



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 log on to <http://jucm.scholasticahq.com> and follow the instructions to upload your text and image(s).

A 20-Year-Old Woman with Acute Chest Pain

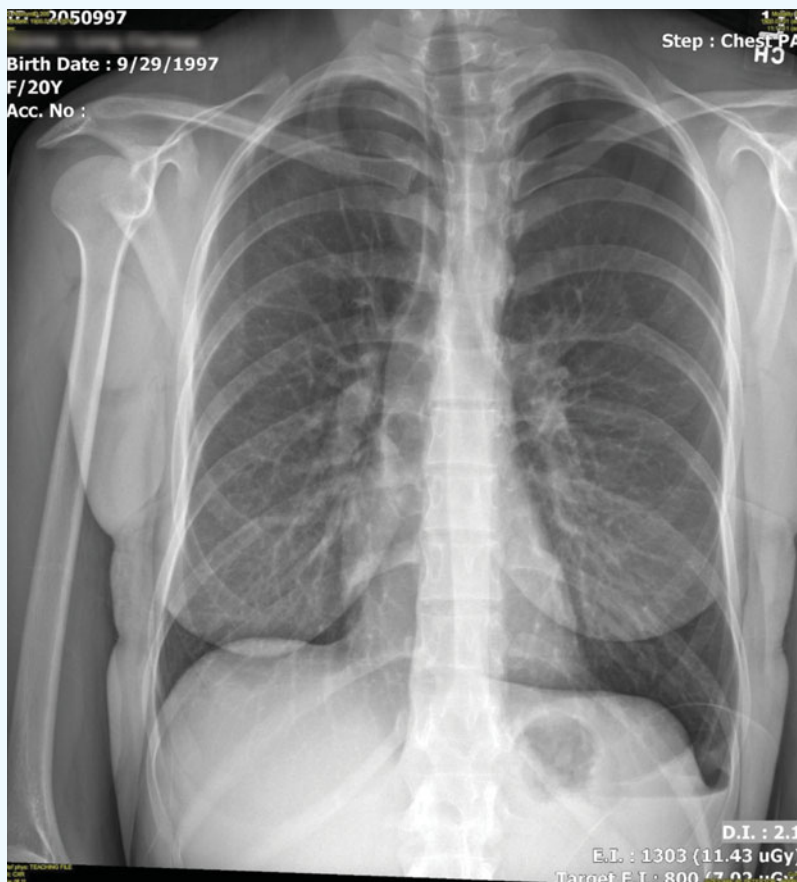


Figure 1.

Case

The patient is a 20-year-old female who presents with sudden onset of left sided chest pain. A collegiate cross-country runner, she reports that she also felt light-headed when lacing up her running shoes earlier in the day.

View the image taken (**Figure 1**) and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

