

CASE STUDY

Ayurvedic Management of *Hrudadaurbalya Janita Vrukkamaya* (Pre renal CKD) - A Case Study

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ABSTRACT

Left Ventricular Hypertrophy (LVH) is thickening of wall of heart's main pumping chamber. This thickened heart wall loses its elasticity and may result in elevation of pressure within heart and sometimes poor pumping action. The most common cause is high blood pressure. LVH can often be corrected by treating underlying problem causing heart to work too hard. Depending on type of damage that has occurred, treatment measures may include medications like ACE Inhibitors, Beta blockers, Ca channel blockers, diuretics etc. as well as healthy lifestyle changes which helps to reduce HTN. If LVH is caused by a valve problem, surgery may be needed to repair or replace the valve. Though LVH is considered a disease entity where western medical science has great efficacious drugs and ayurveda is generally not considered a treatment of choice because of fear of emergencies. LVH can closely be correlated with *Tridoshaj Hrdroga*. In *Ayurvedic* texts; detailed description of *Hrudroga* along with its treatment is mentioned. Here is a case of LVH treated successfully with *Ayurvedic* treatment.

Key Words *Hrdroga, Vrikkamaya, Mahastrotas, Marmasthana*

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INTRODUCTION

Hrudroga (Heart disease) is very common in present scenario. Due to change in concept of diet and lifestyle; the incidence of *Hrudrog* is increasing at high rate. Heart failure describes the state that develops when the heart cannot maintain an adequate cardiac output or can do so only at expense of elevated filling pressure.

The prevalence rises from ~1% in group 50-59 years to between 5 and 10%. of those aged 80-89 years. Overall prognosis is poor ;~ 50% of patients with severe heart failure due to LV

dysfunction die within 2 yrs, many from ventricular arrhythmias or MI¹.

LVH is thickening of the wall of heart's main pumping chamber. LVH may be present for many years without any noticeable symptoms. As the condition worsens, symptoms may develop such as shortness of breath, fatigue, chest pain, heart palpitations, dizziness or fainting. Because LVH can develop silently over several years without symptoms, it can be difficult to diagnose LVH, even before symptoms become noticeable.

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As per Ayurveda; *hrudaya* is *marma* and *mula sthana* (origination site) for *rasavaha* and *pranavaha strotas*. While *pranavaha strotas* *mula sthana* (origination site) is described *Mahastrotas* (GIT). So we can say *mahastrotas* (GIT) is most important *strotas* in the body being the main site of digestion and assimilation of ingested food and producer of *adhya dhatu rasa dhatu*.

According to ayurveda origination of all disease are instructed from GIT because of disturbance of function of *agni/mahastrotas* (GIT). Except mental causes where affection in GIT takes place later ; leading to initiation of disease process.

Ayurveda precisely emphasis that prolonged affection of one or two *strotas* will always affect remaining *strotas* as per the nature of pathogenesis². Present case is a very good example of above principle where pathogenesis silently progressed to most important *marma* Heart primarily and kidney secondarily. And this is all because of varied slow etiological factors, self-medication and complex lifestyle of patient; ignoring the basic rules of healthy life mentioned in ayurveda. These are the regions that clinical pictures of various diseases do not found as per textual referances.

Present case is also as per above principle. As parallel modern science has developed thousands of investigation technology that can identify pathologies; so early helping the human being as well as Ayurveda physicians.

From ancient time Ayurved is known for serving society by cure and prevention (*Swasthya Rakshanam*) and this concept is exactly

applicable on cure and prevention of heart disease.

In present case study, patient has history of *Ativyayama*, *Chinta* (Stress) as a cause of disease. Habituation of causative factors resulted in manifestation of *vata pradhan tridosha* vitiation in *Hrudaya marma* and hence occurrence of LVH. Hence patient was treated with treatment principles like *Nidana parivarjana*, *tridosha shaman*, *vyadhiviparita* and *Dhatuposhan chikitsa*.

