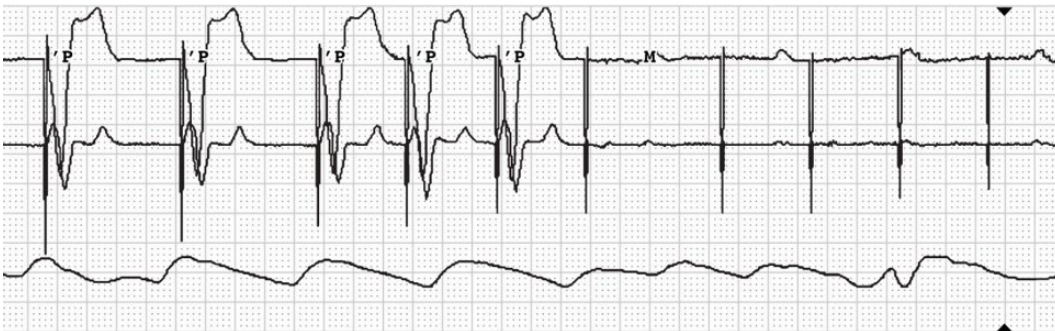


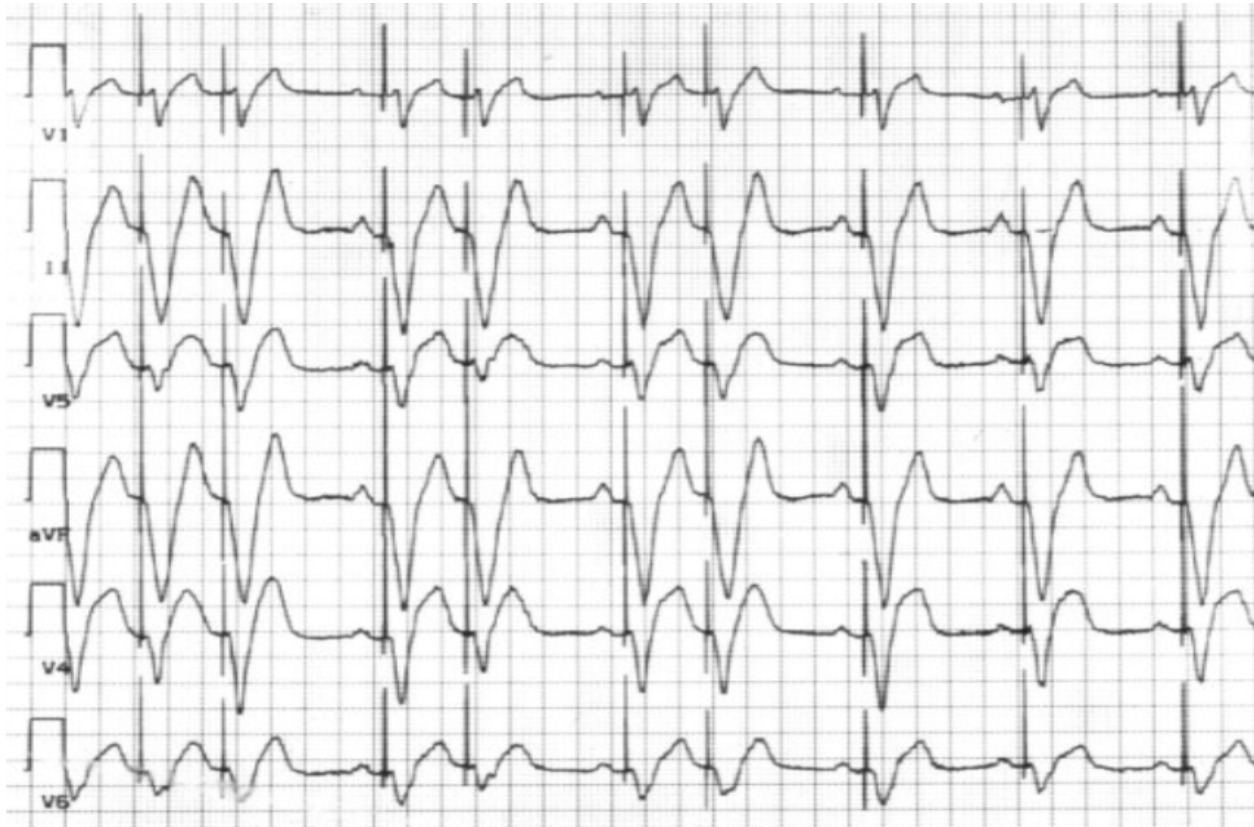
Session Questions for June Basics & Beyond

