

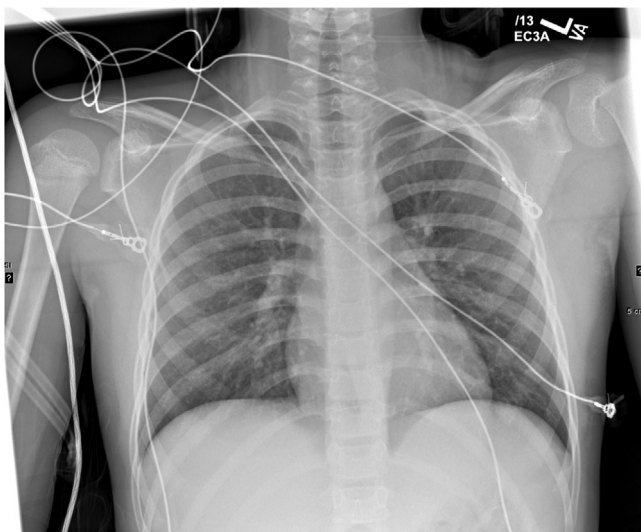
IMAGES IN EMERGENCY MEDICINE**Pediatrics****Boy with shoulder pain****Frances Sparks Fonacier DO | Jonathan Garen MD | Thomas R. McCarty MD**

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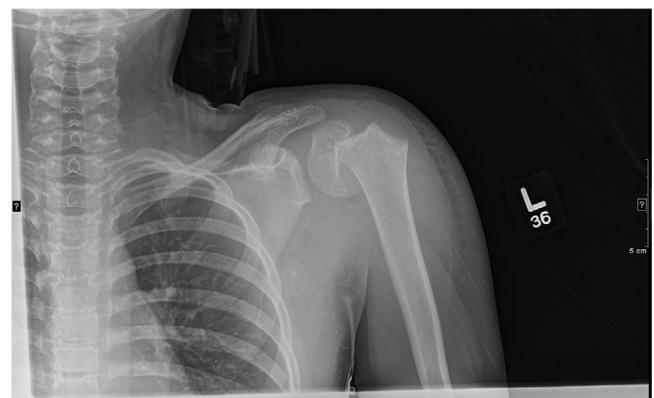
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**FIGURE 1** Initial chest x-ray

An 11-year-old boy presents to the emergency department following a dirt bike accident where he was thrown from his bike. He experienced a five minute loss of consciousness and sustained significant damage to his helmet.

Upon arrival he was agitated, confused, and complaining of left shoulder pain. Swelling, contusions, and abrasions were noted to the left shoulder with tenderness and limited range of motion. The remainder of his examination was unremarkable. Computed tomography (CT) scans were unremarkable. An initial screening chest x-ray was performed.

The initial chest x-ray revealed a Salter-Harris I fracture of the left proximal humerus, confirmed with dedicated upper extremity imaging.

**FIGURE 2** Initial shoulder x-ray

Proximal humeral physis fractures account for ~0.45% of all pediatric fractures and 4%–7% of all epiphyseal fractures.¹ The proximal humeral physis contributes to 80% of longitudinal growth and has potential for significant bone remodeling. This allows for excellent prognosis, infrequently requiring surgery. Salter-Harris I fractures are most common in children younger than age five. Proximal humeral metaphyseal fractures are most common between ages five and eleven. The most common mechanism of injury is a fall onto an outstretched hand or direct blow to the posterolateral upper arm.²

Management of these fractures depends on severity of injury.³ Fractures with greater than one-third humeral shaft width displacement typically require closed reduction.^{4,5} For our patient, orthopedic surgery performed a closed reduction under sedation. The patient was then placed in a sling and was admitted for overnight observation. The patient was to follow up with orthopedics in one week to reevaluate the need for surgery.



FIGURE 3 Initial shoulder x-ray

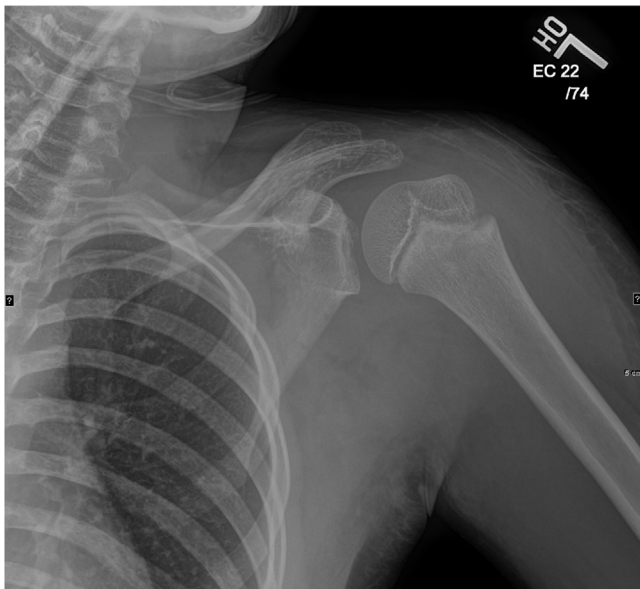


FIGURE 4 Post-reduction x-ray

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