

14+11 ♂ fall snowboarding



Proximal Humerus Fractures

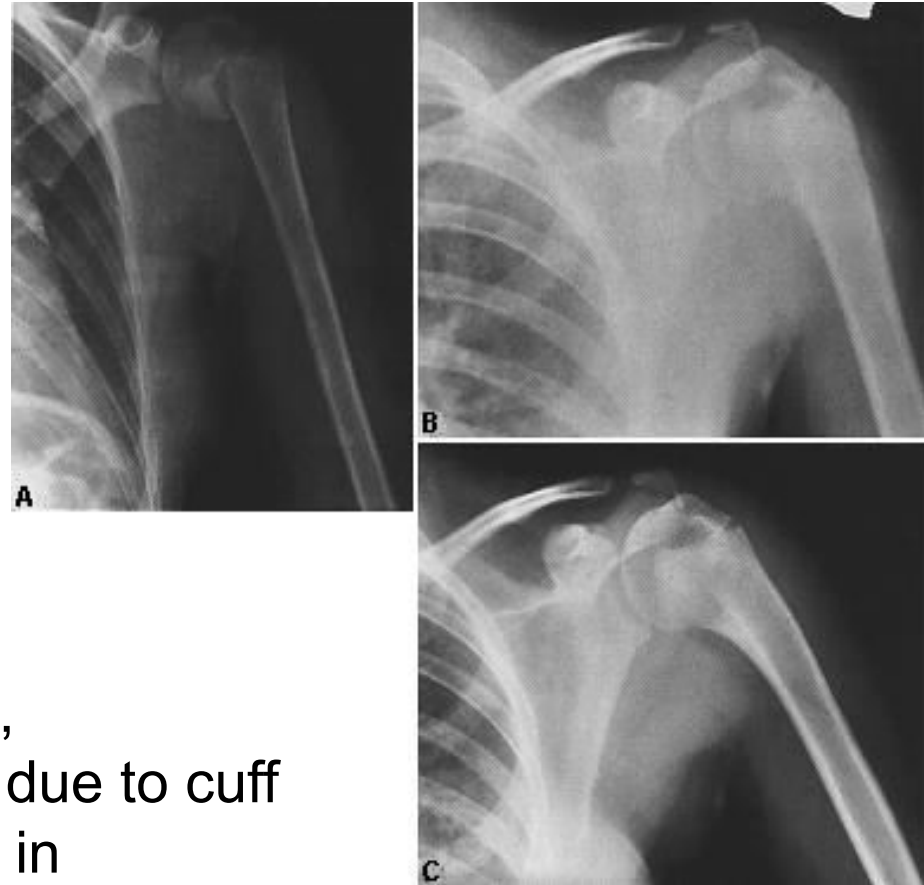
- Vast remodeling potential
- Anatomic reduction unnecessary if $> 2y$ of growth remaining
- Residual deformity in adolescents can lead to impingement during overhead activities
- No evidence based criteria are available to establish a threshold ORIF in a child with open growth plates

Neer – Horowitz Classification

Proximal Humeral Physeal Fractures

- Grade I - < 5 mm
- Grade II - $< 1/3$ shaft width
- Grade III - $\leq 2/3$ shaft width
- Grade IV - $> 2/3$ shaft width

- Proximal fragment sits in flexion, abduction and external rotation due to cuff
- Distal fragment is shortened and in adduction due to deltoid and pectoralis



Proximal Humerus Fractures

- If remodeling potential is inadequate Neer type III/IV fracture in a child > 11 the advantages of fixation must be considered
- Biceps entrapment with ORIF
- Pins
 - threaded
 - bent
 - buried
- Flexible Nails

