Congestive Heart Failure: A Case History

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Abstract- objective evidence of diac dysfunction (preferably confirmed by echocardiography), and, if there are still doubts, a positive response to treatment targeting heart failure. Heart failure generally is a chronic condition (chronic heart failure—CHF) In which bouts of worsening symptoms and signs can occur that may require hospitalisation or more frequent doctor visits (decompensation of CHF). One month treatment injection optineuron, inj. Pantop, inj. Forcan, inj. Targocid, inj. Lasix, inj. Zavicefta, tab. Jardiance, tab. Brilinta , tab. Atorva, tab.
Care plan- Proper diet- low sugar intake
Exercise and walk to reduce body weight.

Key words- cardiac dysfunction, hospitalisation, treatment, body weight.

INTRODUCTION

Heart failure is a syndrome characterized by indications and symbols stemming from cardiac dysfunction. leading to a decrease in cardiac output (Cowie, Mosterdft, et al., 1997). According to the European Society of Cardiology guidelines, the diagnosis of heart failure requires the presence of symptoms and signs (as outlined in tables 1 and 2), objective evidence of cardiac dysfunction (preferably confirmed by echocardiography), and, if there are still doubts, a positive response to treatment targeting heart failure. Numerous compensatory mechanisms occur to support the failing heart, including activation of the neurohormonal system (Mcmurray & Pfeffer, 2005). An increase in natriuretic peptide concentrations, particularly B-type natriuretic peptide, is considered a hallmark of heart failure (Remes et al., 1991). Diagnosing heart failure, especially when relying solely on indications and symbols, poses significant challenges, particularly in primary care settings. Many patients initially diagnosed with heart failure may later be discovered to have other underlying conditions such as obesity, unfortunate physical condition, pulmonary disease, or ischemia upon additional evaluation. Growing evidence indicates that if natriuretic peptide levels are normal and the electrocardiogram shows no abnormalities, reconsideration of a heart failure diagnosis may be warranted (Cowie, Struthers, et al., 1997)

Critical versus long-lasting heart failure-
Heart failure generally is a chronic condition (chronic heart failure—CHF) in which bouts of worsening symptoms and signs can occur that may require hospitalisation or more frequent doctor visits (decompensation of CHF). Alternatively, heart failure may present acutely, with occurrence of severe symptoms and signs within 24 h. Acute heart failure clinically presents in several forms: -
Acute pulmonary oedema secondary to cardiac dysfunction cardiogenic shock, usually in the setting of an acute coronary syndrome, characterised by hypotension, oliguria, and peripheral vasoconstriction (5)(Mcdonagh et al., 1997)

Case Presentation-Mr. Amar Singh Yadav from Saraswati heart care and multi-speciality hospital (Dr. D.K. AGRAWAL MD. DM.) with the complaints presented as dyspnea , uljhan, sweating BP=110/70 MM OF HG.
He was experiencing this form last 8 month.

Past medical history- patient was not suffering from type2 diabetes mellitus, acute coronary syndrome-NSTEMI, hypertension and any other disease.

Past medication history- there is no past medication history.
General Examination-
Weight: 82 kg
Height: 5-foot 7 inch
Physical activity: daily work routine.

Special Investigation –

- ECG-ST-T changes
- X-RAY CHEST PA-WNL
- CT THOREX done on 03/04/23--> Report Enclosed
- 2-D-ECHO-ICMP, GLOBAL HYPOKINESIA OF LV, MORE MARKED IN LAD.
- TERRITORY, SCLEROTIC TRILEAFLET AORTIC VALVE, NO AS, TRIVIAL AR, MODERATE MR, TRIVIAL TR, PASP 26 mm OF hg, LV IS DILATED, NO ANEURYSM, NO CLOT, NO VEGETATION, LVEF-35%.

TREATMENT

One month treatment injection optineuron, inj. Pantop, inj. Forcan, inj. Targocid, inj. Lasix, inj. Zavicefta, tab. Jardiance, tab. Brilinta , tab. Atorva, tab. Ecosprin , tab. Aldactone, syrup potklor, syrup duphalac, and nebulization with duolin and budecort, nebulization with foracort. Infusion- inj. Norad @10ml/hour.

Care plan-

- Proper diet- low sugar intake
- Exercise and walk to reduce body weight.
- High fibre diet less intake.

