endometrial Fibroelastosis.

1) Angina Pectoris - *Hridshola*):

Severe chest pain in heart characterized by

- Difficulty in expiration.
- Severe Chest pain

Vata Dosha –Leads to Spasm of Coronary vessels ---Ischemia of heart—severe pain

Pathophysiology of UC:-

*Thickening of coronary due to *Kapha* (atherosclerosis).

* *Pitta* (inflammatory)

* Abnormal quantity of *Rasa & Rakta* (hypercholesrimia)

2) Coronary Thrombosis: - (*Srotorodhajanya Hrudroga*):-

In angina pectoris, the patient experiences severe pain due to temporary ischemia of the heart following acute spasm of coronary vessels.

Marked narrowing of coronaries limits the blood supply to the heart and give rise to Pre infarction syndrome complete obstruction of one of the branches of coronaries for e. g. coronary thrombosis suddenly cuts off blood supply to the myocardium and gives rise to **Myocardial Infarction.**

Etiology:

The increased & vitiated *Vata* gives rise to dryness, roughness, thinness of coronary vessels & degenerative changes. Increased or vitiated *Pitta* gives rise to chronic inflammatory changes in coronary vessels. Increased or vitiated *kapha* results in thickening of coronary vessels.

3) Hypertension :- (*Raktavegavruddhi*)

Etiology:-

It is well known that the blood pressure varies directly with the cardiac Output and peripheral vascular resistance.

Increased cardiac output is encountered in

-

- A) Increased plasma volume i.e. *Rasavruddhi*
- B) Increased volume of R. B. C. s i.e. *Raktavruddhi*
- C) Increased heart rate i.e. *Vyanaprakopa (Vatavruddhi)*

Increased peripheral resistance is due to:-

- A) Spasm of arterioles i.e. *Vyanaprakopa*
- B) Chronic inflammatory disease of blood vessels i.e. *Pittavruddhi*
- C) Atherosclerosis leading to thickening of blood vessels due to *Kaphavruddhi*

Symptoms hypertension of based on Humoral predominance:-

Sr no	Vata	Pitta	Kapha
1	Worry	Anger	Atherosclerosis
2	Strain	Nose bleeding	Dull Headache
3	Anxiety	Irritability	Edema
4	Insomnia	Violent	Lethargy
5	Fluctuation of B. P. reading	Headache/flush face	
6		Burning sensation	
7		Redeye/sensitivity to eye	

DRUG FOR NEW RESEARCH:-

Sr no	Drug	Action
1	Arjuna	Beta blocker. antioxidant/hypolipidemic
2	Gokshura	Diuretics/ace inhibitor
3	Punarnava	Diuretics
4	Rose petals	Reduces pitta & mood lifting

3) Cardiac Arrhythmias: - (Hridagati Vikriti)

Drugs Used In Cardiac Arrhythmias:-

Sr no	Tachycardia	Bradycardia
1	Ahifen	Nagvelli
2	Bhanga	Tulsi
3	Bilvamoola	Kasturi
4	Shatavari	Kuchala
5	Deodaru	
6	Ela	

***Bhrihatwachtintamani 60 Mg 4 Hrly: -
No Use In Supraventricular Tachycardia

Aims and Objectives:-

The study has been planned with the following aims and objectives:

- 1) To find out the classical management of Coronary Heart Disease by considering role of ayurvedic preparations including *Sadvrutta*, *Aachar Rasayana*.
- 2) To study the etiopathogenesis (Evam Utthanam) , symptomatology (Evam Sansthanam) and Prognosis (Evam Udakam) of coronary heart disease on the basis of Ayurvedic principles.
- 3) To maintain the health of heart with the help of various *Yoga*.
- 4) To find out the effect of *Virechan* on Heart Disease.
- 5) To rule out effect *Sadvritta*, *Aachar rasayan* are useful for preventing Heart diseases.

Material & Methods:-

Randomly patient are treated in our hospital age group between 18 to 50 yrs.

100 Patients suffering from various heart disorder like 1) Coronary Heart Diseases 2) Hypertension 3) Valvular disorders etc

Clinical data is assed in our hospital on the basis of

- 1) Clinical presentation:-
- 2) Biochemistry:-
- 3) Ecg:-
- 4) Angiography
- 5) 2 d Echo

Drugs:-

- SAHATRAPUTI ABHRAK BHASMA 60 MG
- MRUGSHRUNGA BHASMA 60 MG
- YOGENDRA RASA 60 MG

Dose: - TDS

Anupan: - Honey

Duration: - 3 months

Assessment Criteria:-

Signs & symptoms of all patients

Were observed before & after the treatment.

