

I haven't the faintest idea

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A 23-year-old female was brought to the emergency department by ambulance after a “fainting spell.” She felt acutely light-headed, weak and thought she was “going to pass out.” She felt better approximately 5 minutes later, after lying down. There was no loss of consciousness and no evidence of seizure activity. She thought her heart might have been racing during the episode. She had never experienced any similar episodes in the past.

Further questioning revealed a 3-year history of anorexia nervosa. She had never been hospitalized for her illness, but was followed in an eating disorders clinic. Over the past 4 weeks she had significantly reduced her oral intake and had lost approximately 20 lbs. Her present weight was 90 lbs. She admitted to purging daily and using laxatives during the previous 2 weeks. Past medical history was otherwise unremarkable. She was taking no other medications and had no allergies. She smoked half a pack of cigarettes a day and denied recent alcohol intake.

Examination revealed a thin, pale woman in minimal distress. Heart rate and blood pressure lying down were 86 beats/min and 102/60 mm Hg respectively. When standing,

the heart rate was 95 beats/min and blood pressure was 90/58 mm Hg. Respiratory rate was 18 breaths/min, oxygen saturation was 99% on room air and temperature was 36.5°C. She was quite thin and had decreased muscle mass. The cardiovascular and neurological exams were normal. No other pertinent physical findings were noted.

Investigations revealed an HGB of 110 g/L, sodium 130 mmol/L, chloride 91 mmol/L, bicarbonate 28 mmol/L, potassium 3.0 mmol/L, BUN 9.8 mmol/L urea, creatinine 110 µmol/L, calcium 0.7 mmol/L, magnesium 2.09 mmol/L, and phosphate 1.8 mmol/L. An ECG was performed, and the results can be seen in Figure 1.

The most likely cause of the patient's symptoms is:

- A. Orthostatic hypotension
- B. Wolff–Parkinson–White syndrome
- C. Sinus bradycardia
- D. Ventricular arrhythmia secondary to prolonged QT syndrome

For the Answer to this Challenge, see page 306.

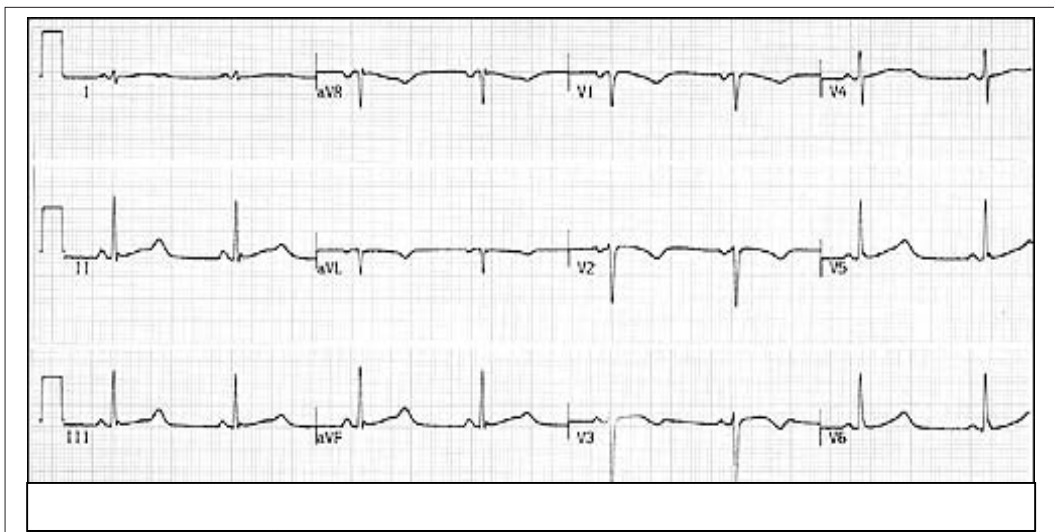


Fig. 1. Results of initial electrocardiogram.