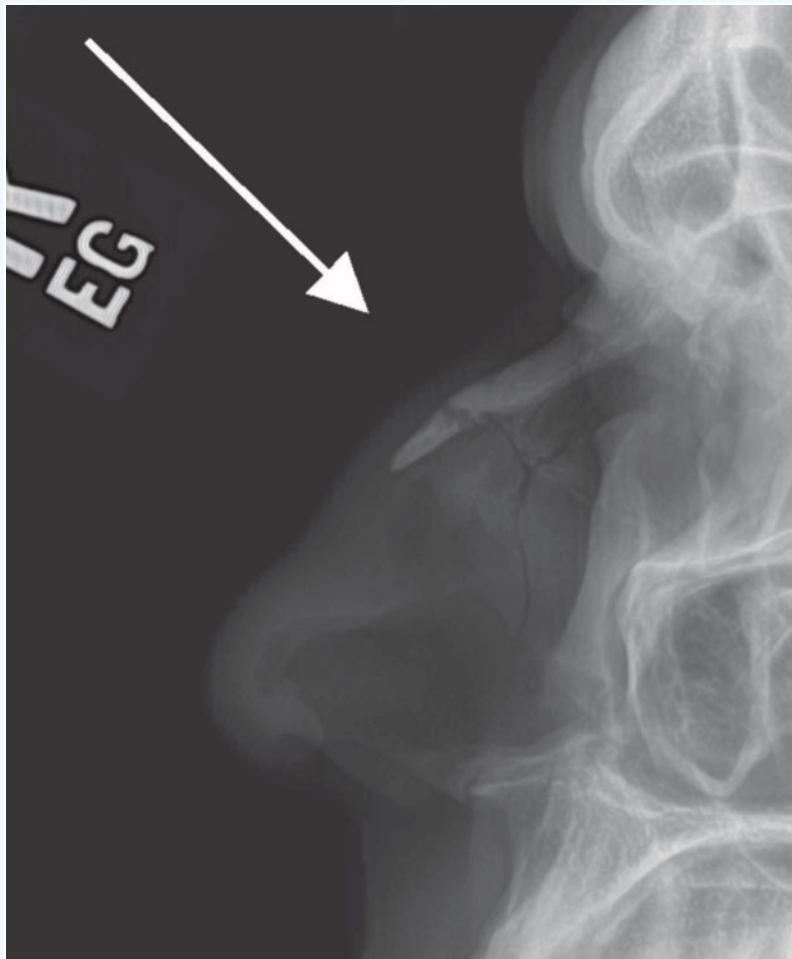




Editor's Note: While the images presented here are authentic, the patient cases are hypothetical.

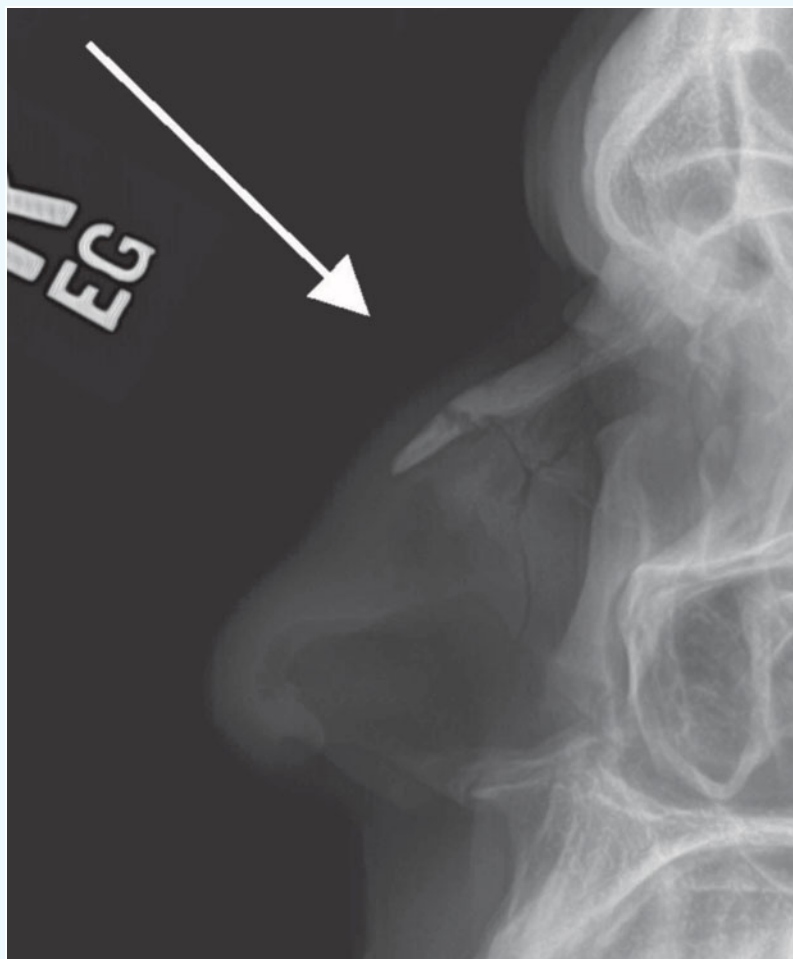
42-Year-Old With Facial Injury



A 42-year-old man presents to urgent care on a Sunday afternoon. He explains that he was playing a game of pick-up football in his neighborhood and suffered a rough kick to the face from another player. His nose is swollen, and he's clearly in pain. An x-ray is ordered to capture a lateral view of the nasal bones.

