INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

If you would like to submit a case for consideration, please email the relevant materials and presenting information to *editor@jucm.com*.

A 12-Year-Old Football Player with Sudden Hip Pain

Figure 1.

Case

The patient is a 12-year-old boy who presents with sudden hip pain that started simultaneously with a "popping feeling" in the same hip. He reports that it started in the middle of his football game earlier in the day.

View the image taken and consider what the diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

Differential Diagnosis

- Avulsion fracture of the anterior superior iliac spine
- Genitourinary abnormalities
- Intra-abdominal pathology
- Snapping hip syndrome
- Stress fracture

Diagnosis

This patient was diagnosed with an avulsion fracture of the anterior superior iliac spine (ASIS), an injury that occurs most often in young athletes. It results from sudden, forceful contraction of sartorius and tensor fascia lata.

Learnings/What to Look for

- ASIS fractures occur as acute-onset injuries (though chronic stress fractures can be a predisposing factor)
- These injuries result from sudden, vigorous contractions (or repetitive contraction) of the sartorius and tensor fasciae latae muscles

Pearls for Urgent Care Management and Considerations for Transfer

- Treatment is usually conservative, including rest, analgesia, anti-inflammatory medications, and partial weightbearing supported by crutches. Referral to an orthopedist is warranted
- Fracture fragments displaced by more than 3 cm may require surgery
- Early diagnosis and prompt initiation of treatment are important to prevent ASIS injuries from becoming chronic