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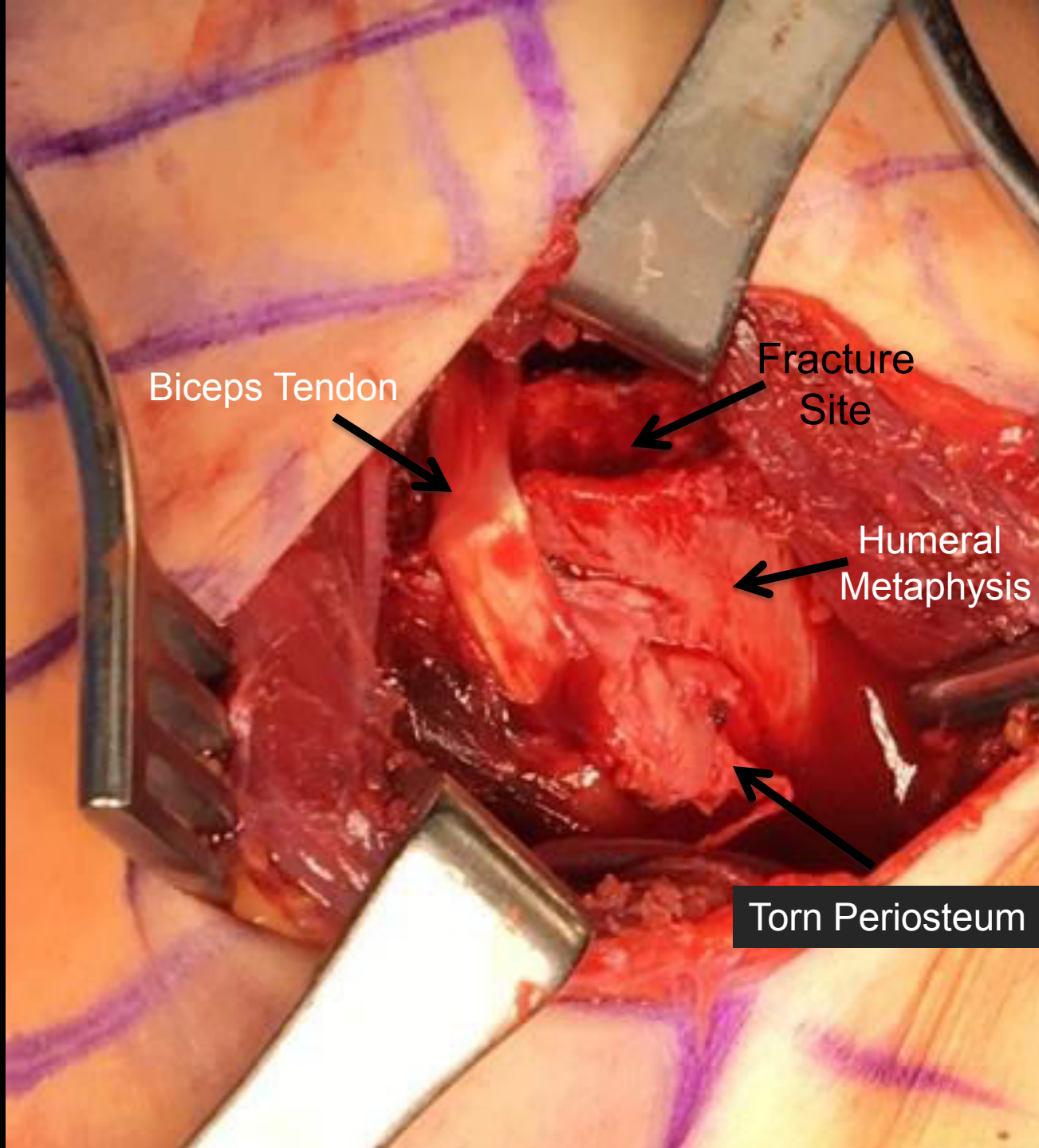
Displaced proximal humerus fracture