Review the image and consider what your diagnosis and next steps would be. Resolution of the case is described on the following page.

Acknowledgment: Images and case provided by Experity Teleradiology (www.experityhealth.com/teleradiology).

**Differential Diagnosis**

- Fractures of the nasal bone and anterior nasal spine
- Fracture of the orbit and zygoma
- Nasal soft tissue injury

Diagnosis

The correct diagnosis in this case is fractures of the nasal bone and anterior nasal spine. As seen in the x-ray, there is a linear fracture through the nasal bone. Irregularity of the anterior nasal spine with overlying soft tissue swelling can be observed.

What to Look For

- Fractures of the anterior nasal spine in maxillofacial trauma are common, and missed diagnosis of these types of fractures happens often because the structure can be overlooked in evaluations
- Evaluate for other fractures of the facial bones
- It is important to evaluate for septal hematoma as this requires intervention to prevent necrosis and infection

Pearls for Urgent Care Management

- Initial treatment includes ice, oral pain medications, and head elevation
- For displaced fractures, discuss with a specialist about preferred timing of reduction



3-Week-Old With Scaly Skin Rash



A 3-week-old girl presents to urgent care with widespread scaly skin. On physical examination, her vital signs are normal. She is noted to have ectropion and large, thick, plate-like scales covering most of her body. The patient had a personal history of prematurity and collodion membrane at birth. There is no family history of dermatological or genetic disorders.

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

Acknowledgment: Image and case presented by VisualDx (www.VisualDx.com/jucm).



Differential Diagnosis

- Bullous congenital ichthyosiform erythroderma
- CHIME syndrome
- Congenital nonbullous ichthyosiform erythroderma
- Lamellar ichthyosis

Diagnosis

The correct diagnosis in this case is lamellar ichthyosis. On the image above, diffuse shiny, plate-like scales and underlying pink erythema may be seen on the face, trunk, and arms. Laboratory testing in this case confirmed a deficiency of transglutaminase-1.

Lamellar ichthyosis is a rare, genetic disorder, resulting from variants in the cornified envelope of keratinocytes in the skin. The hallmark of the disease is a collodion membrane (a translucent, thick, cellophane-like membrane) at birth, which is shed, and followed by diffuse erythematous, scaly skin with thick plate-like scales. Babies may have trouble feeding, dehydration, electrolyte imbalance, breathing problems, and unstable body temperature.

What to Look For

- Rash is described as diffuse erythroderma, scaly skin, and thick plate-like scales
- Greatest involvement is seen in the trunk and lower extremities
- Palms and soles may be affected variably
- Scalp involvement may lead to scarring alopecia

Pearls for Urgent Care Management

- Evaluate the infant's fluid status and nutrition status as dehydration is common
- Evaluate the infant for evidence of systemic infection and heat loss due to the impaired epidermal barrier
- Initial treatment is topical application of large amounts of petroleum-based emollients
- Immediate referral to a multidisciplinary team including a dermatologist is indicated



