

# ECG of the Month



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## Right-Left Confusion?

Below is the ECG of a 59-year-old woman with a history of palpitations. At the time of the ECG, she was asymptomatic.

*What is the diagnosis?*

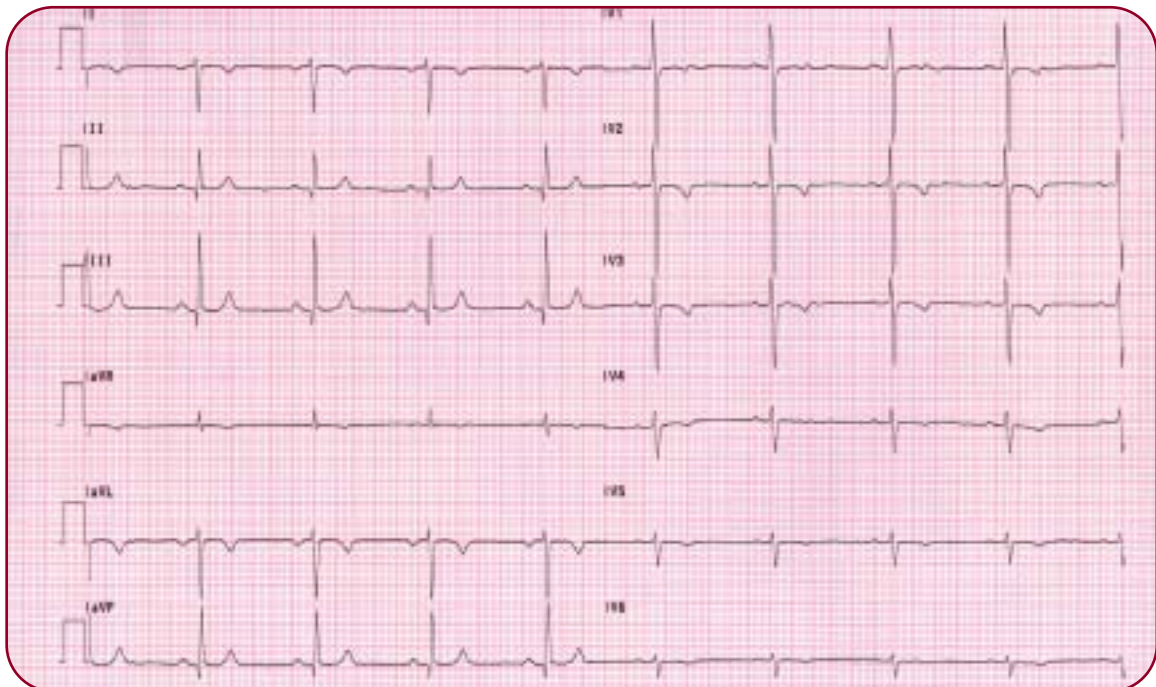
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## This Month's ECG Diagnosis


This ECG shows an abnormal P-wave axis. The P wave is pointing downwards and to the right at about 120 degrees on the frontal plane. The frontal plane QRS axis is also downwards and to the right, showing right axis deviation at about 125 degrees. There is poor R-wave progression across the precordium with gradual diminution of the R-wave and S-wave voltages from  $V_2$  to  $V_6$ .

This ECG shows right axis deviation of both the P wave and the QRS complex. The frontal plane voltages diminish from  $V_2$  to  $V_6$ . The most common cause of right axis deviation of both the P wave and QRS complex is misplacement of the right arm and left arm at the time of the ECG acqui-

sition. Thus, lead I would actually be its own inverse in this situation.

However, with right arm/left arm lead malposition, the frontal plane voltages should increase such that the RS ratio would progress from  $V_2$  to  $V_6$ . In this case, there is regression of the voltages across the precordium. This is seen with dextrocardia.

In this particular case, the patient had known dextrocardia with a struc-

turally normal heart. Although lead malposition and dextrocardia may be confused on the frontal plane, the addition of the chest leads showing voltage reduction across the precordium is consistent only with dextrocardia. 

*The addition of the chest leads showing voltage reduction across the precordium is consistent only with dextrocardia.*