PATIENT INFORMATION

A 48 year male patient visited OPD no. 4 of (PG Kayachikitsa department) at Govt. Akhandanand Ayurved Hospital Bhadra, Ahmedabad date on 4/6/22 having following complains since last 6 months :

Akshikutashotha (Peri orbital oedema)

Ubhayapadasotha (bilateral Pedal oedema)

Daurbalyanubhuti (Weakness)

katishula (Back Ache)

Ubhayapadashula (Bilateral lower limb pain)

Shwasakasthata (Dyspnoea)

Kasa (Coughing)

Kaphasthivana (Sputum expectoration)

Sakastha Savibandha Malapravrutti (Constipation)

Saphena mutra pravrutti (Frothy urine)

Bhojanottar Daha (Burning sensation after meal)

Patient was healthy before 6 months. He had constipation & was taking Triphala churna for more than 10 yrs by self. Before 6 months he felt weakness and mild swelling at both legs. Then

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gradually he started feeling difficulty in breathing and coughing, so he visited nearby Hospital and diagnosed Kidney failure and was referred to IKD - civil Hospital Ahmedabad and diagnosed LVH (Heart failure), Hypertension as a cause of kidney failure and thus treated for same. Patient had mild relief in symptoms but reports were worsening consecutively and hence he was advised Renal dialysis. Then patient approached for Ayurvedic treatment at Kayachikitsa OPD Govt. Akhandanand Ayurved Hospital, Ahmedabad.

PAST HISTORY : hypertension

FAMILY HISTORY : nil

PERSONAL HISTORY:

Diet - excess and frequent consumption of substances having *ushna, tikshna, guru, ruksha, kashaya* property.

Vihara - Excess physical exertion i.e *vyayama, krodha, bhaya* etc.

Sleep - disturbed

Appetite - normal

Bowel movement - once/day (*Savibandha*)

Micturation - 3 to 4times / day
1-2 times / night

Pulse - 78 / min

Bp - 180 / 100 mm Hg

Temp - 98.6 F

NIDANA PANCHAKA

Nidana – *Vyayama, Chinta, Bhaya*

Purvarupa - Patient had high blood pressure 7 yrs ago but it was relieved to normal blood pressure within one month of treatment and had mala vibandha.

Rupa- *Shwasakashtata, Sakaphakasa, Mukhashotha, UbhayapadaShotha, Daurbalyanubhuti.*

Samprapti – The below figure 1.0 describes the representation of Ayurvedic Pathogenesis for Hrudadaurbalya janita Vrukkamaya.

