EMERGENCY PITFALLS IN ORTHOPAEDIC TRAUMA

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MCH Trauma Rounds
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MORAL OF THE STORY

• Fracture distal radius and intact ulna
  – W/O radius fracture will most likely displace; therefore, follow carefully (q/wk x2)
• Poorly moulded cast will increase deformity
MORAL OF THE STORY

• Older teenager will not remodel and fracture displacement must be scrutinized
• Follow fractures that have any displacement closely and refer to Orthopaedics early
MORAL OF THE STORY

• Fracture distal radius and intact ulna – must follow closely even if radius fracture appears benign
• Mould cast appropriately
MORAL OF THE STORY

• Distal radius fracture and insignificant buckle of ulna (like intact ulna)
  – Must follow closely with properly moulded cast
MORAL OF THE STORY

• Distal radius fracture intact ulna will displace more
• Older child:
  ♀ > 10 years old
  ♂ > 12 years old
  \{ less chance of remodelling
MORAL OF THE STORY

- Distal radius tilt in a teenager must be reduced early
- Poor remodelling at this age (> 12 years old ♂/> 10 years old ♀); therefore, need to be aggressive
- Closed reduction even if radius fracture appears to be not that displaced
MORAL OF THE STORY

• Salter Harris III and IV fractures involve growth plate and have potential for growth arrest
• Always refer to Orthopaedics even if not displaced
• Must be followed long term and yearly
MORAL OF THE STORY

• Most cases of distal radius fracture in ♀ < 10 years old and in ♂ < 12 years old will remodel to an acceptable alignment
MORAL OF THE STORY

• Midshaft radial, ulna fractures less capacity to remodel than distal radius fractures especially in adolescents
• Loss of radial bow must always be addressed aggressively
MORAL OF THE STORY

• Proximal radial fractures - very little remodelling capacities
• Loss of radial bow will lead to loss of pronation and or supination
• Be aggressive, early Orthopaedic consult
MORAL OF THE STORY

Referred pain:
• Wrist pain → elbow pathology
• Knee pain → hip pathology
MORAL OF THE STORY

• Always need two views of a limb (AP/Lateral) to appreciate displacement of fracture
MORAL OF THE STORY

• All lateral condyles should be seen by Orthopaedics at time of injury or 2 – 3 days after with x-rays out of cast
• Lateral condyles may initially be undisplaced, but high propensity to displace especially if lots of swelling about the elbow
MORAL OF THE STORY

If suspect lateral condyle or supracondylar fracture, must be seen in Orthopaedics within 3 – 4 days with an x-ray out of cast.
MORAL OF THE STORY

• Malunited supracondylar fractures makes individual more prone to lateral condyle fractures
MORAL OF THE STORY

Always scrutinize minimally displaced supracondylar fractures for medial impaction and rotation.
MORAL OF THE STORY

Always x-ray joint above and below fracture of forearm especially if isolated radial or ulna fracture.

Ulna fracture → Monteggia (radial head)
Radius fracture → Galaezzi (distal radius ulna joint)
MORAL OF THE STORY

• Isolated ulna fracture (especially midshaft to proximal)
  – Always rule out radial head dislocation « Monteggia fracture »

• X-ray joint above and below fracture
MORAL OF THE STORY

• All intra-articular fractures should be seen by Orthopaedics early (in ER or < 3 days of injury)

• Fractures about the elbow heal quickly; therefore, see promptly after injury.
MORAL OF THE STORY

• In high energy trauma, ALWAYS x-ray more than you have to
• If suspect femur trauma, ALWAYS do pelvis x-ray
• Physical exam is crucial
MORAL OF THE STORY

• Any patient with a prior SCFE who develops contralateral hip pain has a SCFE until proven otherwise
• 30% SCFE bilateral, appear < 1 year within each other
• Unstable SCFE much worse prognosis than stable SCFE
MORAL OF THE STORY

- Always get 2 views (AP/Lateral) on limb trauma
- Distal tibia fracture and intact fibula may drift into varus. Follow closely.
- Equivalent to fracture distal radius with intact ulna
MORAL OF THE STORY

Traumatic effusion in child

Different diagnosis:
- ACL (skeletal mature)
- Tibial spine (skeletal immature)
- Patellar dislocation ± osteochondral fragment
- Meniscal, collateral ligament injury
MORAL OF THE STORY

• When unable to actively extend knee, think of quadriceps-patella-patellar tendon-tibial tubercle continuum
MORAL OF THE STORY

• If suspect break in quadriceps-patella-patellar tendon-tibial tubercle continuity
  ↓
  Patella alta (high riding)
• In younger patients → inferior pole patella sleeve fracture
MORAL OF THE STORY

• Always examine entire limb especially in presence of obvious deformity
• Hanging cast in humerus fracture, must start ABOVE fracture line
MORAL OF THE STORY

- Physical examination is crucial
- Scrutinize x-rays
- If obvious, not present → look for subtle changes
THANK YOU