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## **Heart Failure with Chronic Kidney Disease: A Case Study**

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### **ABSTRACT**

Heart failure is a chronic, progressive condition in which the heart muscle is unable to pump enough blood required to meet the body's need of blood and oxygen. Heart failure can be in the right or left side of the heart or both at the same time. It can be a short-term (acute) or on-going (chronic) condition. 68 year old patient is suffering from chronic kidney disease since 2 years which further caused heart failure in patient. She got admitted with chief complaints of chest pain, shortness of breath. Diagnosis of heart failure was done on the basis of echocardiography and electrocardiography. Injection enoxaparin, tablet carvediol, Injection furosemide, tablet clopidogrel were given to reduce symptoms after which the condition improved up to a certain extent.

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Keywords: Heart failure, Chronic Kidney Disease, Diagnosis

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### **1. Introduction**

Heart failure is a clinical syndrome resulting from structural or functional cardiac disorder that impairs the ability of the ventricles to fill or eject blood. It has an etiology of hypertension, coronary artery disease, diabetes mellitus, vascular diseases and many others. It is characterized by fatigue, persistent coughing, irregular heart rate, heart palpitations, shortness of breath, protruding neck veins. Diagnosis can be done on the basis of history collection, physical examination, electrocardiography, echocardiogram, coronary angiogram, stress tests, holter monitoring. The management of the cases can be done by providing pharmacological therapies, coronary artery bypass grafting, cardiac defibrillator, intra-aortic balloon pump and left ventricular assist device.

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### **2. Case presentation**

A patient aged 68 years old visited IGMC Shimla with the complaints of chest pain, shortness of breath, easy fatigability and decreased appetite. She was experiencing these Symptoms from last 3 days.

**Past Medical history-** Patient is suffering from hypertension and diabetes mellitus since 25 years followed by Chronic Kidney disease since 2 years

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### 3. General Examination

**Height-** 160 cm

**Weight-** 65kg

**BMI-** 25.39 kg/m<sup>2</sup>

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### 4. Special Investigation

According to the reported symptoms, patient's blood tests were monitored. At that time patient's haemoglobin level was 10.8g/dl which was lower than the normal range of blood haemoglobin level. The urea and creatinine levels were elevated i.e. 125.1mg/dl and 3.46mg/dl respectively.

Echocardiography shows mitral thickening.

Electrocardiography indicates poor R progression, long PR interval and slight ST depression.

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### 5. Treatment

Inj enoxaparin 0.6ml subcutaneous once a day.

Tablet carvediol 3.125mg orally twice a day.

Inj frusemide 40mg intravenous twice a day.

Tablet clopidogrel 25/25mg orally once a day.

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### 6. Interventions

Supplemental oxygen therapy was provided.

Vital sign was monitored

Instructed patient to check haemoglobin level frequently as prescribed by physician .

Haemodialysis of the patient was done to remove the toxic waste.

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### 7. Care Plan

Low sodium, low fat diet recommended to the patient.

Patient and family counselling regarding the condition was done.

Patient encouraged to come for follow up.

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### 8. Outcome

Patient used prescribed medicine and after taking the medicine chest pain was controlled. After haemodialysis the patient was relieved from swelling.

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### 9. Conclusion

Patient was suffering from chronic kidney failure, from last 2 years. She got admitted in IGMC Shimla with chief complaints of chest pain, shortness of breath, easy fatigability and decreased appetite. The patient had increased urea and creatinine. After haemodialysis the patient's symptom were relieved up to some extent.

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### 10. Discussion

Patient was suffering from heart failure. Diagnosis is based on physical examination, health history, blood tests, echocardiography and electrocardiography. Inj enoxaparin, tablet carvediol, Inj frusemide, tablet clopidogrel were provided. Other therapies can be added for more severe symptoms.

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