Acknowledgment: *Images courtesy of Teleradiology Specialists.*

CLINICAL CHALLENGE: CASE 2

A 52-Year-Old Man Who Is Lightheaded and Dizzy

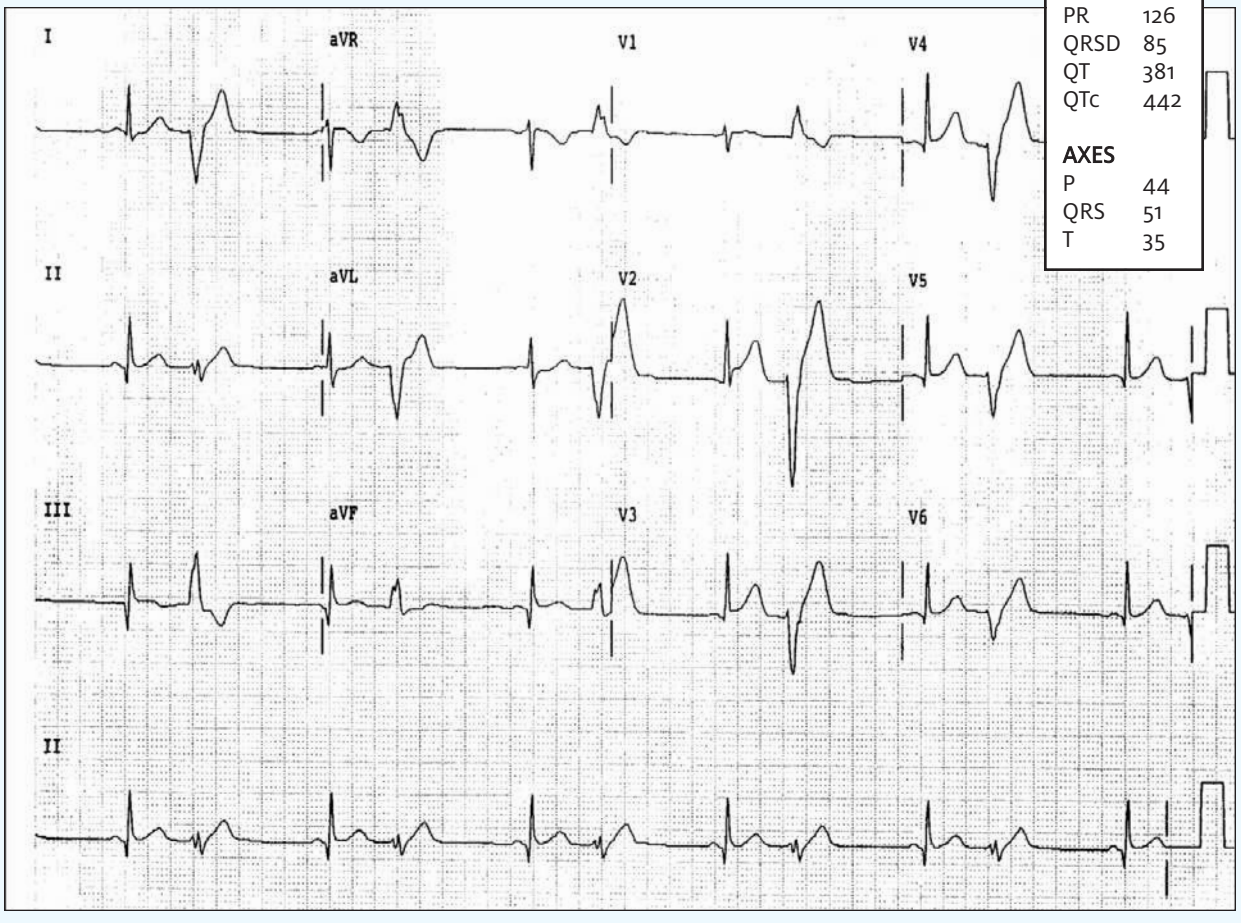

Figure 1.

Case

The patient is a 52-year-old man who presents to your urgent care center with lightheaded dizziness, which he says has been present for the past 3 days. It is worse with standing. He reports that he has been spending a lot of time in the sun lately. He denies chest pain, shortness of breath, abdominal pain, or paresthesias. He does not take any medications. His personal medical history includes untreated hypertension, and there is a family history of heart disease. Upon examination, you find:

- **General:** Alert and oriented, NAD, WNWD
- **Lungs:** CTAB
- **Cardiovascular:** Tachycardic and regular without murmur, rub, or gallop
- **Abdomen:** Soft and NT, no pulsatile mass
- **Ext:** No peripheral edema, pulses are 2+ and equal in all extremities

View the ECG taken and consider what the diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