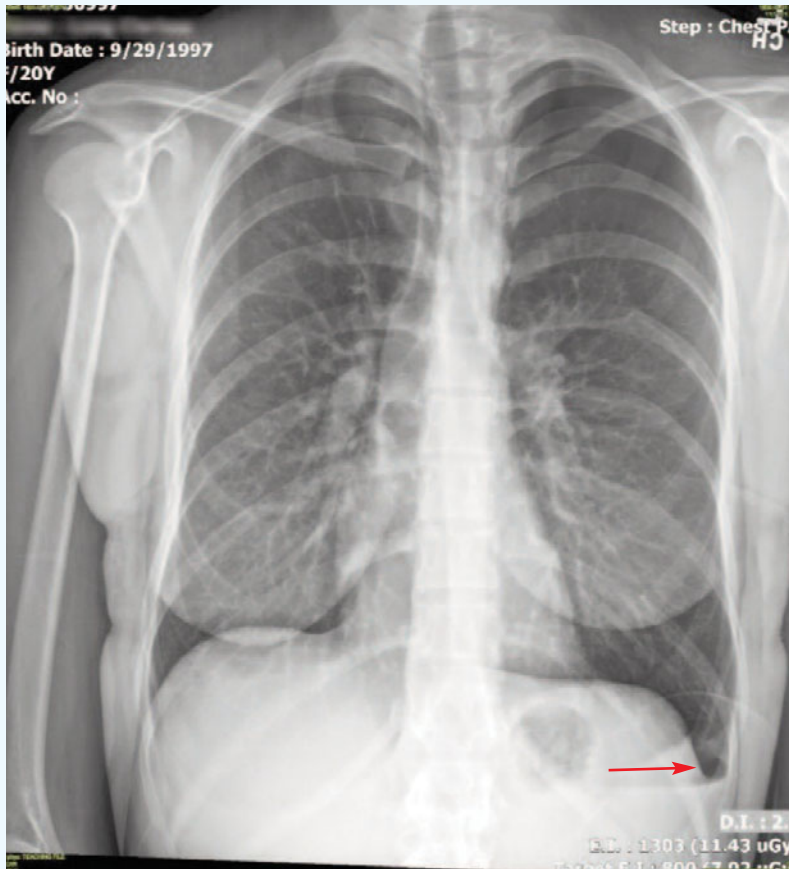


Figure 2.

Differential Diagnosis

- Acute aortic dissection
- Acute pericarditis
- Pediatric acute respiratory distress syndrome
- Primary spontaneous pneumothorax
- Pulmonary embolism

Diagnosis

The patient has primary spontaneous pneumothorax, which occurs most often in patients <35 years of age who have no underlying lung disease. Note the lack of lung markings in the left lower lobe at the site of the costophrenic angle.

Learnings

- People with a tall, thin build are more likely to develop a primary spontaneous pneumothorax
- Symptoms can include chest pain, dyspnea, tachycardia, and hypotension

- More concerning symptoms of tension pneumothorax include tachycardia, tachypnea, hypotension, lack of breath sounds on the affected side, increased jugular venous distension, and tracheal deviation

Pearls for Urgent Care Management and Consideration for Transfer

- For patients with a relatively small pneumothorax, administering oxygen with follow-up in the urgent care clinic or with the patient's primary care physician is appropriate
- Larger pneumothoraces or repeat episodes may warrant chest tube drainage. Surgery may also be considered in some patients
- A tension pneumothorax with hemodynamic instability or mental status change should undergo immediate needle decompression



