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IMAGES IN EMERGENCY MEDICINE

Pediatrics

Pediatric hand pain after trauma

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1 | PATIENT PRESENTATION

An otherwise healthy 11-year-old male presented to the emergency department with finger pain after a forced hyperextension injury of the fifth finger. He noted immediate pain and mild swelling after he jumped and landed with an extended hand on the top of a counter. Physical examination demonstrated swelling and pain to palpation at the right fifth distal metacarpal/proximal phalanx worse with flexion and extension. His examination was otherwise normal. A bedside ultrasound (US) was performed using a 13–6 MHz linear probe, correlating with the point of tenderness and area of visual deformity. The findings are found in Figure 1.

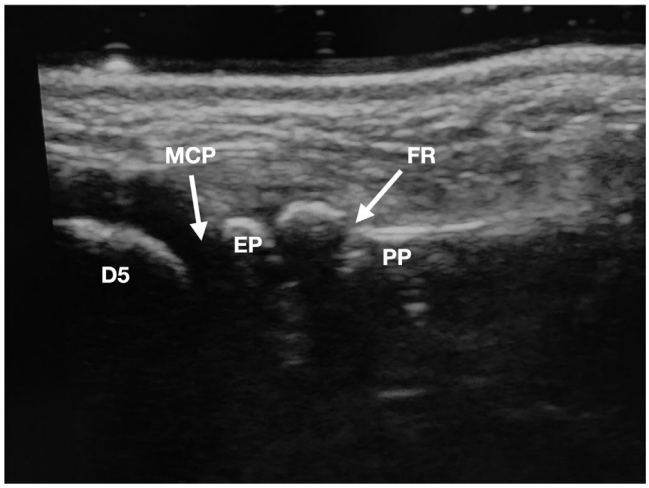

FIGURE 1 An ultrasound image taken in the sagittal plane using a linear probe over the area of pain in the 5th finger is above. Points on the ultrasound are D5 (distal portion of the 5th metacarpal), EP (epiphysis), FR (fracture), MCP (metacarpophalangeal joint), and PP (proximal phalanx)

2 | DIAGNOSIS

2.1 | Finger fracture

Pediatric fractures are common after direct trauma (either from a blunt object or from a fall) and should be investigated thoroughly.[1] This should be done by performing complete physical examinations, appropriate diagnostic imaging, and should find a cortical defect just distal to the growth plate correlating with the point of tenderness and area of visual deformity. US can be used as a surrogate to x-ray in the evaluation of these patients.[2–4]

Due to department policy, an x-ray (Figure 2) was obtained and confirmed the above findings. The x-ray demonstrated an acute buckle fracture involving the dorsal and ulnar base metaphysis of the 5th proximal phalanx of the right hand with soft tissue swelling. The finger was

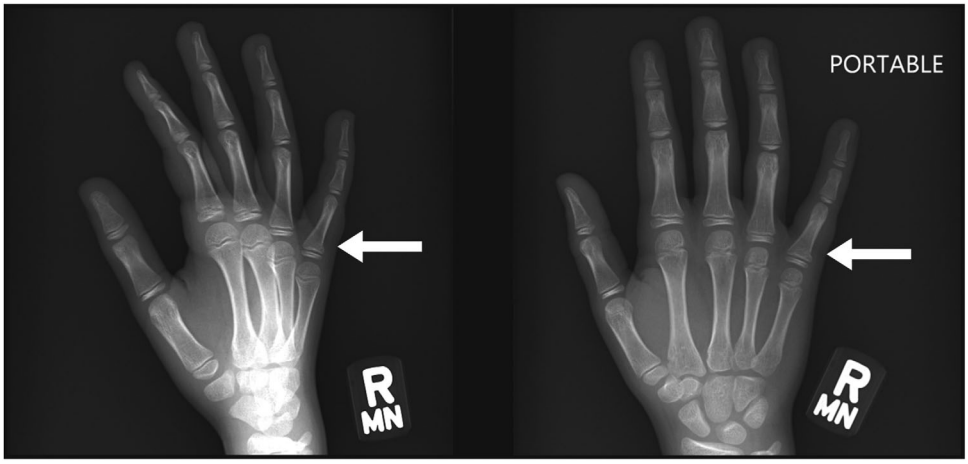

FIGURE 2 An x-ray was obtained showing a proximal fracture (as shown by the arrow)

splinted, and the patient was discharged home with appropriate follow-up and without further complication.

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