ECG Diagnosis: Complete Heart Block

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Third-degree atrioventricular (AV) block (also referred to as complete heart block) is the complete dissociation of the atria and the ventricles. Third-degree AV block exists when more P waves than QRS complexes exist and no relationship (no conduction) exists between them. The escape rhythm may arise within the AV node (resulting in a narrow QRS complex), or lower in the conduction system (producing a wide QRS complex). The ventricular rate (pulse) varies from 30-40 beats/minute. Characteristically in third-degree AV block, the atrial rate is faster than the ventricular rate (60-100 beats/minute) presumably in response to the hemodynamic consequences of the block. Complete heart block complicates 10% of acute myocardial infarctions (AMI) and represents the most frequent unstable bradyarrhythmia encountered in the patient with AMI. In most cases of persistent third-degree AV block, permanent pacing is required. Treatment with atropine often fails to improve the ventricular rate, as vagal stimulation of the AV node is not thought to be the cause of this finding.

References