A 51-Year-Old Man with Shortness of Breath and ‘Burning’ in His Chest

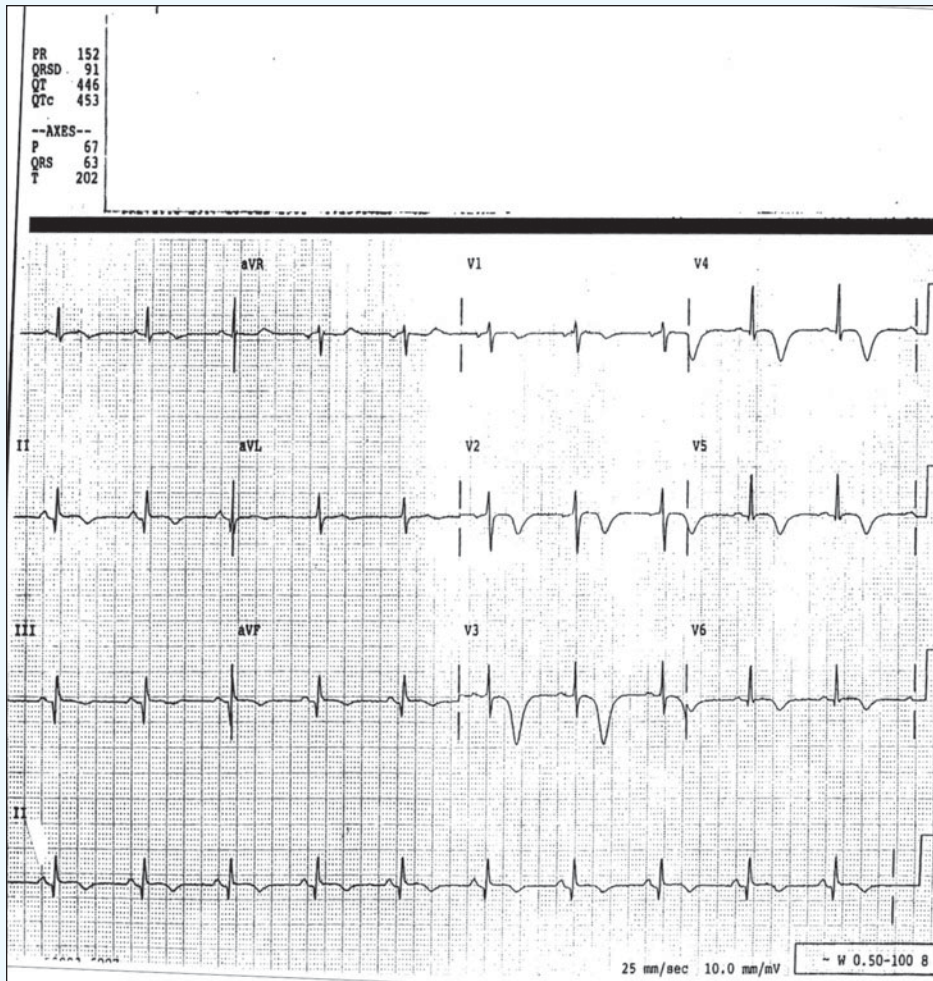


Figure 1.

Case

The patient is a 51-year-old man with shortness of breath and an intermittent burning sensation in his chest. His symptoms began 2 days ago.

Upon exam, you find:

General: Alert and oriented

Lungs: CTAB

Cardiovascular: RRR without murmur, rub, or gallop

Abdomen: Soft and NT without r/r/g

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

THE RESOLUTION

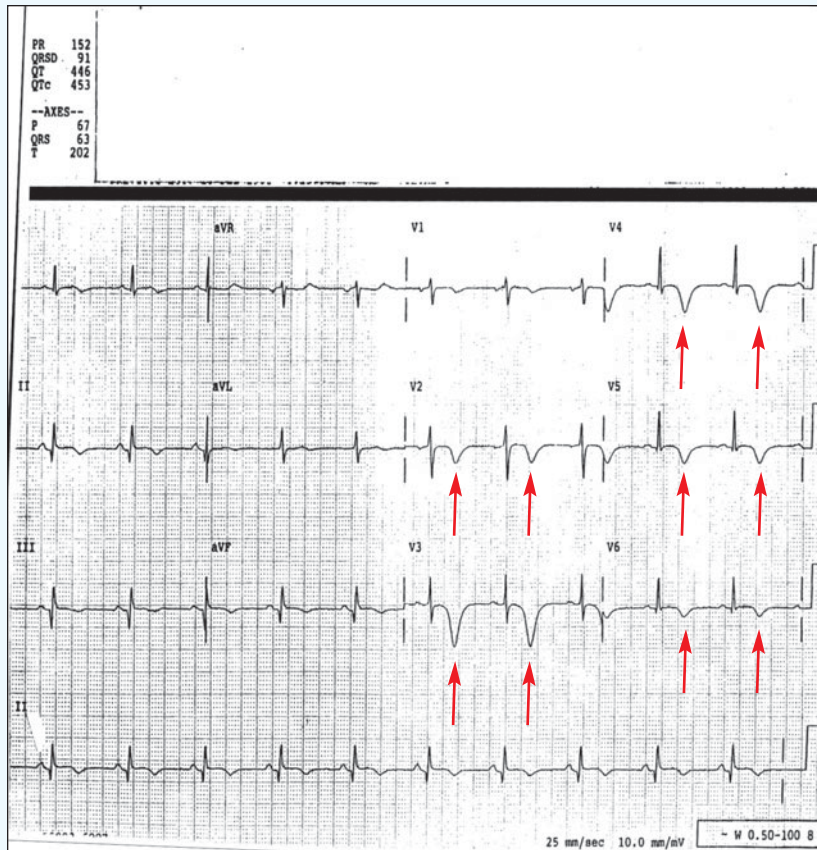


Figure 2.

