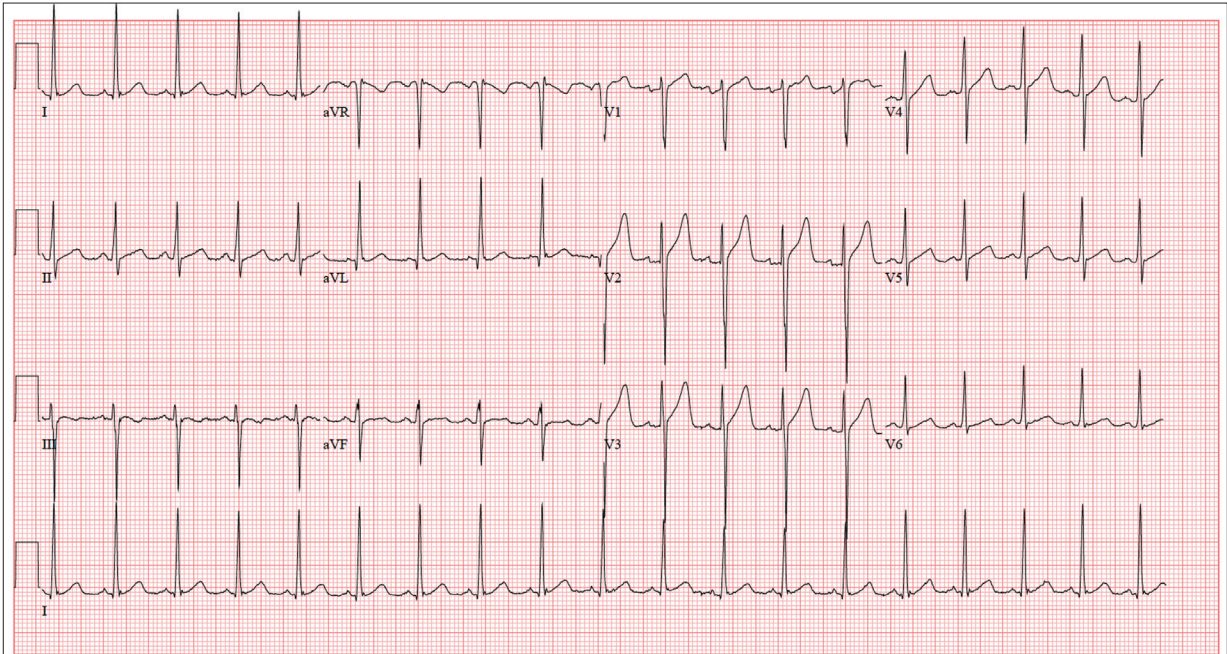


Does Young Athlete Have Cause for Concern?



A 17-year-old male athlete recently graduated high school and received a full scholarship to play baseball for a major university. As part of his preparation for college, his parents bring him to your clinic for a complete physical examination, noting that he contracted several colds during the past school year. He has been symptom free for the past two months.

The patient asks to be examined without his parents pres-



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ent. After they exit the room, he informs you that he has recently become sexually active, hasn't used condoms on two occasions, and wants to be tested for sexually transmitted infections (STIs).

Medical history is unremarkable, with the exception of a fractured left clavicle sustained when the patient was 12. He currently takes no medications, denies tobacco, alcohol, or recreational drug use, and has no known drug allergies. He lives at home with his parents and two siblings. A detailed review of systems reveals no complaints or symptoms.

Vital signs include a blood pressure of 104/58 mm Hg; pulse, 100 beats/min; respiratory rate, 14 breaths/min⁻¹; and temperature, 97.2°F. His weight is 204 lb and his height, 79 in. He appears anxious and apologizes for having

