

# Challenges in Sports Medicine & Orthopedics

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Figure 1

A 29-year-old woman presents to the ED 2 days after falling on her left shoulder. She describes severe pain in her left shoulder, which is worse upon palpation of the left clavicle during examination. A radiograph was completed.

**What is your interpretation  
of the radiographic image?**

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## ANSWER



Figure 1

**T**he radiograph reveals a displaced fracture to the middle third of the left clavicle. Midshaft fractures account for 80% of all clavicular fractures.<sup>1</sup> These fractures are caused by either direct or indirect trauma. Direct traumatic injuries result from impact of a person or object directly over the collarbone, while indirect trauma occurs when the force generated from a fall on the outer shoulder transmits through the clavicle and overcomes the strength of the bone at its curve (eg, injury sustained by tackled football player landing directly on his shoulder). Middle-third fractures with significant displacement can cause injury to the brachial plexus or subclavian artery; therefore, careful neurological and

vascular examination of the ipsilateral upper extremity is imperative.

In nondisplaced or minimally displaced midshaft clavicular fractures, treatment with a sling for 4 to 6 weeks, along with range of motion exercises when tolerated, is usually sufficient. However, if significant displacement and/or tenting of skin over the fracture are present, then open reduction with internal fixation is recommended. The patient in this case was referred for orthopedic surgery.

## REFERENCE

1. McMahon PJ, Kaplan LD. Sports medicine. In: Skinner HB, ed. *Current Diagnosis & Treatment in Orthopedics*. 4th ed. McGraw Hill Companies, Inc; 2006:210.