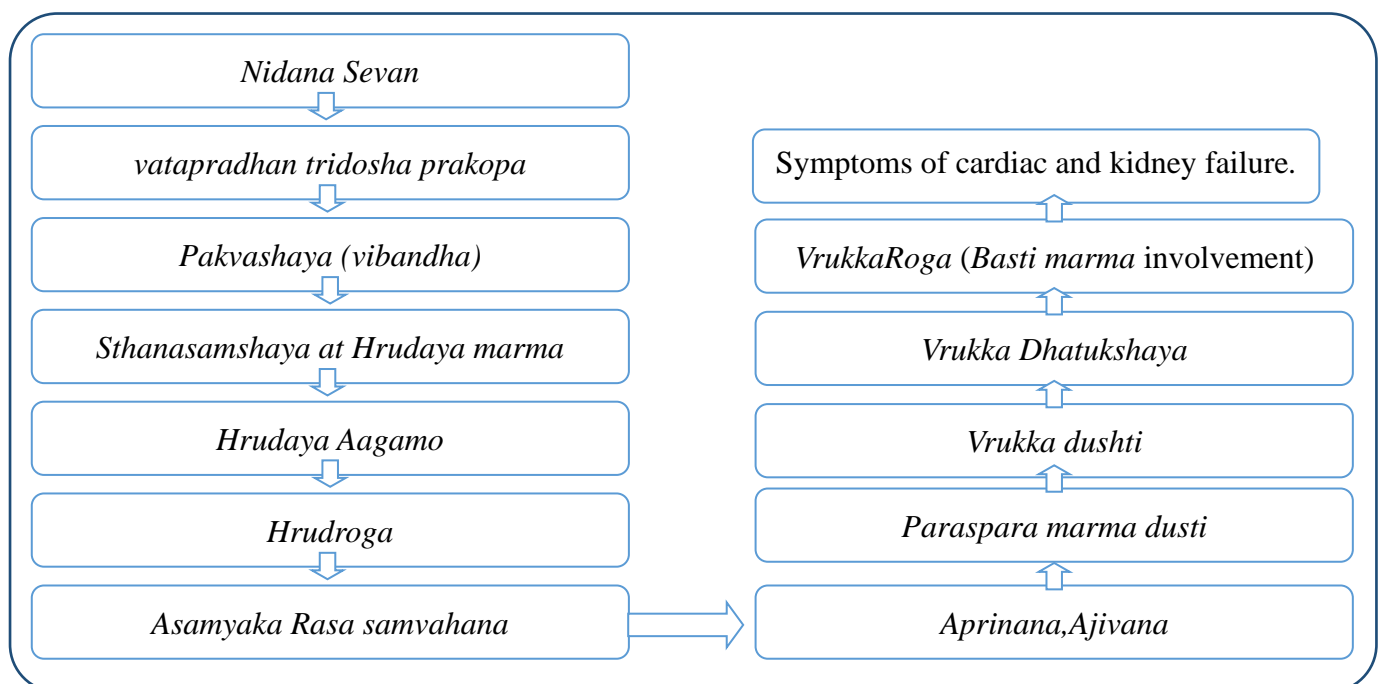


Figure 1 Schematic Representation of Ayurvedic Pathogenesis of Hrudadaurbalya janita Vrukkamaya

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Samprapti Ghataka

1. *Dosha - vata pradhan tridosha*
2. *Dushya - Rasa,rakta, Mamsa, meda, asthi, majja, shukra, Mutra, kleda*
3. *Strotas - Rasavaha, raktavaha, mamsavaha, medavaha, asthivaha, majjavaha, shukravaha, mutravaha, purishavaha, annavaha*
4. *ShotodustiPrakara - Sanga, Vimarga gamana*
5. *Udbhavsthan - ma - Pakvashaya*
6. *Adhitham - Shareer,Manas*
7. *VyaktiSthana - Hundaya, Basti marma*
8. *Agni - Manda*
9. *Vyadhi Swabhava - Chirkari*
10. *Sadhyasadhyata - kricchasadhyaya/Yapya*
11. *Sama nirama - sama*

The below figure 2.1 mentions RFT Before treatment of the patient.

Parameter	Result	Normal Range
RBS (Random Blood Sugar)	90 mg/dL	70-140 mg/dL
S.Creatinine	5.53 mg/dL	0.5 - 1.4 mg/dL
S.CA+2 (Total)	9.8 mg/dL	8.5-10.3 mg/dL
S.Electrolyte Cl-	101 mEq/L	96-108 mEq/L
S.Electrolyte K+ + Na+	139 mEq/L 5.3 mEq/L	135-145 mEq/L 3.5-5.5 mEq/L
S.Hb (PO4)	5.4 mg/dL	2.5-5 mg/dL
S.Urea	113 mg/dL	13-45 mg/dL

Figure 2.1 RFT – Before Treatment

INVESTIGATIONS

The below figure 2.0 mentions 2D Echo Before treatment of the patient.

USG BEFORE TREATMENT

The below figure 2.2 mentions USG Before treatment of the patient.

2D-ECHO (without Plate) - 2D Echocardiography Report

Test Results

- Mitral Valve: Normal
- Aortic Valve: Normal
- Tricuspid Valve: Normal
- Pulmonary Valve: Normal
- Aorta: 24 mm
- Left Atrium: 29 mm
- LV Dd/Ds: 52/40 mm
- LV IVS/PW: 14/14 mm
- Right Atrium: Normal
- Right Ventricle: Normal
- IVS & IAS: Intact
- Pulmonary Artery: Normal
- Pericardium: Normal
- C.W/P.W./Colour: Moderate MR, Trivial AR, Moderate TR
- Doppler Flow Mapping: MVIS: v/a: 0.6/1.9 m/s

Conclusion:

- Concentric LVH + Dilated LV size and Severe LV Dysfunction
- Moderate TR with Moderate PAH
- Moderate MR
- Reduced LV compliance

Figure 2 2D Echo – Before Treatment

KAMESHWAR MEDICAL CENTRE
(Public Trust Reg. No. E-8329 Ahmedabad)

USG - ABDOMEN

Name: _____ Age: 48 Gender: Male
Ref. Dr: _____ Report No.: 2037201 Date: 31-05-2022

Liver appears normal in size and shows normal homogeneous echotexture. No focal SOL is seen. Intra hepatic biliary radicles appear normal. Portal vein appear normal.

Gall bladder appears normal. No e/o calculus or cholecystitis seen. CBD appear normal.

