Multiple Choice Questions

Chapter 6 – Passive Arrhythmias

For each question choose the correct option(s).

6.1 This is a case of bigeminal rhythm with similar P waves and PR intervals, with an RR interval in the baseline rhythm similar to the RR interval of the pause. This can be explained by:

A. Bigeminy caused by premature atrial complexes originated in the low left atrium
B. 3 x 2 sinoatrial block
C. An escape–capture sequence
D. Bigeminy caused by parasinus node premature atrial complexes

6.2 A post-His bundle atrioventricular block is diagnosed:

A. When more than one blocked P wave is shown in the surface ECG
B. When a double His bundle deflection is seen in the intracavity electrophysiologic study (EPS)
C. When the block occurs after the Hissian deflection
D. When the block is accompanied by a slow baseline rhythm and a long PR interval

6.3 Which is the best management of a young athlete with no complaints who sporadically presents with a typical Wenckebach sequence of a second-degree AV block during the night but a normal heart rate during the day?

A. Perform an EPS study (see Appendix A-3)
B. Implant a pacemaker
C. Continue with the same level of activity with a periodic follow-up and Holter recording
D. Perform a magnetic resonance (MR) scan
6.4 What type of stimulation is the best for the treatment of advanced heart failure?

A. Right ventricular stimulation  
B. AAI-type stimulation  
C. VVI-R-type stimulation  
D. Resynchronization stimulation

6.5 You have a patient of 65 years of age with a second-degree 3x2 Wenckebach-type AV block (Fig. 14).

Fig. 14

How can you explain the fact that the QRS complex after the blocked P is always wide?

A. Ventricular escape  
B. Junctional escape with Phase 4 aberrancy  
C. Sinus QRS complexes with Phase 3 aberrancy  
D. Phase 4 aberrancy in sinus rhythm

6.6 The ECG shown in Figure 15 is from a 82-year-old patient with syncope and a slow rhythm, probably a junctional escape (narrow QRS complex), with early complexes showing different morphologies. What is the correct diagnosis?
Fig. 15

A. Premature atrial complexes with and without aberrancy
B. Premature atrial complex plus premature ventricular complex
C. Sinus capture with and without conduction aberrancy in a patient with a junctional escape rhythm
D. ECG of a transplant recipient

6.7 Figure 16 shows an ECG from a 15-year-old patient with congenital AV block and a heart rate of 58 bpm at rest (above).

At night, the average heart rate is 42 bpm with no pauses longer than 2 s and with no significant ventricular arrhythmias. During physical exercise the rate increases to 125 bpm but the AV dissociation is still seen (below). The sinus P wave (P) accelerates to beyond 180 bpm but is not conducted to the ventricles and no premature ventricular complexes can be observed. The patient is asymptomatic.
What measures should be taken?

A. Periodic controls

B. Intracavity electrophysiologic study to obtain a further detailed information and assess for ventricular arrhythmias

C. Implantation of a pacemaker

D. Administration of positive chronotropic drugs