56-Year-Old With Episodes of Chest Pain

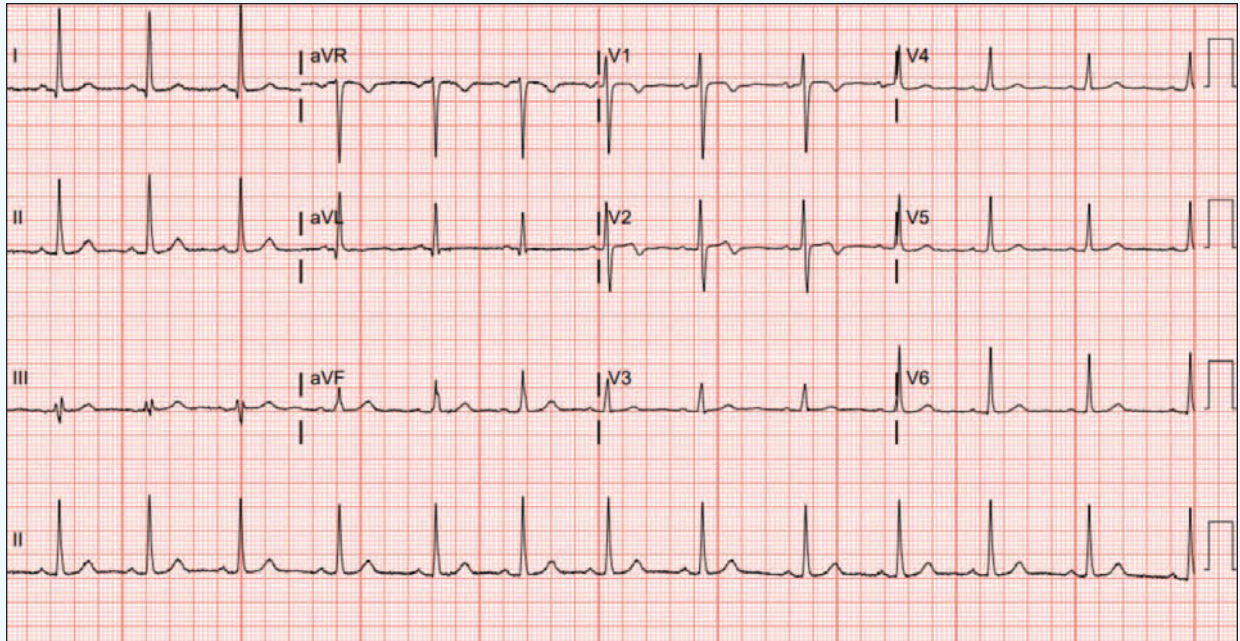


Figure 1: Initial ECG

A 56-year-old female with no past medical history presents to urgent care with 2 episodes of chest pain that woke her up this morning. She had 2 additional episodes while walking and while bathing earlier in the day. The episodes lasted about 10 minutes each, and she is currently free from chest pain. The pain is pressure-like and left-sided, radiating to her back. An ECG is obtained.

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

Case presented by Catherine Reynolds, MD, McGovern Medical School at UTHealth Houston.

Case courtesy of ECG Stampede (www.ecgstampede.com).

ECG STAMPEDE

Differential Diagnosis

- Brugada syndrome
- Left ventricular hypertrophy
- Wellens syndrome
- ST-Elevation myocardial infarction (STEMI)

Diagnosis

The diagnosis in this case is Wellens syndrome. The ECG demonstrates a normal sinus rhythm at 72 beats per minute. There are biphasic T waves with terminal negativity in V1 and V2. There is no significant ST segment elevation, no precordial Q waves, and preserved R wave progression (R wave >3 mm in V3). Wellens syndrome is suggested in this patient with anginal episodes who is currently chest pain free.¹



Figure 2: Biphasic T waves (▼▲) with terminal negativity (▲) consistent with type A Wellens pattern.

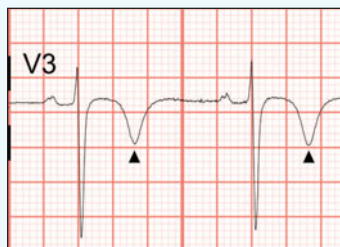


Figure 3: Deeply inverted T waves (▼) consistent with type B Wellens pattern.

Discussion

Wellens syndrome refers to an electrocardiographic pattern observed in patients with severe narrowing of the proximal left anterior descending artery (LAD). This pattern is typically seen in the precordial leads (V2 and V3) on the ECG: Type A presents with biphasic T waves and is seen in approximately 25% of cases (Figure 2); while type B has deeply inverted, symmetric T waves and is seen in approximately 75% of cases (Figure 3).^{2,3} The Wellens pattern is like T waves observed in patients who have recently undergone reperfusion via percutaneous coronary intervention (PCI) (ie, reperfusion T waves). Wellens syndrome is believed to occur when an occluded LAD spontaneously reperfuses.⁴ Wellens syndrome occurs in patients who are not currently experiencing chest pain. When these patients

develop chest pain, the ECG may show “pseudonormalization” of the T waves, where they become upright and appear normal. If the occlusion persists, it can progress to an anterior ST-elevation myocardial infarction.

Unlike in Brugada syndrome or STEMI, the Wellens pattern typically shows minimal or no ST segment elevation. Although this pattern doesn’t meet criteria for STEMI, patients with Wellens syndrome are at high risk for LAD occlusion and require urgent coronary angiography. Patients with Wellens syndrome should be transferred to a PCI-capable facility.

In patients with left ventricular hypertrophy, it is common to see T wave inversion in the left-sided leads (V5 and V6) and ST elevation in the precordial leads. However, it’s crucial to recognize that these changes differ from the distinctive T wave patterns seen in Wellens syndrome and should not be mistaken for them.

What To Look For

- Biphasic (type A) or deeply inverted (type B) T waves in V2-3, which may extend to V1-6
- Minimal or no elevation of the ST segment
- Lack of precordial Q waves
- Preserved R wave progression
- Recent history of chest pain, but chest pain free on evaluation
- May have normal or minimally elevated cardiac enzymes

Pearls For Initial Management, Considerations For Transfer

- These patients have an impending anterior wall myocardial infarction and must be transferred for urgent cardiac catheterization
- Stress test should be avoided, as it will precipitate an acute infarction
- The patient’s condition may change at any time, and they are critical in nature. If they have another episode of chest pain, repeat their ECG and look for an anterior STEMI or “pseudonormalization” of the anterior T waves—this means they are experiencing an acute reocclusion of their LAD

References

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2. Mead N, O Keefe K. Wellen’s syndrome: An ominous EKG pattern. *J Emerg Trauma Shock*. 2009;2(3):206. doi:10.4103/0974-2700.55347
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