Pancreas appears normal. Para - aortic region appears normal. No e/o lymphadenopathy seen.

Spleen appears normal.

Both kidneys are small in size and shows increased B/L renal cortical echogenicity with preserved CMD, P/o bilateral changes of medical renal disease. No evidence of calculus or hydronephrosis seen. Right kidney measures : 76 x 32 mm Left kidney measures : 78 x 33 mm

Urinary bladder is normally full. Prostate appears normal in size.

Bowel loops appears normal. No ascites seen.

COMMENTS:- Both kidneys are small in size and shows increased B/L renal cortical echogenicity with preserved CMD, P/o bilateral changes of medical renal disease.

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Figure 2.2 (USG – Before Treatment)

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DIAGNOSIS – On the basis of clinical history, clinical presentation, 2D ECHO (Fig.2.0), RFT investigations (Fig. 2.1) and USG (Fig. 2.2) patient was diagnosed as a case of hrudroga janita vrukkamaya.

THERAPEUTIC INTERVATION:

Alternate *kshira basti* and *Niruha basti* was planned in the management along with medicines (*Shaman chikitsa* as given in table 1.0) was started as below in table 2.0 and 3.0 respectively.

Table 1 Initial Management

Medicine	Dose	Duration
<i>Hingwashtak churna-6 gm</i> <i>Navayasa loha 250 mg</i> <i>Mukta shukti 500 mg</i>	1 tsp BD	30 days
<i>Agnitundi vati</i>	2 BD	7 days
<i>Gokshuradi guggulu</i>	2 BD	23 days
<i>Prabhakar vati</i>	2 BD	30 days
<i>Laghu vasant malti rasa</i>	2BD	30 days
<i>Yogendra rasa</i>	2 BD	30 days
<i>Shiva gulika</i>	1 OD	30 days
<i>Tablet Cardimap</i>	2 BD	30 days
<i>Dashmula kwath-10 g</i> <i>Pathydi kwath-10 g</i> <i>Prakshepa of</i> <i>Gokshur-20 g</i> <i>Shatavari-5 g</i> <i>Punarnava-5 g</i>	100 ml BD	30 days

All these medicines given with milk before meal.

Table 2 Kshira basti dravyas

Vastidravya(Kshira vasti)	Doses
<i>Kshir</i>	200 ml

Table 4 Subjective assessment criteria of disease improvement

Symptoms	B.T	A.T			
		1 st wk	2 nd wk	3 rd wk	4 th wk
<i>Akshikutashotha</i>	+++	++	++	+	-
<i>Ubhayapadasotha</i>	+++	++	+	-	-
<i>Daurbalyanubhuti</i>	++++	+++	++	+	+
<i>Katishula</i>	+++	+	-	-	-
<i>Ubhayapadashula</i>	++	+	-	-	-
<i>Shwasakasthata</i>	+++	++	+	-	-
<i>Kasa evum kaphasthivana</i>	++	+	-	-	-
<i>Sakastha savibandha malapravrutti</i>	+++	+	-	-	-
<i>Sphena mutra pravrutti</i>	++	+	-	-	-
<i>Bhojanottar daha</i>	++	+	-	-	-

<i>Bruhat manjisthadi kwatha</i>	150 gm
<i>Gomutra arka</i>	25 ml
<i>Gokshura churna</i>	20 gm
<i>Punarnava churna</i>	20 gm
<i>Guduchi churna</i>	20 gm

Table 3 Niruha basti dravyas

Vasti dravya(Niruha)	Doses
<i>Madhu</i>	60 ml
<i>Saindhav</i>	10 gm
<i>Shatpushpa</i>	20 gm
<i>Goghrita</i>	60 ml
<i>Kwatha(Dashmula+pathyadi)</i>	250 ml

Pathya - Apathya

Patient was advised *pathya ahara* and *vihara* during the course of medication like-fresh cooked food, easily digestible light diet like *khichdi* (*Vilepi*), *mudga yusha* (green gram soup), vegetable soup, *roti*, *sabji* (bottle gourd, ridge gourd, sponge gourd, pointed gourd, bittergourd, (spiny gourd etc). Patient was barred for day sleep (*Divaswapa*) and awakening at night (*Ratri jagrana*), suppression to natural urges, excess physical exertion (*Adhika vyayama*).