3 D CT Scan showing fracture displacement



3 D CT Scan showing fracture displacement

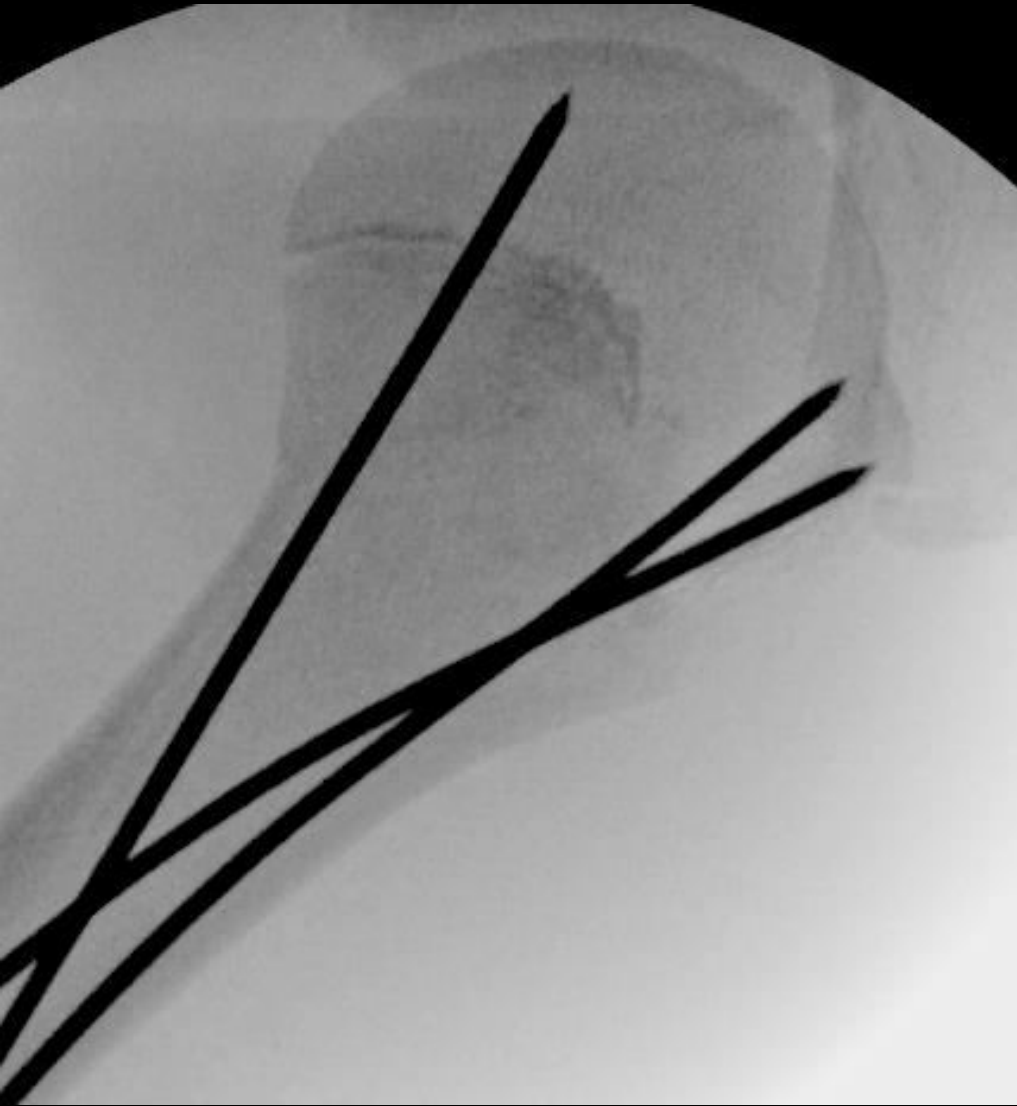


Biceps Tendon

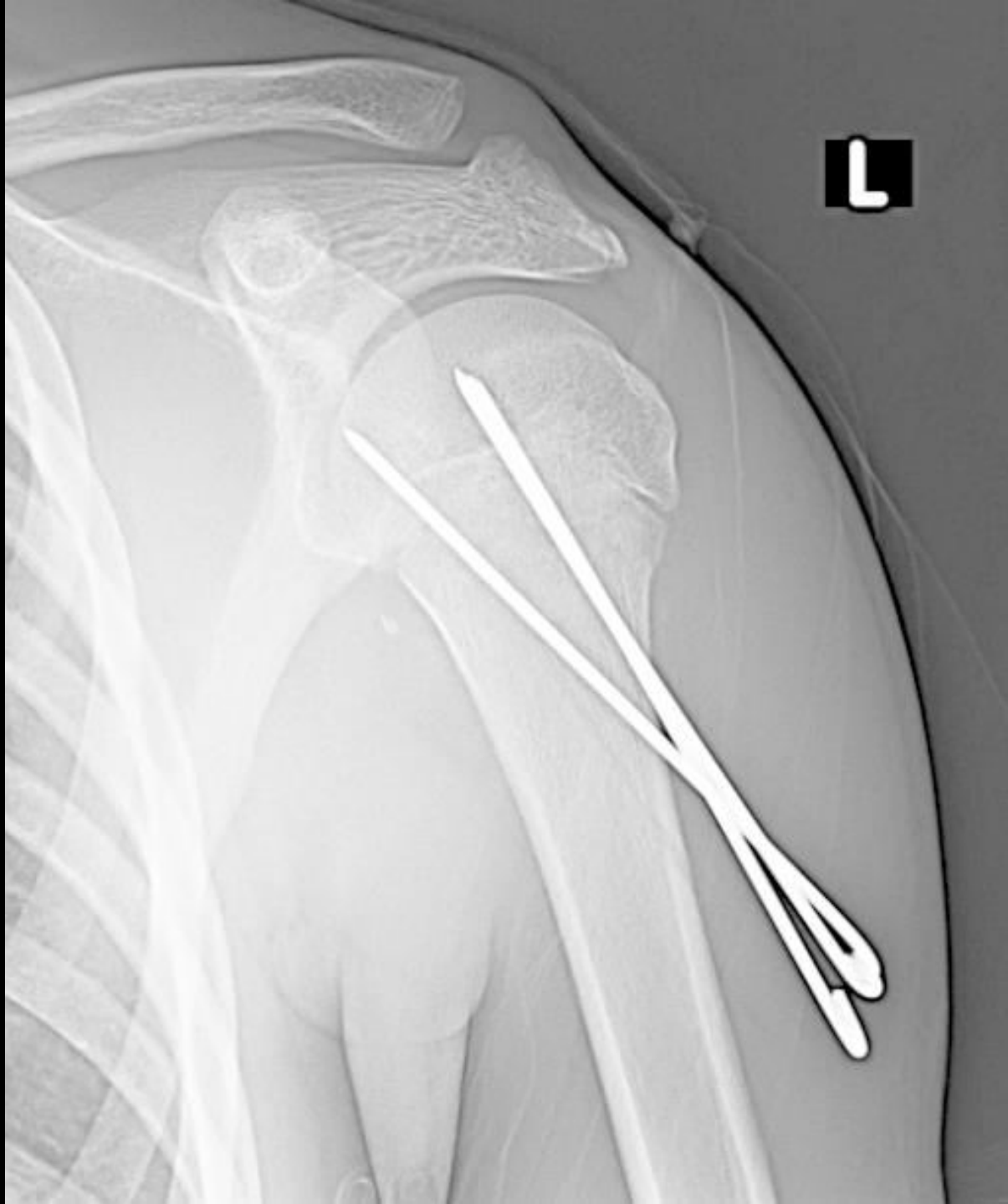
Fracture Site

Humeral Metaphysis

Torn Periosteum



Fixated fracture with 3 buried smooth pins





Healed fracture following pin removal



Healed fracture following pin removal