

**Video – Heart Failure**

- Watch the following video about the fundamentals of heart failure then complete the case study below.
- [https://youtu.be/Y1IUFGh2T\\_E?si=U5fo4s5Y7BsRw55x](https://youtu.be/Y1IUFGh2T_E?si=U5fo4s5Y7BsRw55x)

**CASE STUDY**

You are working in the internal medicine clinic at Beebe. Today your first patient is 70-year-old J.M., a man who has been coming to the clinic for several years for management of coronary artery disease (CAD) and hypertension (HTN). A cardiac catheterization done a year ago showed 50% stenosis of the circumflex coronary artery. He has had episodes of dizziness for the past 6 months and orthostatic hypotension, shoulder discomfort, and decreased exercise tolerance for the past 2 months. On his last clinic visit 3 weeks ago, a chest x-ray (CXR) examination revealed cardiomegaly. You review J.M.'s morning blood work and initial assessment.

**Laboratory Results****Chemistry**

Sodium	142
Chloride	95
Potassium	3.9
Creatinine	0.8
Glucose	132
BUN	35

**Complete Blood Count**

WBC	5.4
Hgb	11.5
Hct	37%
Platelets	229

**Initial Assessment**

J.M. reports increased fatigue and shortness of breath, especially with activity, and “waking up gasping for breath” at night, for the past 2 days.

**Vital Signs**

Temperature	97.9 ° F (36.1 ° C)
Blood pressure	155/93
Heart rate	105 beats/min
Respiratory rate	18 breaths/min

1. **Highlight** the lab results that cause you concern and explain why.

**CASE STUDY PROGRESS**

J.M. tells you he becomes exhausted and has shortness of breath climbing the stairs to his bedroom and must lie down and rest (“put my feet up”) at least an hour twice a day. He has been sleeping on 2 pillows for the past 2 weeks. He has not salted his food since the provider told him not to because of his high blood pressure, but he admits having had ham and a small bag of salted peanuts 3 days ago. He states that he stopped smoking 10 years ago. He denies having palpitations but has had a constant, irritating, nonproductive cough lately.

**2. You think it’s likely that J.M. has heart failure (HF). From his history, what do you identify as probable causes for his HF**

**3. For each potential assessment listed, specify whether it is associated with left-sided HF or right-sided HF.**

Potential Assessment Finding	Left-Sided HF	Right-Sided HF
a. Weakness		
b. Jugular (neck) vein distention		
c. Dependent edema (legs and sacrum)		
d. Hacking cough, worse at night		
e. Enlarged liver and spleen		
f. Exertional dyspnea		
g. Distended abdomen		
h. Weight gain		
j. Crackles and wheezes in lungs		

**CASE STUDY PROGRESS**

The provider confirms your suspicions and indicates that J.M. is experiencing symptoms of early left-sided heart failure. An echocardiogram is ordered. Medication orders are written.

**Medication Orders**

- ✓ Enalapril 10 mg PO twice a day
- ✓ Furosemide 20 mg PO every morning
- ✓ Carvedilol IR 6.25 mg PO twice a day
- ✓ Digoxin 0.5 mg PO now, then 0.125 mg PO daily
- ✓ Potassium chloride 10-mEq tablet PO once a day

4. For each medication listed, identify its class and nursing assessments related to each.

Medication	Classification	Nursing Assessments
Enalapril		
Furosemide		
Metoprolol		
Digoxin		
Potassium Chloride		

5. When you go to remove the medications from the RX Station, you see that carvedilol (Coreg ER) is stocked. Will you give it to J.M.? Explain.

6. As you remove the digoxin tablet from the automated medication dispensing machine, you note that the dose on the tablet label is 250 mcg. How many tablets would you give?

7. Based on the new medication orders, which blood test or tests will be monitored carefully? Explain your answer.

**END**