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 Construction Worker with Sudden Foot Pain After Stepping Into a Hole

Figure 1.

Case

The patient is a 45-year-old male construction worker who felt pain immediately after stepping down from a truck into a pothole.

View the images 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

- Foot dislocation
- Metatarsal fracture
- Plantar plate disruption
- Soft tissue ankle injury
- Lisfranc fracture dislocation

Diagnosis

This patient has fractures of the metatarsal bases of digits 2 and 3, and likely 4, as noted. Metatarsal malalignment is diagnostic for Lisfranc fracture dislocation.

Learnings/What to Look for

- Mechanism of injury is direct crush injury, or an indirect load onto a plantar flexed foot
- Disability will occur if the injury is untreated

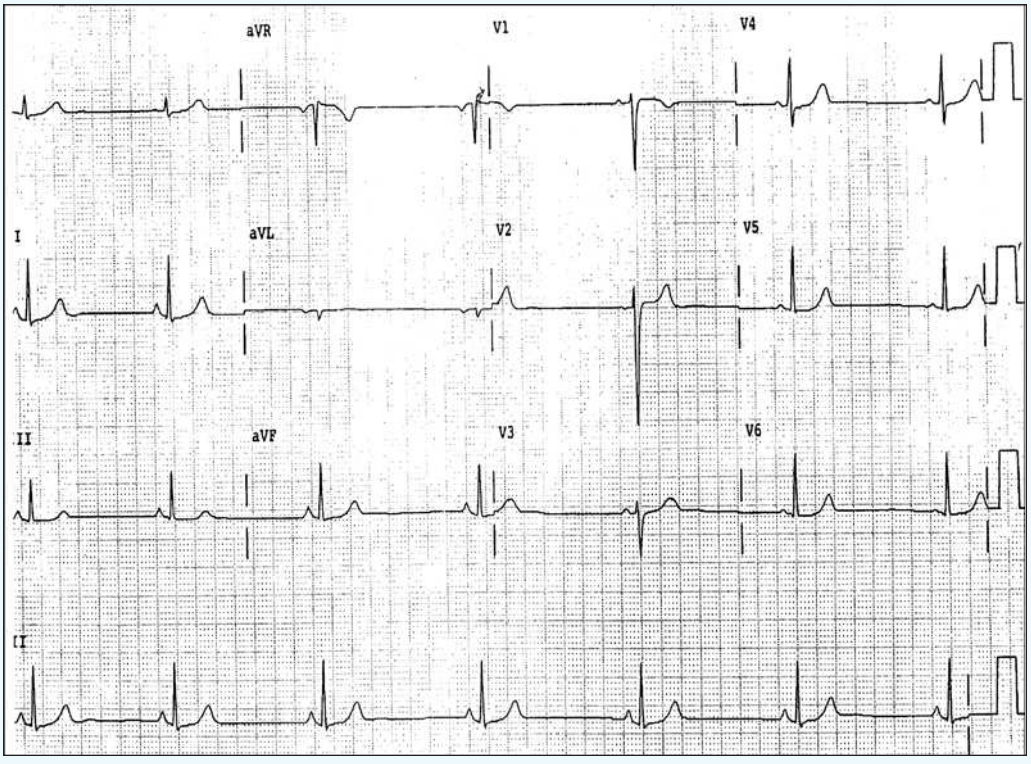
Pearls for Urgent Care Management and Considerations for Transfer

- Internal fixation is the most common treatment

Acknowledgment: *Images and case provided by Teleradiology Specialists, www.teleradiologyspecialists.com.*

CLINICAL CHALLENGE: CASE 2

A 27-Year-Old Marathon Runner with Epigastric Pain



PR	155
QRSD	80
QT	455
QTc	362
AXES	
P	81
QRS	72
T	51

Figure 1.

Case

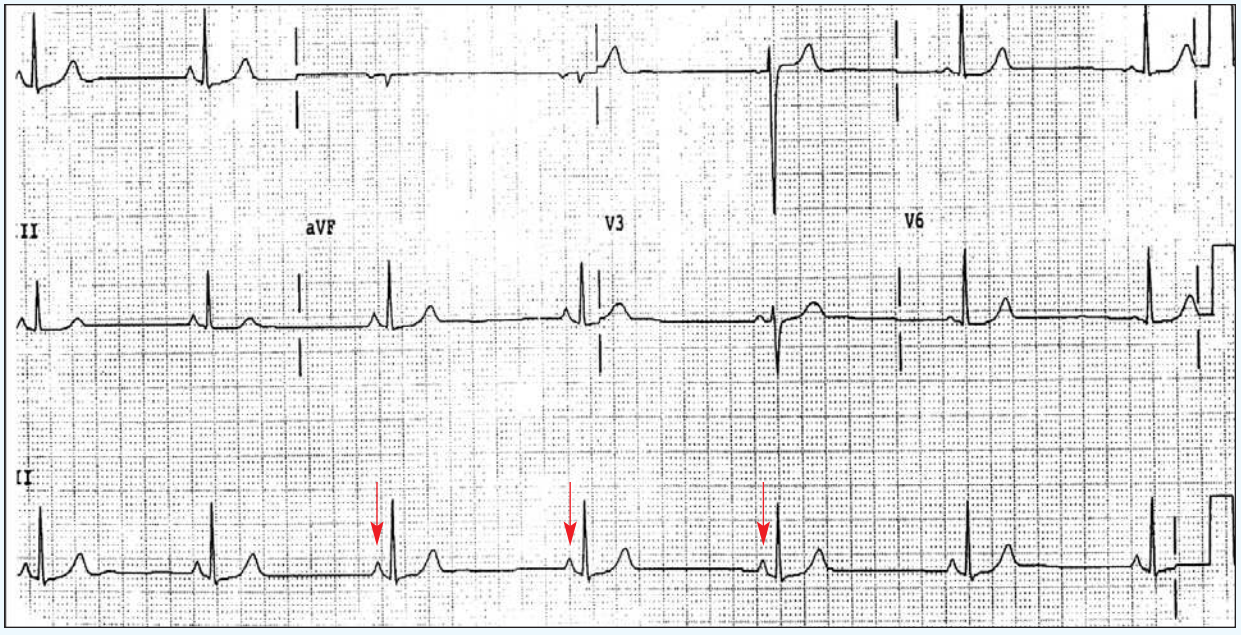
A 27-year-old woman who has been training for a marathon presents to the urgent care center with epigastric pain. She states the pain is worse after she consumes tomato sauce or orange juice, and wonders if she may have reflux. She denies shortness of breath, exertional component, pleuritic pain, leg swelling, use of hormonal therapy, or sweating. No right upper quadrant pain. Improves with antacids. No FH or heart disease or other risk factors.