ASSESSMENT OF DISEASE IMPROVEMENT:

Clinical assessment of symptoms before and after treatment in given as described in table 4.0.

SUBJECTIVE CRITERIA

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INVESTIGATIONS AFTER TREATMENT:

The below figure 3.0 mentions 2D Echo After treatment of the patient.

The below figure 3.2.1 mentions 2D Echo After treatment of the patient.

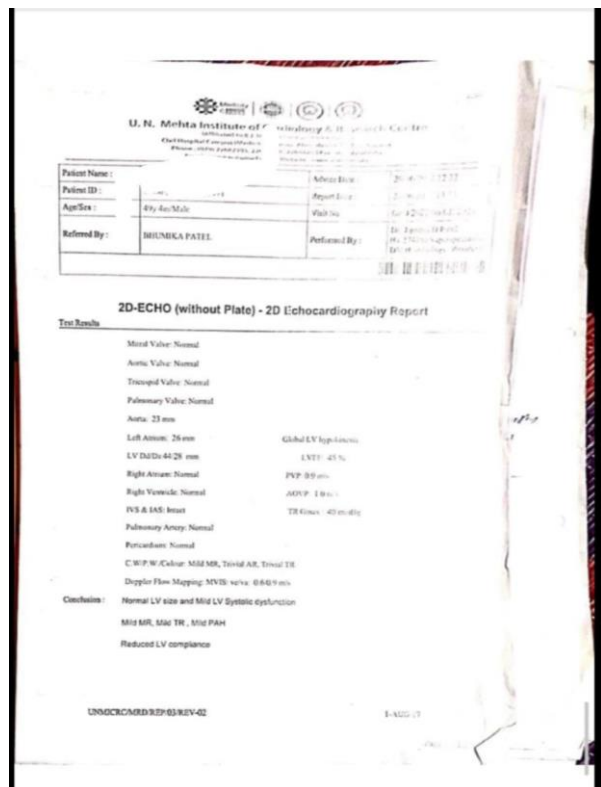


Figure 3 2D Echo – After Treatment

The below figure 3.1 mentions USG After treatment of the patient.

