

Notable ECG findings

2nd degree heart block, Mobitz 1: PR interval lengthening, dropped beat
2nd degree heart block, Mobitz 2: PR interval constant, frequently dropped beats
3rd degree heart block: PR interval constantly changing, AV dissociation
RBBB: wide QRS; rsR' V1-V2 (M shape, rabbit ears); axis deviation if due to right ventricle hypertrophy
LBBB: wide QRS; V1: no R wave, deep S wave; notched R wave, no Q wave in V5/V6, 1/AVL
Afib: absent P waves, irregularly irregular (varying R-R interval)
Aflutter: sawtooth pattern (2:1, 4:1), regularly irregular rhythm
Multifocal atrial tachycardia (MAT): 3 distinct P wave morphologies, irregularly irregular (COPD patient)
Wandering atrial pacemaker: Same as MAT, but normal heart rate
(Paroxysmal) Atrial tachycardia: variable P wave morphologies (depending if it originates in L or R atrium); narrow QRS; regular rhythm
AVNRT: P wave buried in QRS; narrow QRS; regularly irregular
AVRT: P wave after QRS or buried; narrow QRS; regularly irregular
Wolf-Parkinson-White syndrome: delta wave; short PR; wide QRS
Wolf-Parkinson-White with AVRT most common
Wolf-Parkinson-White with afib: also irregularly irregular
Vtach: 3 unusual, wide complex QRS in a row; AV dissociation; P waves buried
Torsade de pointes: polymorphic vtach from a long QT interval; QRS complexes appear to twist
Brugada syndrome: pseudo right bundle branch block and ST-segment elevations in the right precordial leads (V1-V2)
Pericarditis: diffuse ST segment elevation; PR segment depression
Cardiac tamponade: electrical alternans (alternating QRS amplitude)
Hyperkalemia: peaked T wave, wide QRS; if severe: absent P wave, sine wave
Hypokalemia: flat T wave, ST depression, U wave, long QT
Hypocalcemia: long QT
Hypomagnesemia: long QT, long PR
HOCUM: LVH (big QRS); Deep Q waves in the inferior (II, III, and aVF) and lateral (I, aVL, V5-6) leads (indicates septal hypertrophy)
Restrictive cardiomyopathy: Low voltage ECG; LBBB/RBBB, heart block; large P wave from atrial hypertrophy
Aortic stenosis: LVH: big QRS, left axis deviation
Pulmonary hypertension: R heart strain (RVH, R axis deviation, RBBB, S1Q3T3)
PE: sinus tachycardia; high risk findings: R heart strain (RBBB, S1Q3T3), afib findings
RVH: (Tetralogy of Fallot; pulm htn): right axis deviation, RBBB