1. Which of the following trials demonstrated that patients with NYHA Class III-IV, and QRS ≥ 120 ms, had a decreased all-cause mortality and hospitalization with CRT-P or CRT-D implantation compared to optimal medical therapy only?
 - a. MADIT-CRT
 - b. COMPANION**
 - c. ECHO-CRT
 - d. DAVID
2. The only types of heart failure are systolic or diastolic.
 - a. True
 - b. False**
3. Per the 2023 HRS/APHRS/LAHRs Guideline on cardiac physiologic pacing for the avoidance and mitigation of heart failure document, the data supporting Conduction System Pacing (CSP) as a treatment for heart failure is far superior to Cardiac Resynchronization Therapy (CRT) and should be used exclusively to reduce mortality and hospitalization.
 - a. True
 - b. False**
4. This tracing was obtained when the programming wand was placed over an 8-year-old pacemaker. The patient had been asymptomatic. The pacemaker was programmed VVIR 60 to 120 bpm and prior to pacemaker interrogation, the rhythm was consistent ventricular pacing at 65 bpm. This tracing obtained when the programming wand is placed on the pacemaker. Tracing can be explained by:



- a. Normal magnet function for this pacemaker
 - b. ERI (Elective replacement indicator)
 - c. EOS (End of service)**
 - d. Lead dislodgement
5. Which of the following ECG morphologies should be observed for LV lead capture?
 - a. Limb lead I should have a positive QRS morphology
 - b. Limb lead I should have a negative QRS morphology**
 - c. Chest lead V6 should have a biphasic QRS morphology
 - d. Chest lead V1 should have a negative QRS morphology
 6. Which of the following is **not** a contributing factor to anodal stimulation for CRT?
 - a. High current density
 - b. Bipolar pacing configuration
 - c. Unipolar pacing configuration**
 - d. Anode receives enough energy, then it can depolarize the muscle tissue

7. The tracing below was obtained during a treadmill exercise test to assess symptoms of fatigue that the patient was experiencing during heavy exertion. This tracing is compatible with which of the following?



- a. Intermittent failure of ventricular output
 - b. Intermittent failure to capture in the ventricle
 - c. True atrial undersensing
 - d. Normal upper rate behavior
8. Which of the following ECG morphologies should be observed for RV lead capture?
- a. Limb lead I should have a positive QRS morphology
 - b. Limb lead I should have a negative QRS morphology
 - c. Chest lead V6 should have a biphasic QRS morphology
 - d. Chest lead V1 should have a negative QRS morphology
9. Regarding AV Delay programming to optimize BiV pacing, which of the following programming should be performed? (circle all that apply)
- a. AV delay should be shorter than the intrinsic PR interval
 - b. AV delay should be longer than the intrinsic PR interval
 - c. Turn on positive AV hysteresis
 - d. Program rate adaptive AV delay
10. Which of the following can prevent 100% CRT pacing?
- a. Atrial arrhythmias with rapid conduction
 - b. Frequent PVCs
 - c. Sensing issues
 - d. All of the above

11. Which of the following is true of Negative AV Hysteresis:
- a. Promotes intrinsic conduction
 - b. Promotes BIV pacing
 - c. Shortens the AV delay in the presence of intrinsic conduction
 - d. Both b and c
 - e. None of the above