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Practice primarily trauma related
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No conflicts to declare
Objectives:
Achieve a basic understanding of fractures/dislocations
Basic approach to assessment and management of patient
CAPA 2016

Format:
You have the basic “word” document of the principles

I will use “powerpoint” to demonstrate principles

Add to document or sit and take it in
CAPA 2016

WARNING:
This is GRAPHIC
This is real
Fractures

Bone is compromised

Aka - smashed, cracked, broken etc
Why do bones break?

High energy

Low/repetitive energy
Fractures

Pathologic -
Fractures

Classification
E - low
Bone - humerus
Location – diaphysis (shaft)
Pattern - transverse

A fracture is a soft tissue injury with a broken bone in it
Clinical

Pain
Deformity
Loss function
Crepitus
Bruised
Bleeding
Look at all of it
Management

Goals: stabilize, diagnose, treat, rehabilitate

Restore function
Assessment

In the field: first aid principles
ABC of ATLS
Stabilize the pt.
Check deformity, tenderness and painful areas, circulation
Splint and transport
Assessment

Injury history
General history

Examine – look, feel, move (patient moves first then you move it)
Inspect entire region – move other joints
Assessment

Important items to note: in context of the injury and patient

- Open or closed injury
- Circulation
- Neurologic function - static and evolving problems
- Compartments
Assessment

Splint – very helpful, comfortable, transport

X-ray – orthogonal views 90 degrees, AP + lateral, extra views depend on area involved - ankle mortise, shoulder axillary lateral, foot - oblique.
Xrays

First line.
Limited detail however.
Imaging

After xray if NOT helping, NOT comfortable you might want more to help…

CT – easy bony +/− soft tissues

MRI – soft tissues +/− bone

Bone scan

ultrasound
Xrays

Approach
Read the whole film
Confirm pt., part, side
Rule of 2’s – joint above and below, two views, two times – before and after intervention
Xrays

Describing fractures
What Bone, part of bone
Ulna
Diaphysis
Fracture geometry (oblique)

Displaced?
Length
Angle – look at apex of two longitudinal lines
Displacement – translation
Rotation – mostly clinical
Describing:
Diaphysis
Comminuted
100% displaced
Xrays

Humerus
Proximal shaft
Spiral
Min short
Not angled
~20 % displaced
Xrays

Displacement
Treatment

1. Is a reduction required? How – closed, or open?

2. How to stabilize? Plaster/pins/plate/nail?

3. Decisions made considering the fracture and the patient
When to operate?

Fail to obtain or maintain reduction
Displaced intraarticular
Open fracture
Pathologic
With vascular injury
Polytrauma
Dislocations

Loss of congruence of a joint
Neurovascular exam pre/post all (knee**)
Some need open reduction
Reduce sooner is better
Risk AVN in hip
Dislocation

Elbow
Traction
Align
Flex with P-A pressure on olecranon
Local/sedation
Check arc of stability
Dislocation

Hip
Most anterior
Dashboard
Check knee (PCL)
Acetabulum and head fractures
Check stability
Dislocation

Shoulder
Anteroinferior most
Axillary nerve
Avoid throwing position
Older – vascular injury, fractures, cuff
Young surgery?
Local or sedation
Special

Open – not compound
Bone communicates with outside
Out-in
In-out
Graded 1-3(a-c)

ER – clean gross contamination
reduce/splint
antibiotic and tetanus
xrays
Special

Open
Open
Stabilize bone
Deal with wound coverage
Antibiotics
Repeat
Special

Open
Plates
Nail
Not good
Take Home

Approach each patient/injury in a stepwise fashion

Be systematic

Don’t get distracted by the obvious – clinical or xray