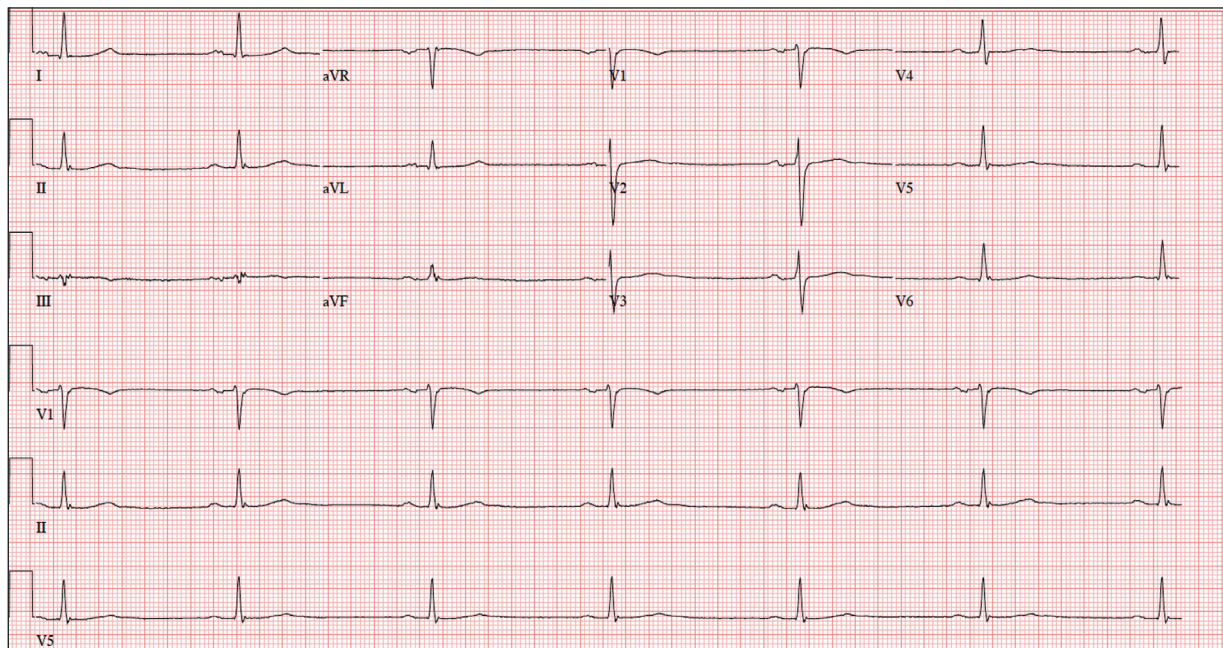


Marathon Runner Has History of A-fib



A 52-year-old man has a cardiac diagnosis of paroxysmal atrial fibrillation (A-fib). An echocardiogram demonstrates no valvular heart disease and a left ventricular ejection fraction of 62%. There are no symptoms to suggest left ventricular dysfunction or volume overload. He denies exertional angina or dyspnea and says he has had no palpitations or recurrences of A-fib since you saw him six months ago.



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The patient is very active: In the past year, he has completed two half marathons and one full marathon. In addition to his running schedule, he also swims 30 min/d and trains on an elliptical machine for 1 h/d. His only complaint today is that he recently lost the toenails off each big toe, which he attributes to his running, adding that this isn't the first time it's happened.

Medical history is remarkable for two episodes of A-fib that manifested with palpitations and a rapid heart rate, which caused dyspnea. The last episode was approximately eight months ago. Both were treated with cardioversion in the emergency department of your institution. He was not started on an anticoagulant or antiarrhythmic medication after either occurrence.

The patient currently takes no medications except the occasional ibuprofen for muscle soreness related to training. He has no known drug allergies and does not use naturopathic medications or illicit drugs. He has never smoked, and he only drinks wine socially, usually on weekends. The patient works as a certified public accountant for a large corporation. He is married with two teenage children.

A 12-point review of systems is remarkable only for an inguinal rash and the aforementioned missing toenails.

