Advanced 12 Lead EKG

Left Atrial Enlargment P-mitrale	• Notched p wave > 0.12 second in limb leads • Causes prolonged conduction times required to travel through enlarged LA • Produces a double hump (camel hump)
Right Atrial Enlargment P-pulmonale	• Right Atrial Enlargement • Peaked P wave taller than 2.5 mm in the limb leads • P-pulmonale = teepee
Left Ventricular Hypertrophy	• S in V1 or V2 + R in V5 or V6 $\geq$ 35 mm. Or • Any precordial lead is $\geq$ 45 mm • The R wave in AVL is $\geq$ 11mm • The R wave in Lead I is $\geq$ 12 mm • The R wave in lead AVF is $\geq$ 20 mm
Right Ventricular Hypertrophy	• R:S ratio is $\geq$ 1 in leads V1 and/or V2 • R is bigger than S
Wolff-Parkinson-White	• Shortened PR interval < 0.12 sec with a normal p wave • Wide QRS complex $\geq$ 0.11 sec • The presence of a delta wave • ST-T wave changes or abnormalities • Association with paroxysmal tachycardias – can be fatal
Pericarditis	• Diffuse ST elevation • Scooping upwardly concave ST segment elevation in almost all leads except AVR • No reciprocal ST depression except in AVR • PR depression
Early Repolarization	• Elevated take-off of ST segment at the j point • Concave upward ST elevation ending with a symmetrical upright T wave – often of large amplitude • Gently upsloping and curving downward or sagging of the ST segment , producing the so called “smiley face” • Contrasted with the junctional elevation and horizontal or straight ST segment & the curving upward of “sad face” of the STEMI examples • No reciprocal ST segment depression
Pulmonary Embolus (not diagnostic … may see these changes)	• S1, Q3 or S1,Q3, T3 (inverted T) • RBBB • Inverted T waves secondary to RV strain may be seen in the right precordial leads and can last for months or • R axis deviation noted by Lead I negative or S wave Lead I and AVR positive • V1 has tall R wave • Large p waves II, III, AVF • Inverted T wave Lead III

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