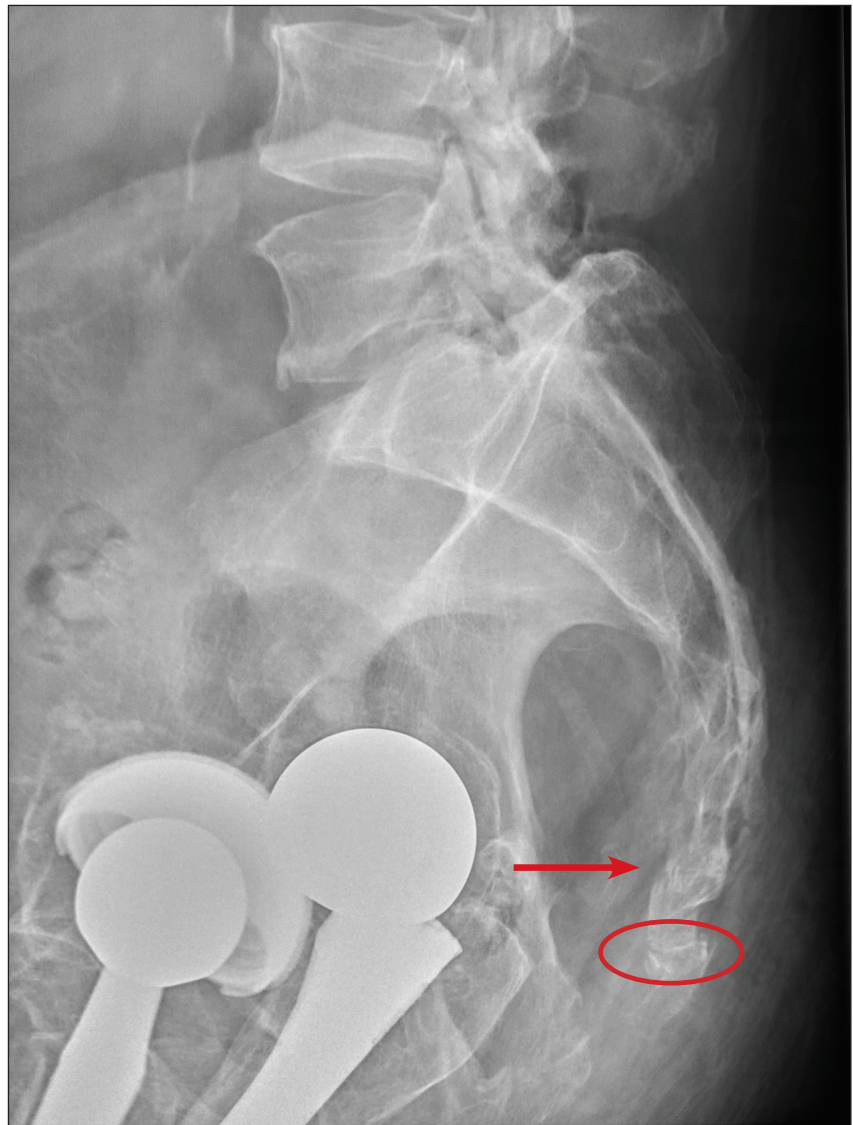
sweaty palms. A thorough physical exam yields completely normal results, with the exception of a palpable callus over the mid portion of the left clavicle (consistent with his history of a fracture). Lung sounds are clear in all fields; there are no murmurs, bruits, rubs, or extra heart sounds; and a strong PMI (point of maximum impulse) is easily palpable over the left chest at the seventh and eighth intercostal spaces.

The patient is sent to the lab, where blood is drawn for a routine chemistry panel, complete blood count, and STI surveillance panel. When he returns and his parents reenter the room, they insist on ECG for their son. You explain that there's no clear indication for it; however, they insist and state they will pay out of pocket if not covered by insurance. You reluc-

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ANSWER

There are degenerative changes present. Bilateral hip prostheses are noted. Within the coccyx, there is bone remodeling and angulation that are likely chronic and related to remote trauma or injury (arrow). Below this, some cortical lucency (circled) is noted, most likely consistent with an acute fracture. The patient was prescribed a nonsteroidal medication and a mild narcotic pain medication. **CR**



ECGCHALLENGE

tantly agree. The ECG shows the following: a ventricular rate of 112 beats/min; PR interval, 132 ms; QRS duration, 756 ms; QT/QTc interval, 326/444 ms; P axis, 59°; R axis, -8°; and T axis, 26°. What is your interpretation?

ANSWER

The correct interpretation of this ECG includes sinus tachycardia

and left ventricular hypertrophy.

Sinus tachycardia is evidenced by an atrial rate greater than 100 beats/min with a P wave for every QRS complex and a QRS complex for every P wave.

Left ventricular hypertrophy is present when either the sum of the R wave voltage in lead I and the S wave in lead III is 25 mm or higher *or* the sum of the S wave in

lead V₁ and the R wave in either V₅ or V₆ is 35 mm or higher.

In follow-up to these findings, an echocardiogram was recommended and performed. It revealed a normal heart consistent with that of a young athlete.

The patient and his parents were reassured as to the young man's condition but decided to seek a second opinion. **CR**