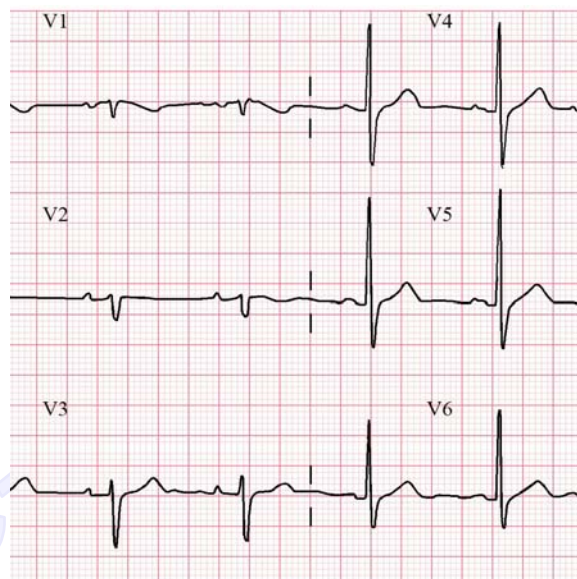


Right and Left Ventricular Hypertrophy

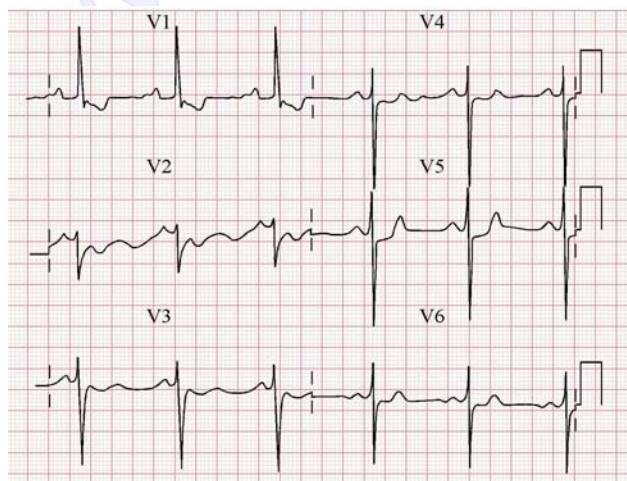
Look for signs of right and left ventricular hypertrophy in the right chest leads (V1 and V2) and left chest leads (V5 and V6).

When the ventricles are normal, the QRS complexes across the chest leads of an ECG have these configurations:

- ✧ In right chest leads V1 and V2, the QRS complexes are predominantly negative with small R waves and relatively deep S waves because the more muscular left ventricle produces depolarization current flowing away from these leads.
- ✧ In left chest leads V5 and V6, the QRS complexes are predominantly positive with tall R waves because the more muscular left ventricle produces net current flowing towards these leads.
- ✧ The QRS complexes in V3 and V4 reflect a transition between the right and left chest leads. The normal transition zone, where the R wave and S wave are equal, is between V3 and V4. Early transition may appear in V2 while late transition may not appear until V5 or V6.



In right ventricular hypertrophy (RVH), the configurations of the QRS complexes across the chest leads are changed:



- ✧ In V1 the QRS are positive with tall R waves. This is because increased right ventricular muscle mass causes the net ventricular depolarization current to move towards this right chest lead. R waves that are taller than S waves are deep in V1 are highly suggestive of RVH.