SARASWATI HEART & MULTI SPECIALITY HOSPITAL

Diet Chart

Name of the Patient : Mr. Aman Singh Yadav Age / Sex : 19/M

Diagnosis : Height : Weight :

Ward : SI-3A Date : 29/03/23

Nutritional Requirements :

Energy : 1940 Kcal : Protein : 60 gm : Fat : — gm : Salt : gm :

Timings	English	हिन्दी
Bed Tea 6:30 AM	Tea Biscuit/Rusk	चाय → 1 Cup (Without Sugar) बिस्कुट/रस्क → 2
Breakfast 8:30 AM	Skimmed Milk Bread/Porridge, Oat Meal Or Roti Paneer (Without Cream) Egg White Sugar/Honey	दूध (बिना मलाई वाला) → 1 Glass (Skimmed) ब्रेड/दलिया/आटे मील/चूड़ा → 1 Bowl अथवा रोटी → 2 पनीर (बिना मलाई वाला)/अण्डे का सफेद भाग → 30gm चीनी/शहद
Mid Morning 11:30 AM	Soup or Fruit Juice or Coconut Water or Fruit	हरी सब्जी का रस या फलों का रस या → 1 Cup नारियल पानी या फल → Apple/Banana
Lunch 2:00 PM	Roti* (20 gm = 1 No.)* Rice Dal Vegetable Curd Salad Refinad Oil/Musturd Oil	रोटी (1 रोटी 20 ग्राम) → 2 - 3 चावल दाल → 1 Bowl सब्जी → 1 Bowl सलाद → 1 Plate रिफाइण्ड तेल/सरसों का तेल/सोयाबीन का तेल → 2ml
Evening Tea 5:00 PM	Tea Sugar Biscuit/Rusk/Bread Or Upma/poha Bhuna Chana/Sprouts Or Moong Dal Chilla/Ghugharl	चाय 1 Cup चीनी (Without Sugar) बिस्कुट/रस्क/ब्रेड - 2 अथवा उपमा/पोहा → 1 Bowl भुना चना-1 मुट्ठी/ अंकुरित दाल या - 30gm मूंग दाल का चिल्ला/घुघरी
Dinner 8:00 PM	Roti Dal Vegetable Salad Refined Oil / Musturd Oil	रोटी - 2 - 3 दाल → 1 Bowl सब्जी → 1 Bowl सलाद → 1 Plate रिफाइण्ड तेल/सरसों का तेल/सोयाबीन तेल → 2ml
Bed Time 10:00 PM	Skimmed Milk	दूध (बिना मलाई वाला) → 1 Glass (Cow milk Without Cream)

Roti Flour : Wheat Flour + Soyabean or Black Chana Flour in Ratio 4:1 is Excellent
3 भाग गेहूँ के आटे में 1 भाग काले चने का आटा मिलाकर रोटी बनायें ।

Fig no. 1

Outcome-

In view of respiratory distress, initially patient was intubated and put on mechanical ventilation. Norad infusion was started in view of hemodynamic instability.

Patient is being managed with IV antibiotics, IV fluids, mechanical ventilatory support, inotropic support, nutritional support and other supportive measures.

Showed severe LV dysfunction LVEF- 20%. CTVS team review was taken and their advice was followed. he under went PTCA + stenting to LAD $ LCx. the procedure was uncomplicated and well tolerated. patient responded well with given treatment and after stabilization, patient gradually weaned off from ventilatory support and extubated.

