

N202 Unit III

Class Preparation Assignment – Dysrhythmia Case Study

Patient Profile:

F.B is a 70-year-old male who was admitted to the hospital with decompensated heart failure. During his hospitalization, he experienced a cardiac arrest secondary to pulseless ventricular tachycardia and was successfully defibrillated. He is now in the Intensive Care Unit under your care, receiving close monitoring.

PMH:

CAD, CHF, HTN, HLD, previous MI

Subjective Data:

Reports dyspnea with activity, fatigue, & mild chest discomfort from the defibrillation

Objective Data:

Appears pale & anxious

Vitals: HR 70 bpm, BP 104/56 mmHg, RR 26/min, SpO2 92% on 2L NC, T 100.1 Oral

Focused Assessment: crackles auscultated in lung bases, shallow inspiratory effort, audible S3 present on cardiac auscultation

Diagnostics: Echocardiogram – EF 25%, K+ 2.9 mEq/L on morning labs, Telemetry – strip below



Questions:

- 1) Interpret the rhythm above: **Normal sinus rhythm with unifocal PVCs.**
- 2) Identify two reasons why F.B. may be experiencing this ectopy:

-Two reasons why F.B may be experiencing this ectopy is due to hypokalemia (2.9) which increases ventricular irritability and severely reduced EF (25%) which can cause a weak, ischemic myocardium prone to PVCs.

3) Why is F.B. on an amiodarone infusion?

-F.B is on an amiodarone infusion to suppress ventricular arrhythmias and prevent recurrence of pulseless ventricular tachycardia after his cardiac arrest.

Change in Condition:

Later that same day, F.B. receives potassium replacement and continues to be monitored on the Amiodarone infusion. He begins to complain of dizziness and increased weakness.

New set of vital signs reveals: HR 42 bpm & BP 88/46 mmHg.

Telemetry now shows: P waves that are present and regular, QRS complexes that are slow and regular, but no consistent relationship between P waves and QRS complexes.

The provider orders a temporary pacemaker.

Questions:

4) Based off of the telemetry description above, what rhythm is F.B. now experiencing?

-F.B is experiencing third-degree heart block.

5) What is the main purpose of a temporary pacemaker in this situation?

-The main purpose of a temporary pacemaker is to maintain an adequate heart rate and support cardiac output until the conduction system recovers or a permanent plan is made.

6) Based on F.B.'s history and hospitalization, is he a candidate for an implantable cardioverter-defibrillator (ICD) prior to discharge?

-Yes, he survived a cardiac arrest from pulseless VT and has an EF of 25%, which are clear indications for an ICD for secondary prevention.