

ECG #20

A 30-year-old woman presents to ED with pre-syncope symptoms. Describe and interpret her 12-lead electrocardiogram:



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INTERPRETATION:

- Ventricular rate 63 bpm
- Sinus rhythm
- PR interval 138 ms
- Normal QRS axis (31°)
- QRS duration 90 ms
- QTc 442 ms
- Low QRS voltages in the lateral precordial leads (V4-6) with absent R wave progression and dominant S waves
- Normal ST segments
- T wave flattening/inversion throughout the precordial leads (V2-6)

DIAGNOSIS:

- Right-sided placement of precordial electrodes!

Repeat ECG with left-sided precordial electrode placement:



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INTERPRETATION:

- Ventricular rate 62 bpm
- Sinus rhythm

- PR interval 132 ms
- Normal QRS axis (18°)
- QRS duration 96 ms
- QTc 444 ms
- Normalised R wave progression and T wave axis throughout the precordial leads

DIAGNOSIS:

- Normal 12-lead electrocardiogram

These ECG changes are similar to the characteristic pattern seen in [dextrocardia](#):



(Image courtesy of LITFL: <https://lifeinthefastlane.com/ecg-library/basics/dextrocardia/>)

- Right axis deviation
- Inversion of aVR (global positivity)
- Inversion of lead I (global negativity)
- Absent R-wave progression in the precordial leads with dominant S waves throughout

Of note, reversal of the left and right upper limb electrodes may produce a similar picture to dextrocardia in the limb leads, but with normal appearances in the precordial leads.

See this [post](#) from LITFL for an excellent review on on the topic of limb lead reversals.