Upon exam, you find:

- **General:** A&O, NAD, conversational and interactive. Normal body habitus
- **Lungs:** Clear bilaterally
- **Cardiovascular:** Regular rhythm, without m,r,g
- **Chest:** There is point tenderness over the left lower sternal border
- **Abdomen:** Soft with very minimal tenderness epigastric but elsewhere soft and NT, no distention, without r/r/g
- **Ext:** No edema or asymmetry, pulses are 2+ and equal in all extremities, no pain with palpation

An ECG is performed before you evaluate the patient. Review the ECG and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION



Differential Diagnosis

- Normal sinus rhythm
- First-degree AV block
- Second-degree AV block
- Third-degree heart block
- Junctional bradycardia
- Sinus bradycardia

Diagnosis

This ECG shows a sinus rhythm with a rate of 38. The normal rate is 60-100, so this is not simply a normal sinus rhythm.

The normal PR interval is 120-200 ms, and this PR is 155, which is normal; this is not first-degree AVB.

There is a P wave before each QRS and the PR interval is consistent; therefore, this is not second- or third-degree AVB.

Regarding the P waves: There are P waves before each QRS, so similarly this is not a junctional rhythm (where the depolarizing influence is from the AV node as opposed to the atrial node).

There are no T wave inversions concerning for ischemia; note that T wave inversions in aVR and V1 are normal. We do not see ST elevation or depression concerning for ischemia.

This ECG shows sinus bradycardia.

Learnings/What to Look for:

- The rate is normal (60-100), bradycardic (<60) or tachycardic (>100)
- With a very slow rate, consider heart block and ensure there is a P before each QRS and that there is not lengthening of the PR interval (Wenckebach) or a dropped QRS beat (Mobitz 2)
- Specifically evaluate each ECG for findings of ischemia such as T wave inversion or ST elevation or depression

Pearls for Urgent Care Management and Considerations for Transfer

- Sinus bradycardia is often an incidental finding, as in this case, and can occur as a normal variant or in athletes
- Compare to a previous ECG, if available
- Inquire if the patient is symptomatic including dizziness, weakness, fatigue, chest discomfort, shortness of breath, diaphoresis, hypotension or hypoxemia
- Medications such as beta blockers or calcium channel blockers may cause bradycardia as well as some electrolyte abnormalities. Inquire about meds in all patients. Lab testing should be individualized based on the providers pre-test estimation of risk
- Patients who are symptomatic should be emergently transferred to the emergency department

CLINICAL CHALLENGE: CASE 3

A 43-Year-Old Man with Pruritic, Scaly Plaque and Vesicles on His Hands and Arms

Figure 1.

Case

The patient is a 43-year-old man who presents to urgent care after work with an extremely pruritic fine scaly plaque and tense vesicles covering his hands and arms. He had been gardening the previous weekend, worked on his car, and prepared his boat for its first voyage of the season. He wasn't sure which activity might have caused such a terrible rash.

View the image 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

- Allergic contact dermatitis
- Hogweed dermatitis
- Poison ivy-oak-sumac dermatitis
- Arthropod bites or stings

Diagnosis

This patient was diagnosed with allergic contact dermatitis due to exposure to poison ivy, poison oak, or poison sumac.

Learnings/What to Look for

- This is a hypersensitivity reaction to an oily resin found on the leaves and in the stems and roots of plants in the Rhus genus
- This dermatitis occurs in previously sensitized individuals, usually appearing 48 hours after antigen exposure
- Typically presents as erythematous, linear plaques with associated vesicles and bullae
- Pruritis is generally severe

Pearls for Urgent Care Management and Considerations for Transfer

- Treatment includes a course of oral prednisone, starting at 1 mg/kg/day (up to 80 mg), tapering over at least 14 days (or longer, for severe reactions)
- A 6-day tapering Dosepak should not be prescribed, as the reaction may rebound once the short course concludes

Acknowledgment: *Images courtesy of VisualDx (www.VisualDx.com/JUCM).*