- 1) Chest pain
- 2) Breathlessness
- 3) Hypertension
- 4) ECG
- 5) Biomarkers
- 6) 2 d echo
- 7) Angiography
- 8) 3 d echo

Investigations:-

Advanced Investigation:-

Sr no	Modern science	Ayurved
1	CK-MB/HS CRP LEVEL	NADI PARIKSHAN
2	SGOT/SGPT	RUGNA PARIKSHAN
3	TROP-T	(EXAMINATION OF PATIENT)
4	LIPID PROFILE/CHOLESTEROL	
5	ECG	
6	2 D ECHO/3 D ECHO	
7	TMT/STRESS TEST	
8	ANGIOGRAPHY	

Observation & Results:-

There are best results in CHD (atherosclerosis) of above combination in heart disease.

- 50 patients are found Coronary Heart Disease
- 32 patients are Hypertension.
- 18 patients are Vulvular disorder

Evidence based trials are conducted with the help of *Rose water shirodhara & rose arka nasya in hypertension*. Analysis will be submitted after complication

Illustration/figures/tables:-

Table No 1: Sex Wise Distribution:-

Sex	No of patient	%
Female	28	28
Male	72	72

Table No 2: Prakriti Wise Distribution:-

Age	No of patient	%
KP	28	28
KV	22	22
PK	08	08
PV	18	18
VK	12	12
VP	12	12

Table No 3: Occupation Wise Distribution:-

Occupation	No of patient	%
Student	03	03
Housewives	15	15
Service	18	18
Business	46	46
Clerk	08	08
Cook	02	02
Others	08	08

Table No 4: Disease Wise Distribution:-

Disease	No of patients	%
Coronary Artery disease	50	50
Hypertension	32	32
Vulvular disorder	18	18

Figure:01 Before treatment

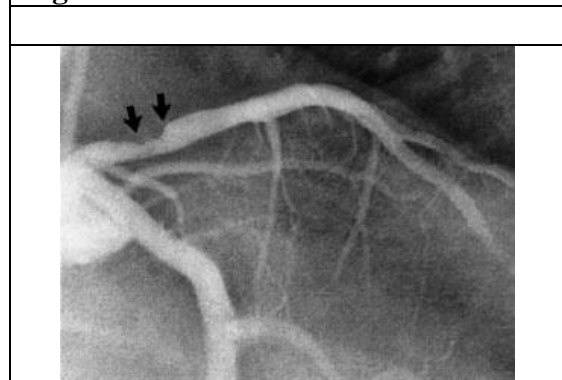


Figure no:- 02 After treatment 3 months

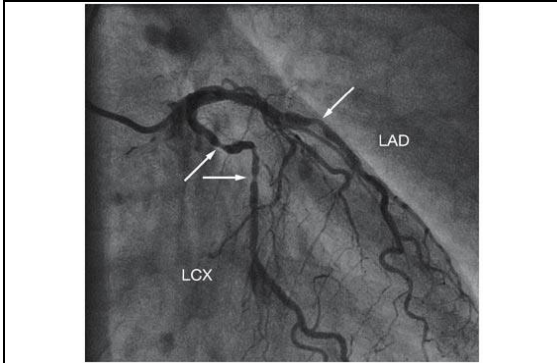


Figure no:- 03 After treatment 6 months



Discussion:-

- 1) The effect of above Ayurvedic preparations on Coronary Artery with atherosclerotic change with the help of *Sadvrutta, Aachar rasayan, & Yoga* is miraculous.
- 2) The *Vaikranta Bhasma* having action as like aspirin/clopidogral.
- 3) But adverse effect of *vaikranta bhasma* having no control action having tendency of bleeding from gum.
- 4) The adverse action of this drug is removed with bhavana of *Mauktik Bhasma. Nagvelli Patra, Tulsi Patra Swaras...* trials are continued... (PT INR is observed)
- 5) There is no perfect use on cardiac arrhythmia excluding Sinus Tachycardia.
- 6) Sinus Bradycardia above mentioned drugs.
- 7) The *virechan therapy /basti* is more useful in these patient on basis of

causes of hridroga mentioned in (cha. sutra. 7) *vegavarodh.* .

- 8) *Punarnavrista* is used in chestpain with breathless due to CCF is very useful
- 9) Decoction of *Dashmoola* with tila tail or saindhav salt *Basti* give temporary relief in chest pain consist to unstable angina.

Place of Work:-

These clinical trials are conducted at Shatayu Hospital, PMT's Ayurved hospital & Post. Graduate Institute Shevgaon. Dist:-Ahmednagar, Maharashtra 414502 & Shatayu Hospital, Shevgaon.

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Conclusion:-

- 1) The *Virechan therapy / Basti* is most useful.
- 2) Cardioprotective drugs can be used (*Brihatvatachintamani/Trailokyachintamani Laxmivilas/Rassindoor/Suvarna/Raupya/Shringa/Abhrak*)
- 3) The drugs *Rason, Bala, Rasna, Medhya rasayan* can be used *Rasayan* for Hypertension
- 4) *Sadvrutta palan, Aachar Rasayan & Yoga* is useful in heart diseases for prevention.
- 5) The above ayurvedic preparation is help to postponed PTCA/CABG
- 6) In all emergencies allopathy medicines was prescribes & continued Need some inventional cardiology.

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