# Mistakes Machines – AND People – Make When Reading ECGs!
## -DISCUSSION-
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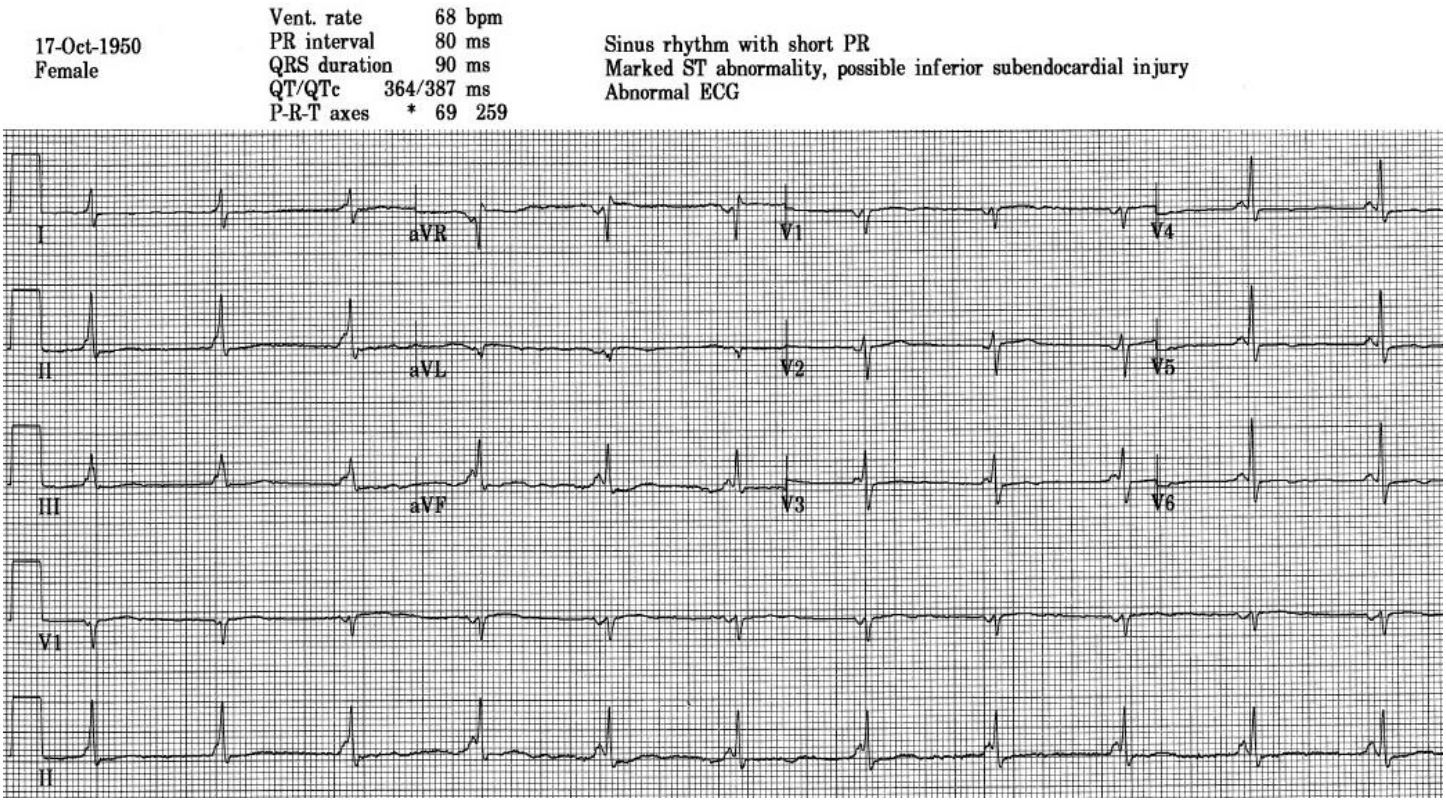


***Figure 1 (The V5 rhythm strip was omitted to save space. It added nothing.)***

1. **What is your interpretation of this ECG?**

   There is an accelerated junctional rhythm that is slightly faster than the sinus rate resulting in AV dissociation. The rates of the two independent rhythms are so similar that one could call this an *isorhythmic dissociation*.
   What are two problems with isorhythmic dissociation? First, if the sinus P wave and the ventricular depolarization are separated by a conductible interval, it could be misinterpreted as *sinus rhythm*. Second, if the sinus P wave appears too close to the QRS, it could be mistaken for *ventricular pre-excitation*.

2. **What do you think of the line in the machine interpretation that says: "…possible inferior subendocardial injury"?**

   Subendocardial ischemia does not localize. Therefore, there is no basis for diagnosing "inferior," "anterior," "lateral" etc. *subendocardial* ischemia. If ST

depression appears to localize to those vascular patterns, think in terms of a reciprocal change rather than sichemia.

Always remember **Jones's Rule:** "Any ST depression on the ECG of a patient complaining of ACS-type pain should be considered a *reciprocal change to an acute transmural ischemia* located elsewhere on the ECG. The reciprocal change may appear *before* the ST elevation becomes apparent or, even when *both* are present, the ST depression of the reciprocal change may continue to be much more impressive. **Don't be fooled!**

3. **What conditions may have caused the "Marked ST abnormality" (such low-voltage repolarization)?**

   If you see very low-voltage T waves, think first about *hypokalemia, hypocalcemia, hypothyroidism* or *adrenal insufficiency***,** then consider *pericardial effusion, cardiomyopathy,* or *lung disease***.**

   **Always rule out technical factors before attributing them to pathology**.