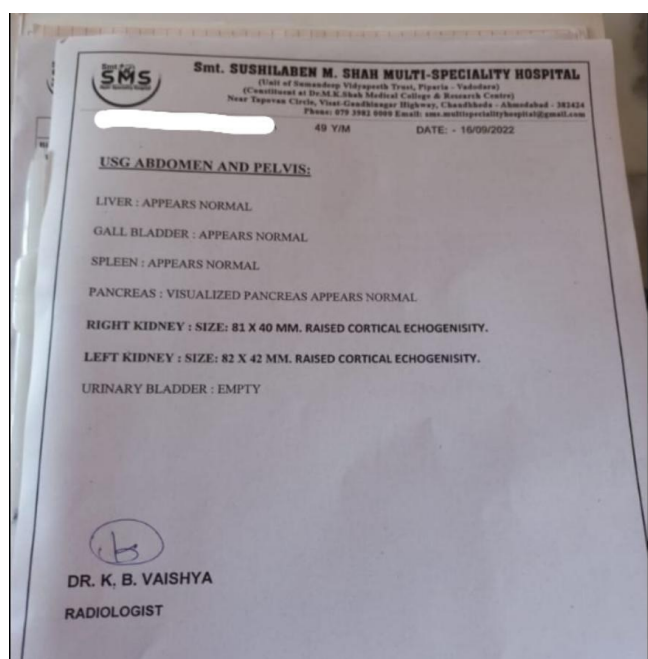


Figure 3.1 USG – After Treatment

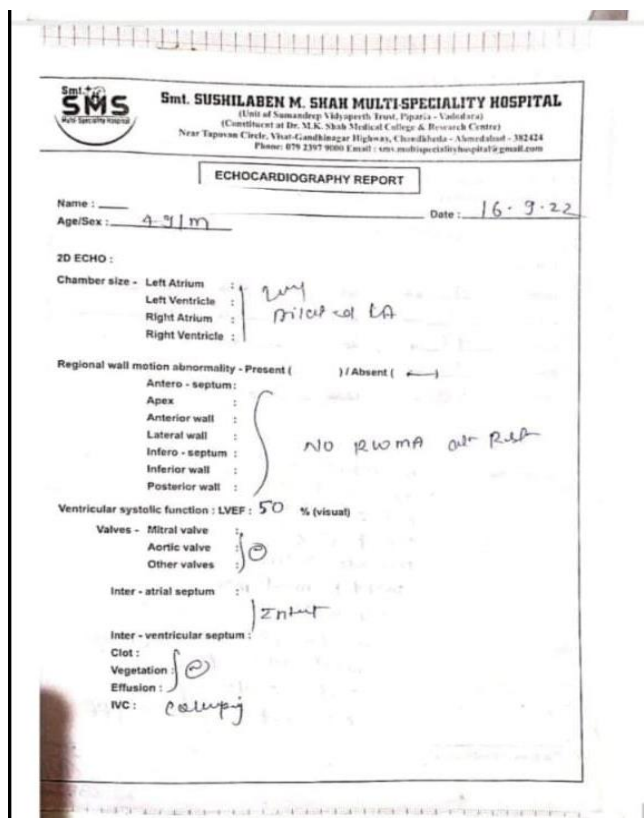


Figure 3.2.1 2D Echo

The below figure 3.2.2 mentions 2D Echo After treatment of the patient.

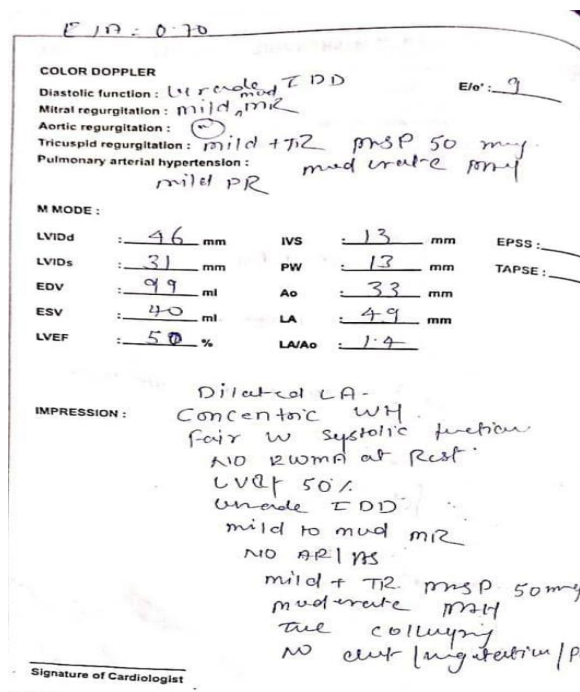


Figure 3.2.2 2D Echo

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The below figure 3.3 mentions RFT After treatment of the patient.

RESULTS

After 20 days of Ayurvedic treatment, patient got complete relief in symptoms like facial oedema, pedal oedema, breathlessness, weakness, constipation, abdominal pain and backpain. After 30 days of Ayurvedic treatment patient's blood pressure under normal range (On admission on 4/6/22 patient had 180/100 mm Hg and on discharge on 9/7/22 he had 128/82 mm Hg).

FOLLOW UP:

Follow up medicine described in table 5.0 was given in OPD of Government Akhandanand Ayurveda College Hospital, Ahmedabad. *Naimittika Rasayan* drugs dispensed as per the condition of patient and 2D Echo report and other blood investigations.



Figure 3.3 RFT

Table 5 Follow up treatment

Medicine	Anupana	Dose
<i>Avipattikar churna 6g</i> <i>Navayasa loha 250 mg</i> <i>Muktashukti 250 mg</i>	<i>Ghrita</i>	1 tsp BD
<i>Gokshur churna 5g</i> <i>Punarnava churna 5g</i> <i>Guduchi churna 5g</i> <i>Ashwagandha churna 5g</i>	Milk	50 ml BD
<i>Manjistadi kwatha</i>		100 ml BD
<i>Sudarshan ghanvati</i>	<i>Ushnodaka</i>	2 BD
<i>Shiva gulika</i>	Milk	1 OD
Added after 2 mths		
<i>Bruhat bangeshwar rasa</i>	Milk	1 OD
<i>Vastiamayantaka ghrita</i>	<i>Ushnodaka</i>	2 tsp in morning

