

## Fight Bite with Tendon Laceration

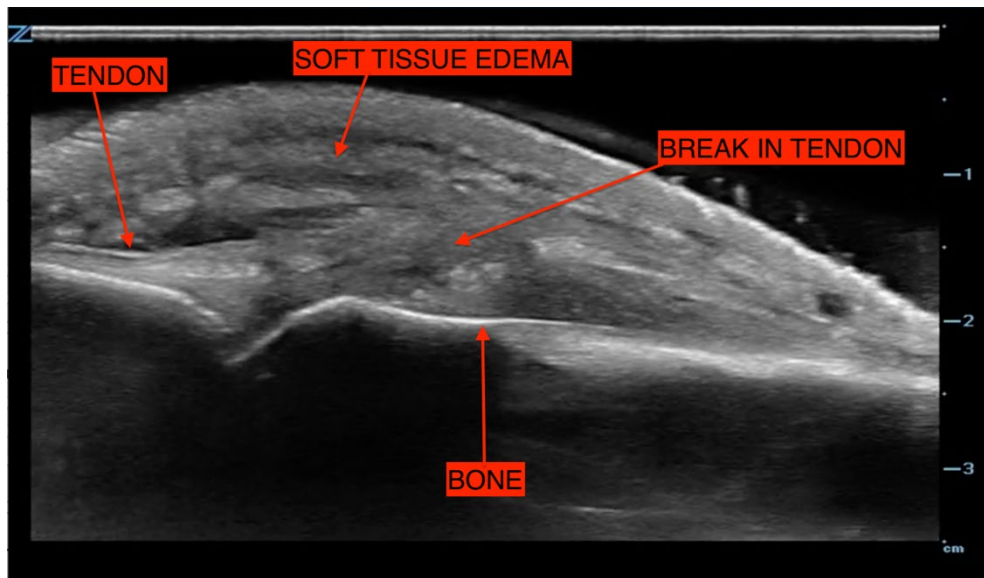
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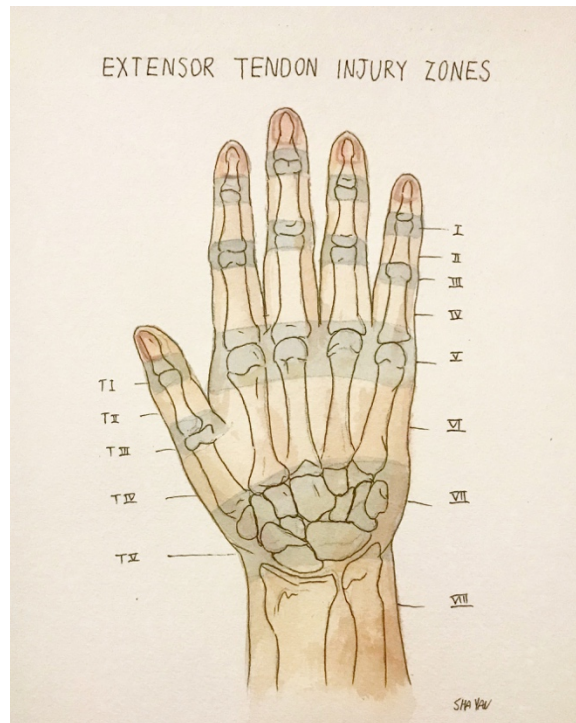
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Video Link: <https://youtu.be/MPvBuV72VHU>



**History of present illness:** A 57-year-old male presented 24 hours after punching another individual in the mouth and injuring his right hand. He complained of pain and decreased range of motion in his 4<sup>th</sup> digit. On exam, the patient had a 1 cm laceration to his right 4<sup>th</sup> metacarpophalangeal joint with soft tissue swelling and limited extension of the digit against resistance.

**Significant findings:** The video shows a water bath ultrasound of the right 4<sup>th</sup> digit, demonstrating soft tissue swelling with a hypoechoic region along the tendon consistent with edema and tendon disruption (see video and annotated still image).

**Discussion:** Hand extensor tendon injuries can be caused by laceration, trauma, or overuse.<sup>1</sup> Extensor tendon injuries are classified into eight zones.<sup>2</sup> This patient suffered a Zone V partial tendon injury, commonly termed a “fight bite.” Management of tendon injuries is dependent on: partial vs full, closed vs open, and injury location.<sup>3,4</sup> Closed tendon injuries require a volar extension splint with hand surgery follow-up within one week. Open tendon injuries involving >50% tendon width can be repaired in the emergency department, though some will require delayed repair.<sup>4</sup> Ruptures involving <50% of tendon width should be placed in a volar extension splint, whereas ruptures involving >50% of tendon width should be sutured.<sup>3</sup> Injuries to Zones II-IV and Zone VI may be repaired in the emergency department.<sup>4</sup> However, injuries to other zones, the thumb, open fractures, neurovascular compromise, grossly contaminated wounds, or immunocompromised patients should be referred to a hand surgeon.<sup>5</sup> “Fight bite” injuries should be treated with antibiotics and hand surgery consult for possible operative intervention.<sup>6</sup>

After a normal X-ray, a bedside water-bath ultrasound was performed, revealing a Zone V extensor tendon rupture. The patient received tetanus prophylaxis, IV antibiotics, was splinted and admitted to the hand surgery service for operative washout of the wound and delayed tendon repair.

**Topics:** Water bath ultrasound, tendon laceration, extensor tendon injury, fight bite, hand injury, orthopedics.

#### References:

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