PREVENTION

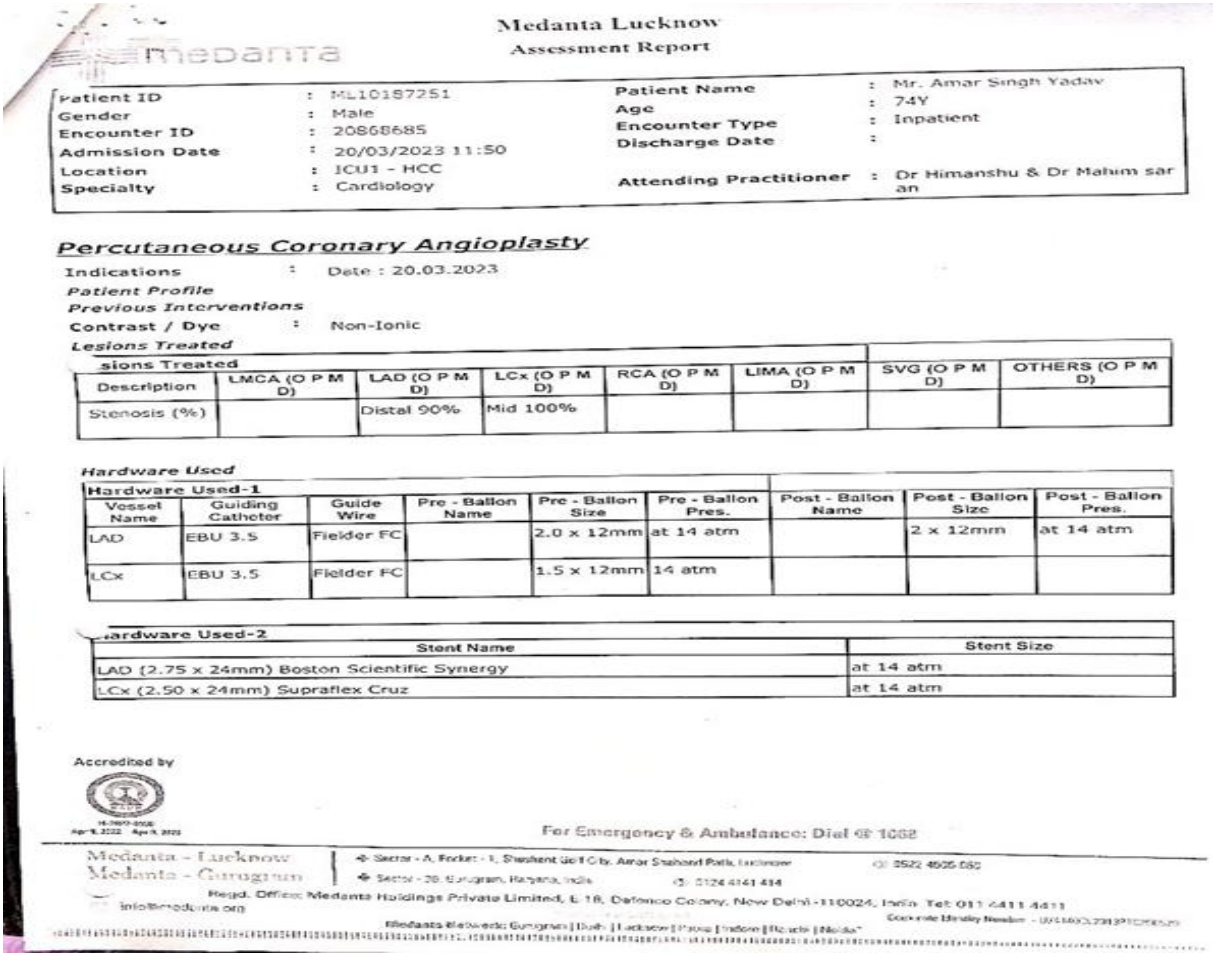
Lifetime risk of heart failure-

The incidence figures from the Framingham heart study and Rotterdam study have been used to provide estimates of the life time risk of developing heart failure (table 10).25 w26. The overall chance that a 40-year-old person develops heart failure during the rest of his/her life Is 21%. In hypertensive persons (systolec blood pressure .160 mm Hg and/or diastolic blood pressure .100 mm Hg) this chance Is appreciably higher (28%) than In normotensive persons; they have a lifetime heart failure risk of 13%.

Prevention of heart failure-

As coronary artery disease and hypertension are the predominant causes of heart failure, prevention of the onset of

Hypertension and coronary artery disease is key to reducing the burden of heart failure. w64 Given the high prevalence of hypertension in western societies, the impact of antihypertensive treatment may well be larger than that of adequate treatment of acute coronary syndromes (table 11).15 w CHF5



Medanta Lucknow
Assessment Report

Patient ID	: ML10187251	Patient Name	: Mr. Amar Singh Yadav
Gender	: Male	Age	: 74Y
Encounter ID	: 20868685	Encounter Type	: Inpatient
Admission Date	: 20/03/2023 11:50	Discharge Date	:
Location	: ICU1 - HCC		
Specialty	: Cardiology	Attending Practitioner	: Dr Himanshu & Dr Mahim sar an

Percutaneous Coronary Angioplasty

Indications : Date : 20.03.2023

Patient Profile

Previous Interventions

Contrast / Dye : Non-Ionic

Lesions Treated

sions Treated

Description	LMCA (O P M D)	LAD (O P M D)	LCx (O P M D)	RCA (O P M D)	LIMA (O P M D)	SVG (O P M D)	OTHERS (O P M D)
Stenosis (%)		Distal 90%	Mid 100%				

Hardware Used

Hardware Used-1

Vessel Name	Guiding Catheter	Guide Wire	Pre - Ballon Name	Pre - Ballon Size	Pre - Ballon Pres.	Post - Ballon Name	Post - Ballon Size	Post - Ballon Pres.
LAD	EBU 3.5	Fielder FC		2.0 x 12mm	at 14 atm		2 x 12mm	at 14 atm
LCx	EBU 3.5	Fielder FC		1.5 x 12mm	14 atm			

ardware Used-2

Stent Name	Stent Size
LAD (2.75 x 24mm) Boston Scientific Synergy	at 14 atm
LCx (2.50 x 24mm) Supraflex Cruz	at 14 atm

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Fig no. 2

Saraswati Heart Care
& Multi Speciality Hospital
Discharge Summary

Registration No. 2006033092
Name MR. AMAR SINGH YADAV Age 74 Sex MALE
Address 146 D/21 A NYAY NAGAR DHOOMANGANJ, PRAYAGRAJ, UTTAR PRADESH, INDIA.
Date of Admission 25-Mar-23 Date of Discharge 07-Apr-23 Ward/Bed: SEMI-PRIVATE - 3A
Consultant Incharge DR. D. K. AGRAWAL MD, DM.

