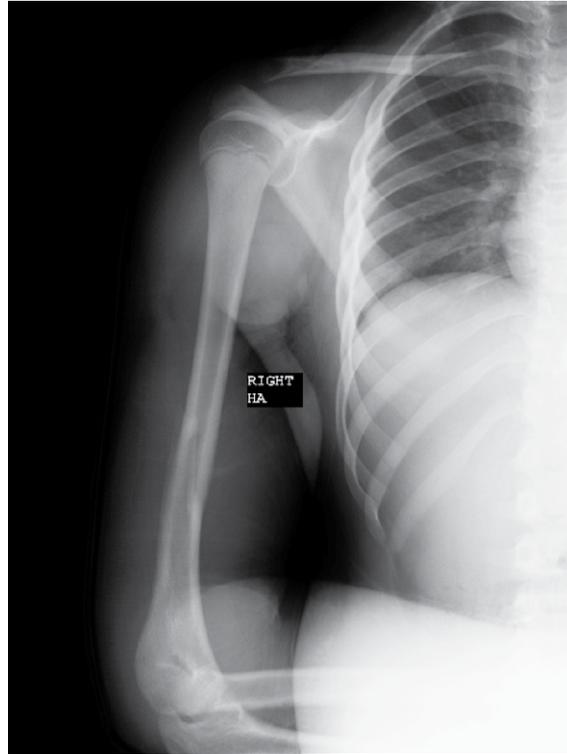


# RADIOLOGY QUIZ

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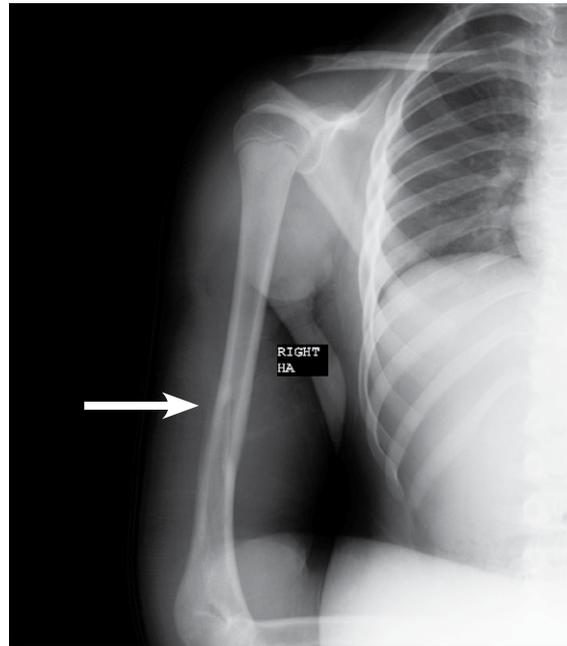
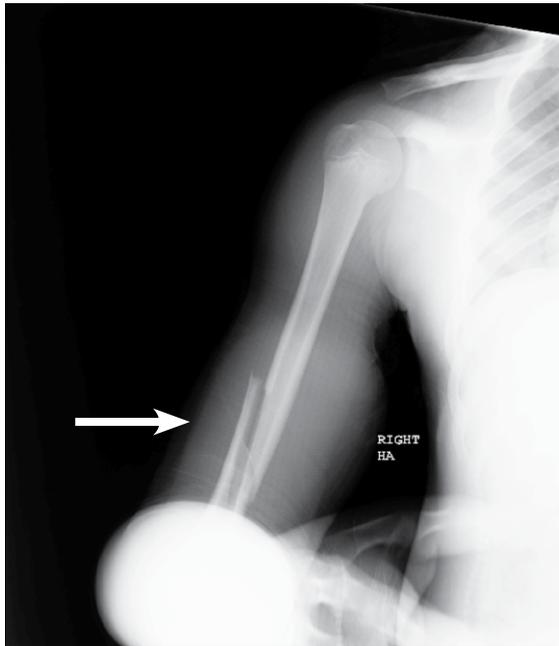
## PROBLEM



➤ A 14-year-old boy was playing and fell off his bed, landing on his right elbow. He experienced severe pain in his right arm after the fall. What is your interpretation of these views of the humerus?

Turn page for answer ➤

## ANSWER



➤ The images reveal a minimally displaced oblique fracture through the midshaft of the humerus. Midshaft fractures of the upper arm require careful neurologic assessment at the wrist and hand. The radial nerve is the most commonly affected nerve in these injuries, due to its proximity to the midshaft region of the humerus. Injury to the radial nerve may occur during the initial injury or during reduction of the fracture, resulting in weakness in the extensors of the hand and numbness in the first dorsal web space.

Minimally displaced fractures of the humerus may be managed with application of ice, use of analgesics, coaptation splinting, and referral to an orthopedic surgeon.<sup>1</sup> Surgical management is reserved for fractures that are open, pathologic, or related to neurovascular injury, as well as for nonunions and fractures that cannot be managed using closed techniques.<sup>2</sup> This patient was treated with a coaptation splint (U-shaped, or sugar-tong, splint) with the elbow flexed at 90° with an elasticized wrap, a sling for support, and pain medications. He was referred to an orthopedic surgeon for urgent evaluation.

### REFERENCES

1. Simon RR, Koenigsnecht SJ. Humeral Shaft Fractures. *Emergency Orthopaedics: The Extremities*. 3rd ed. Norwalk, CT: Appleton & Lange; 1995:173-176.
2. Griffin LY. Fracture of the Humeral Shaft. *Essentials of Musculoskeletal Care*. 3rd ed. Rosemont, IL: American Academy of Orthopaedic Surgeons; 2005:174-176.

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