DISCUSSION

Heart is one of the most vital organ in the body. The heart is important seat of *vata*, *pitta*, *kapha*, *Ojas*. The increased incidence of cardiac diseases all over the world is due to faulty diet pattern and lifestyle. Due to food adulteration, with increased use of pesticides in vegetables and fruits leads to vitiation of *dosas*, *mahastrotas* (GIT) which is

mulasthan of *pranavah strotas*. Due to various causative factors like irregular food habits, stress, anxiety leads to vitiation of *aadya dhaatu rasadhatu* which leads to leads to vitiation of *rasvaha strotas*. In present case long term usage of *Trifala* kept GIT symptom free but alteration in *dhaatu poshan krama* is estimated in this case because there is no medication in the world

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which can guarantee to be disease free life. Though *triphala* is stated one of the best *rasayan* drug but non judicious regular use without avoiding the factors like *ritucharya*, *vaya*, *dosha*, *agni* definitely unable to produce its described function of *rasayan karma*. Prolonged *Triphala* use as a laxative certainly would produced *roukshya* (dryness) in GIT as well as *adhya rasdhatu*. Additionally mental stress/ anxiety/sorrow/ fear and important pathological role as per principle mentioned by *acharya charaka* in sutrasthan 30³.

So, the additionally other *nidana like vyayama*, *bhaya etc* mentioned collectively work together in manifestation of *Tridoshaj hrudroga*⁴. And leads to *rasavaha mula sthana*, *hridaya* and *pranavaha strotas mulasthan* GIT leading to cardiac pathology which later involved another *marma sthana vrukka* by principle.

So, *ayurvedic* management was planned according to the pathology described.

Initially patient had *akshikuta shotha*, *ubhayapadashotha*, *daurbalya*, *katishula*, *ubhayapadashula*, *shwasakasthatha*, *kasa*, *kaphasthivana*, *sakastha savibandha malapravrutti* etc so; the treatment started with *kleda harana*, *vata anuloman*, *deepan*, *pachan*, *hrudbalya drugs*.

Combination of *Hingwastaka churna*, *navayasa loha*, *muktashukti bhasma*, *agnitundi vati*, *gokshuradi guggulu*, *prabhakar vati*, *laghu vasant malti rasa*, *yogendra rasa*, *tablet cardimap*, *dashmula pathyadi kwatha* were selected and it worked very well and patient got

100% relief in all signs and symptoms except weakness and no changes in lab parameters. There was slight elevation in BP so *Agnitundi vati* was stopped after 7 days and *gokshuradi guggulu* tablet was started and this problem was solved. In this management *ksheer basti* and *Niruha basti* was given alternatively because of presence of *kleda* in the body, because of impaired cardiac and renal function. This management kept continued and it improved the LVEF function from 25% to 45% (Fig. 3.0) and later on after 2 months it improved to 50% (Fig. 3.2.2). With this statement patient was totally asymptomatic.

On admission reports : S.Creat - 5.51, urea - 60, LVEF - 25%

On discharge : S.Creat - 4.7 and Urea - 78, LVEF - 45%

The patient was discharged on date 9/7/22 when he was symptom free and following medicines kept continued in follow-up.

Medications include combination of *Avipattikar churna*, *navayasa loha*, *muktashukti*, *Manjisthadi kwatha*, *Sudarshan ghanvati*, and *kshirpaka of combination of gokshur*, *punarnava*, *guduchi churna* was given (As mentioned in Table 5.0).

Later on after 2 months patient was advised USG and there was markly increase in size of kidney (Fig. 3.1). Rt. kidney measuring 81 mm and Lf. Kidney measuring 82 mm (on 16/09/22). Thenafter *Bangeshwar rasa* and *Vastiamayantaka ghruta* was started along with follow-up medicines.

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CONCLUSION

In present case study patient was treated with *ayurvedic* principles of *hrdroga* and got marked improvement within 1 month without any side effect or recurrence. All the observation was done on the basis of clinical presentation and clinical investigations. Before the treatment the patient was having symptoms like *Akshikutashotha*, *Ubhayapadasotha*, *Daurbalyanubhuti*, *Katishula*, *Ubhayapadashula*, *shwasakasthata*, *Kasa evum kaphasthivana*, *Sakastha savibandha malapravrutti*, *Sphena mutra pravrutti Bhojanottar daha*. With the internal medication along with *Panchakarma* treatment (*Kshirbasti* and *niruha basti* alternate) for 20 days he got relief from all symptoms. From this study we can conclude that *hrdroga janita vrikkamaya* can be managed successfully by *ayurvedic* principles.

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