Welcome!

5th Annual
ORA Orthopedics
Conference for Primary Care
Top 10 Ortho Urgent Care Injuries

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ORA Orthopedics
10. Proximal Humerus Fractures
Treatment

• Simple sling
• ICE, pain meds
• Button-down shirts
• Recliner to sleep in
It will be up to the surgeon on how to treat, but most are treated nonoperatively.
9. Pediatric Elbow Injury

Bony anatomy of the elbow

- Humerus
- Lateral epicondyle
- Medial epicondyle
- Radius
- Coronoid process
- Ulna

The white dotted lines indicate the physis, or growth plate

Medial view of ulnar head

Fig. 1
<table>
<thead>
<tr>
<th>Ossification Centre</th>
<th>Age of Ossification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitellum</td>
<td>1</td>
</tr>
<tr>
<td>Radial Head</td>
<td>3</td>
</tr>
<tr>
<td>Internal (medial) Epicondyle</td>
<td>5</td>
</tr>
<tr>
<td>Trochlea</td>
<td>7</td>
</tr>
<tr>
<td>Olecranon</td>
<td>9</td>
</tr>
<tr>
<td>External (lateral) Epicondyle</td>
<td>11</td>
</tr>
</tbody>
</table>

In the image, the X-ray of the elbow joint shows the ossification centres and the corresponding labels for the bones.
Anterior Humeral Line
Fat Pad Signs

- An **anterior fat pad** protrudes from the coronoid fossa. It is normal unless bulging or shaped 'like a sail'.

- A **posterior fat pad** is always pathological.
On any view of the elbow, a line drawn through the middle of the radial shaft should pass through the capitellum. If the line misses the capitellum on any of the elbow views, dislocation of the radial head is present.
Worst Case

Type III Supracondylar Humerus Fracture

* requires immediate consultation *
with orthopedic surgeon
Can’t go Wrong with a Posterior Splint
8. Distal Radius Fractures
Distal Radius Fractures

- One of the most common orthopedic injuries
- 1/6 of all fractures evaluated in ER
- Bimodal age distribution
  - 5-14 yo
  - 60-69 yo
- Female-to-male ratio of 4:1, postmenopausal
- Extra-articular metaphyseal fractures - elderly, thin osteoporotic cortex
- Intra-articular fractures with joint surface displacement occur in young patients
Hematoma Block with 1% or 2% Lidocaine.

Inject from posterior.
Volar or Sugar-Tong Splint
Distal Radius Fractures

- Trend is to perform surgery
- Multiple techniques
  - Percutaneous pins
  - External fixation
  - Locking Plates
Distal Radius Fractures
Fixation Techniques
7. Fingertip Injuries
Subungual Hematoma

- Evacuate if >50%
- 10-21 days of splinting
  - Malleable aluminum splint, simple custom thermoplastic splint, Stax splint
Fingertip Amputations
What to do?

- Digital Block
- Rx
  - If no tension on skin, then close with suture
  - Too much tension → stabilize with xeroform and splint for protection, give antibiotics & pain meds
Ultimate Question for the Surgeon

Ronguer more bone until skin can be closed

...OR...

Perform flap coverage
THENAR FLAP
6. Acute Knee Swelling

- Arthritic Flare
- Gout
- Infection
Septic Knee
- Clinical Presentation -

- Acutely painful
- Red, swollen joint
- Restricted range of motion: pain even with passive motion
- Fever
- Labs
  - Elevated WBC
  - Elevated sedimentation rate (ESR)
  - Elevated CRP
The Tap

- Sent fluid off for:
  - Cell count and differential
  - Gram stain
  - Culture & sensitivity
  - Crystals

- Try to get tap before giving antibiotics
5. Sports Knee Injuries

- Occurs during athletic endeavor
- Contact vs. Non-Contact (pivoting)
Patellar Dislocation vs. ACL vs. Meniscus Tear

Medial joint line tenderness

Ummmmm, why is the patella over there?

Lachman test
Can’t go wrong with Knee Immobilizer and Crutches
4. Back Pain

- 80% of adults experience LBP at some point in their lifetime
- Most common cause of job-related disability
- 25% of adults reported experiencing LBP during the past 3-mos
- Men and women are equally affected
Is there leg pain?
Treatment - LBP -

- Pain meds
- Anti-inflammatory
- Muscle relaxer
- Physical Therapy visit

Low Back Pain Exercises:
- Standing hamstring stretch
- Pelvic tilt
- Partial curl
- Extension exercise
- Quadruped arm/leg raise
- Gluteal stretch
- Side plank

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3. Ankle Sprain
Ottawa Ankle Rules

- Bone tenderness along the distal 6 cm of the medial malleolus
  ... OR ...

- Bone tenderness along the distal 6 cm of the lateral malleolus
  ... OR ...

- An inability to bear weight both immediately and in the emergency department for four steps
Treatment

- Long walking boot
- Weight-bear as tolerated
- Most end up with crutches initially
- Rest, ICE, Compression, Elevation
- Immediate PT is debatable
2. 5\textsuperscript{th} Metatarsal Fracture

- Tuberosity Avulsion
- Jones Fracture
Three Classic Zones & Fracture Frequency

| Zone 1 | 93% |
| Zone 2 | 4%  |
| Zone 3 | 3%  |
It’s All About the... Blood Supply
Tuberosity Fracture will still have good blood supply for healing.
Jones' Fracture
not a good blood supply
Treatment

- Short walking boot
- NWB until they see a surgeon
Jones’ Fractures (Zone 2) intramedullary screw fixation
I. Proximal Interphalangeal Joint Dislocation (PIPJ)
PIP Joint Dislocations

- Most commonly injured joint in sports
- Dorsal dislocation is most common
- Commonly seen in ball-handling sports
- Presentation:
  - Many are reduced in first few seconds by player
  - Global swelling about joint
Describing the Dislocation

Where is the base of the middle phalanx in relation to the proximal phalanx?
PIP Joint Dislocations

X-rays needed to evaluate for fracture or subluxation

Any dislocations that result in a fracture fragment need evaluated by a hand surgeon for stability
Volar plate disrupted in dorsal dislocations
PIPJ Dorsal Dislocation
- Nonoperative Treatment -

- Finger immobilized in a dorsal splint w/ 20-30 deg of flexion for 10 to 21 days

- After 2-3 weeks, start an active flexion program using buddy tapping
Irreducible Volar PIP Joint Dislocations

Condyle "buttonholes" between the central slip and lateral bands

Needs evaluated by surgeon for open reduction and repair
thank you!

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