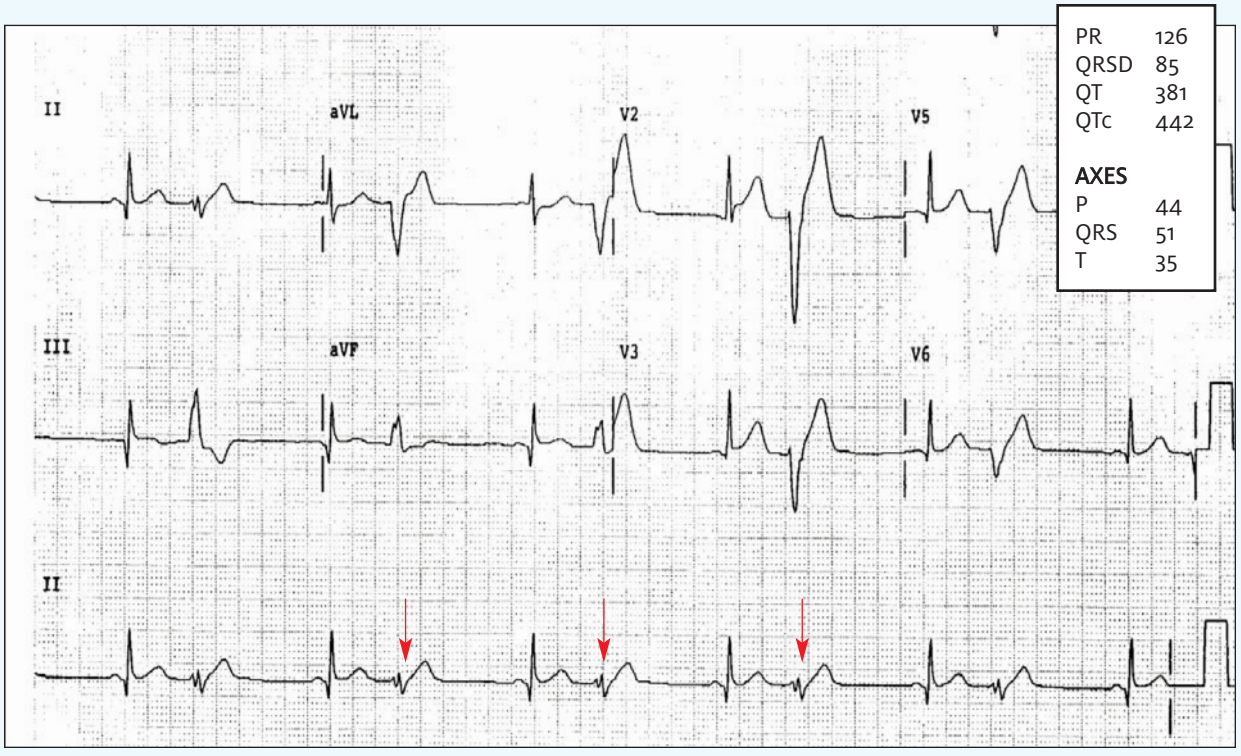

Figure 2.

Differential Diagnosis

- First-degree AB block
- Atrial flutter
- Mobitz type 2
- Ventricular bigeminy
- Ventricular trigeminy

Diagnosis

This patient was diagnosed with ventricular bigeminy.

The ECG reveals a regular rate. There are P waves with a PR interval of 126, with normal being 120-200 so this is not first-degree AV block. The rhythm is regular, and there are no flutter (saw tooth) waves, so this is not atrial flutter. Wenckebach type 1 has a gradual lengthening of the PR interval until there is a dropped beat (a P without a QRS following) and is not occurring in this ECG. Mobitz type 2 is an intermittently dropped QRS segment (without the gradual lengthening of the PR interval), but this is not occurring on this ECG, either. Ventricular bigeminy is a ventricular beat occurring every other beat; this rhythm is present on this ECG. Ventricular trigeminy is a ventricular beat every third beat.

Learnings/what to look for:

- Ventricular bigeminy is diagnosed when there is a ventricular depolarization occurring every other beat
- The ventricular beat is a wide QRS complex (appearance similar/identical to a PVC)
- These beats may occur from a sympathomimetic stimulus (eg, meds, caffeine, cocaine), alcohol, beta agonists, theophylline, electrolyte abnormality, acidosis, or ischemia

Pearls for Urgent Care Management and Considerations for Transfer

- Inquire about signs of acute coronary syndrome, such as chest discomfort, shortness of breath, diaphoresis, weakness, or dizziness, as well as hemodynamic instability such as tachycardia, hypotension, dizziness, or confusion
- Compare to an old ECG
- Consider checking electrolytes in patients who are at risk for abnormalities, such as patients on diuretics, or those with dehydration, prolonged vomiting/diarrhea, or with renal failure. Review the med list for antiarrhythmics, as many may also have a proarrhythmic potential
- If there is concern for ischemia, transfer to the ED for emergent evaluation

A 45-Year-Old Woman with Suddenly Discolored Skin

Case

A 45-year-old woman presents with a complaint of "a brown spot" on her back. Upon examination, you confirm there is a reticular hyperpigmented patch of skin, which she says she noticed after using a heating pad to relieve myalgia after working in her garden. She confesses that she fell asleep with the heating pad on the area, she thinks for several hours.

View the photo and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

Figure 2.

Differential Diagnosis

- Livedo reticularis
- Cholesterol emboli
- Erythema ab igne
- Systemic lupus erythematosus

Diagnosis

This patient was diagnosed with erythema ab igne (literally, in Latin, redness from fire), a hyperpigmentation disorder caused by long-term exposure to heat. The most common sources include hot water bottles, electric blankets, and even laptop computers.

Learnings

- Although actual burns do not occur from the heat source in erythema ab igne, the skin develops a course pigmentation that appears as patches that are pink, purple, and eventually brown
- Pruritus or mild burning paresthesias may occur
- Resultant pigmentation changes can be permanent; there is no effective treatment

Pearls for Urgent Care Management and Considerations for Transfer

- Caution the patient to avoid prolonged exposure to the heat source
- Follow-up with a dermatologist is warranted to establish a new "baseline" against which future changes in pigmentation can be measured, in the interest of vigilance for cutaneous malignancies

Acknowledgment: *Images courtesy of VisualDx.*