On physical exam, the vital signs include a blood pressure of 107/60 mm Hg; pulse, 46 beats/min; respiratory rate, 12 breaths/min⁻¹; and temperature, 97.8°F. His height is 74 in and his weight, 172 lb.

Seizure Prompts Man to Fall

A 70-year-old man is brought to your facility by EMS following a new-onset, witnessed seizure. He reportedly fell down some steps. On arrival, he has returned to baseline but is complaining of left-sided weakness and right ankle pain.

Medical history is significant for mild hypertension. Vital signs are stable. The patient exhibits slight confusion. He reports some mild weakness on his left side, especially in his lower extremity.

There also appears to be moderate soft-tissue swelling of his right ankle, with a slight deformity noted. Dorsalis pedal pulse appears to be slightly diminished in that foot as well.

You send the patient for noncontrast CT of the head, as well as a radiograph of the right ankle (the latter of which is shown). What is your impression?



see answer on page 50 >>

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ECGCHALLENGE

The patient is in no distress. The neck veins are flat, the lungs are clear, and the cardiac exam reveals no murmurs or gallops. The abdominal exam is unremarkable. There is no edema in the peripheral extremities, and pulses are strong bilaterally. Both feet reveal multiple callouses, and the two great toes have missing nails but healthy nail beds. The neurologic exam is intact.

As part of his clinic visit, a 12-lead ECG is obtained. It reveals a ventricular rate of 38 beats/min; PR interval, 222 ms; QRS duration, 112 ms; QT/QTc interval, 524/416 ms; P axis, 20°; R axis, 26°; and T axis, 33°. What is your interpretation of this ECG?

ANSWER

This ECG shows marked sinus bradycardia with a first-degree

atrioventricular block and non-specific T-wave abnormality. The QT interval of 524 ms is consistent with prolonged QT interval but is normal when corrected for rate.

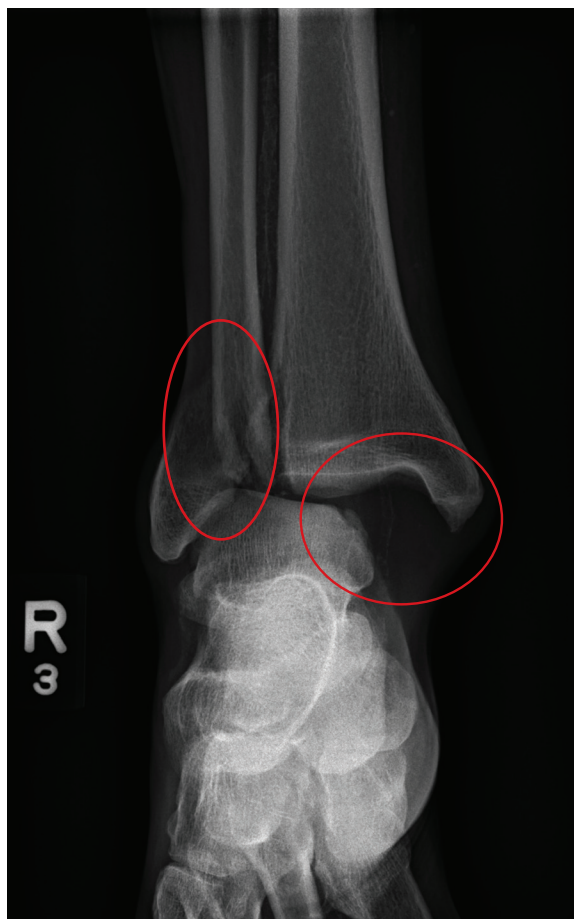
These findings were consistent with previous ECGs. Since the patient's bradycardia is asymptomatic, no intervention (ie, placement of a permanent pacemaker) is indicated. **CR**

>> *continued from page 15*

ANSWER

The radiograph shows a fracture dislocation of the ankle. The distal tibia is dislocated medially relative to the talus, as evidenced by the widened joint space. There is also an oblique fracture of the distal fibula.

Since the patient was experiencing neurovascular compromise, the dislocation was promptly reduced in the emergency department. Subsequently, he was taken to the operating room for open reduction and internal fixation of his fibula fracture. **CR**



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