Reason for Admission: A 74 YEARS MALE PRESENTED AS DYSPNEA, ULIHAN, SWEATING BP= 110/70 MM OF HG.

Diagnosis: K/C/O- NSTEMI, SEPSIS, RTI, CAD-->TVD 26/01/23, LVEF- 20%, DM TYPE II, HYPERTENSION, PTCA TO LAD & LCX 20/03/23, RESIDUAL TO RCA CTO (MEDANTA HOSPITAL LUCKNOW), LAMA- 24/03/23, NOW LVF, HYPOTENSION, RESPI FAILURE PT. EXTUBATED 27/03/23, LVEF- 35%, ON NIV BI- PAP SUPPORT WITH O2.

Procedures Done: ON NIV BI- PAP SUPPORT WITH O2.

Clinical Summary: A 74 YEARS MALE PRESENTED AS DYSPNEA, ULIHAN, SWEATING BP= 110/70 MM OF HG, MANAGED WITH I/V PAN, I/V NOR-AD, I/V MEROMER, I/V DALACINE C, I/V NS, TAB. AXCER, ECOSPRIN, ATORVA, SYP. POTKLOR, COURSE DURING HOSPITALISATION WAS UNEVENTFUL.

Investigations: ECG-ST-T CHANGES
X-RAY CHEST PA- WNL
CT THOREX DONE ON 03/04/23--> REPORT ENCLOSED
2-D-ECHO- ICMP, GLOBAL HYPOKINESIA OF LV, MORE MARKED IN LAD TERRITORY, SCLEROTIC TRILEAFLET AORTIC VALVE, NO AS, TRIVIAL AR, MODERATE MR, TRIVIAL TR, PASP 26 MM OF HG, LV IS DILATED, NO ANEURYSM, NO CLOT, NO VEGETATION, LVEF- 35%.

Medication Advised

Tab Palmacoff 500	BD		Tab OSRA (5)	OD	
Tab Dalacine - C (300)	TDS		Tab Forceo- 150	OD	
Tab Pan-40 mg	OD		Tab Clar (250)	BD	
Tab Dytor (20)	BD		Tab Cobadex C25	OD	
Tab Tizanave (90)	BD		Tab BEMPESTA (100)	OD	
Tab Ecosprin (75)	OD		Syp Pedilac- 3 TSF With Water	TDS	
Tab Atorva- 40	OD				

Follow-up REVIEW AFTER 5 DAYS WITH FBS REPORT.

Plot No. 2 & 3, Garbhanga Colony, C. Y. Chintamani Road, Prayagraj (UP) - 211 002 U.P., India. Phone : 0532 - 2400012, 2400013 Mob. : [illegible]

Fig no. 3

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Case Summary

Fig no. 4

DISCUSSION

Congestive heart failure (CHF) is a complex clinical syndrome, characterized by multiple metabolic alterations, including those related to plasma electrolytes. Hyponatremia, hypokalemia, and hypomagnesemia are the most common electrolyte disorders of CHF, predominantly in patients in more advanced and refractory stages of the condition. Except as a complication of therapy (e.g., diuretics), these electrolyte disturbances are not commonly encountered in mild to moderate ventricular dysfunction (systolic or diastolic) and reasonably compensated cardiac failure. (Dei Cas, Leier, & Metra., 1995).

Here in this case the patient observed symptoms of nocturnal dyspnea due to difficulty in breathing, swelling on feet and legs due to sodium retention. The report of serum electrolytes, cardiac enzymes and cholesterol levels, ejection fraction of blood and B-type natriuretic peptide (BNP) reveals the evidence of congestive heart failure. Patient's electrolytes were significantly deranged BNP level in blood and cholesterol levels were higher than normal.

One week earlier to her visit to tertiary care hospital, patient visited the primary care hospital also private clinic with similar complaints and was primarily diagnosed her condition as congestive heart failure.

No treatment was started immediately and the physician advised the patient undergo clinical laboratory tests including X-ray, electrocardiogram (ECG), blood tests includes serum electrolytes (serum sodium potassium, calcium etc.) cardiac enzymes (CK-MB creatine kinase MB) troponin I), thyroid stimulating test (TSH), kidney function test (RFT's) cholesterol levels, ejection fraction (EF), brain natriuretic peptide test (BNP).

CONCLUSION

In this case physicians were clinically diagnosed the condition as congestive heart failure based on the laboratory investigations. Some causes/etiology of congestive heart failure was known and to evaluate further cardiac issues echocardiography and angiography is recommended.

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