Differential Diagnosis

- First-degree AV block
- Wolff-Parkinson-White
- Anterolateral ischemia
- Right bundle branch block
- Hyperkalemia

Diagnosis

The patient has anterolateral ischemia. The ECG reveals T wave inversion, likely from ischemia, in the anterior and lateral distribution

Learnings/What to Look for:

- Leads V3 and V4 reflect blood supply to the anterior part of the heart, whereas leads I, aVL, V5 and V6 reflect blood supply to the lateral part of the heart
- The anterior part of the heart usually gets its blood supply from the left anterior descending artery (LAD), also called the “widow maker”

- The inferior part of the heart usually gets its blood supply from the right coronary artery (RCA). It is reflected on the ECG in leads II, III, and aVF
- Note that an isolated T wave inversion or Q wave in lead III only is a normal finding. (A Q is ‘free’ in III. A flipped T is ‘free’ in III)

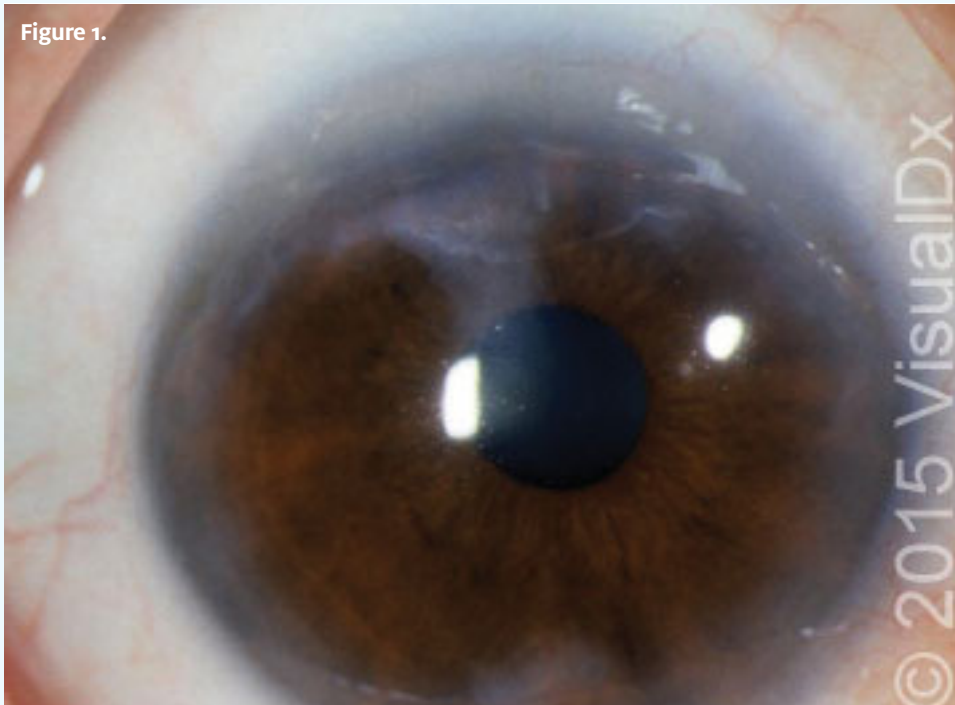
Pearls for Urgent Care Management and Considerations for Transfer

- Compare to a previous ECG, if available, as anterior T wave inversions may also occur from intracranial processes, including bleeding
- Patients with chest discomfort and/or dyspnea with an ECG concerning for anterolateral ischemia should have emergent transfer to the ED. While awaiting transport, the patient should be monitored, have IV access obtained if possible, and receive 81-160 mg aspirin
- EMS should be notified that the patient has an ECG concerning for ischemia



A 45-Year-Old Male with Sudden Eye Pain

Figure 1.



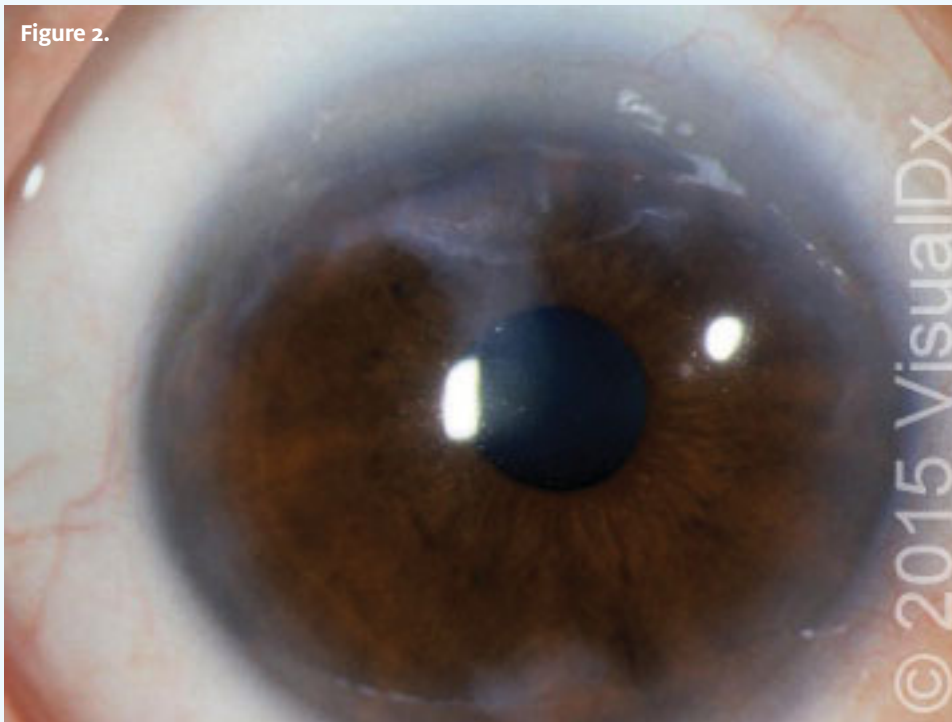
Case

A 45-year-old man presents with bilateral ocular pain, excessive tearing, and bloodshot eyes. He reports that his symptoms began 2 days ago with the sensation of a foreign body lodged in his eye, and that his eyes have been unusually sensitive to light. He has not worn his contacts since the onset of symptoms.

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**

- Blepharitis
- Contact lens solution toxicity
- Corneal foreign body
- Herpes simplex virus keratitis

Diagnosis

This patient is experiencing contact lens solution toxicity—a diagnosis that could be missed if he wasn't questioned as to contact lens use.

Learnings

- This toxicity is often associated with improper contact lens wear or poor contact lens hygiene
- There are two types of contact lens toxicity:
 - The more common form is caused by contact lens overwear (often sleeping in contact lenses), leading to corneal hypoxia. This will lead to rapid decline in vision associated with ocular pain, redness, and light sensitivity. Chronic hypoxia may cause corneal scarring and vascularization

- The second type has been classically associated with the preservative thimerosal, but can be seen with any contact lens solution. Patients will complain of ocular discomfort and foreign body sensation

Pearls for Urgent Care Management and Consideration for Transfer

- The patient should be advised to wear his glasses instead of contact lenses pending ophthalmology follow-up
- Supportive care includes cold compresses for itching and swelling; warm compresses for aching, pain, or discharge; rinsing the eye(s) very gently with cool water; and avoidance of rubbing the eyes