Shoulder Injuries

Sept 2014

Anterior dislocation (95%)

70% subcorocoid, 30% subglenoid, subclavicular, intrathoracic
Chronic subluxation common in elderly
dislocation more common if >40yrs, 1st dislocation, fall >1 flight of stairs, fight, MVA
Recurrent in 50% (usually related to Bankart lesion and lesion in inf glenohumeral lig)

Complications

Rotator cuff inj (esp subscapularis; in 86% if >40yrs)
Greater tuberosity #
    10-15%; doesn't change mng; if significantly displaced, likely rotator cuff tear
humeral neck
Arterial compromise
    usually axillary artery in elderly; lat thorax bruising, axillary bruit, absent radial pulse
Bankart lesion
    avulsion ant glenoid labrum, tear anterior capsule, assoc with recurrent dislocations
Hill-Sachs deformity
compression # post-lat humeral head due to abrasion by glenoid
in recurrent dislocations, incidence 25-75%
Brachial plexus inj
    esp if >50yrs, assoc #, haematoma; multiple nerves in 50%; usually incomplete inj;
    sensory recovery faster than motor; usually good prognosis with recovery within 3/12)
Axillary nerve inj
    most common neuro inj; occurs in 40% if EMG tested, 10-25% clinically
Other nerve inj
    suprascapular 15%, musculocutaneous 10%, radial/ulnar 7%, median 5%
Recurrent dislocation
    <20yrs, >90% recurrence rate; >40yrs, 10-15% recurrence rate

Reduction: success rate in 70-96% regardless of technique used

Shoulder Relocation

Hippocratic technique

aka Traction-countertraction.
Patient supine w/ arm abducted.
Sheet placed under axilla to provider of counter-traction.
Traction on abducted arm with elbow flexed + gentle int/ext rotation
or arm or lateral pressure on proximal humerus

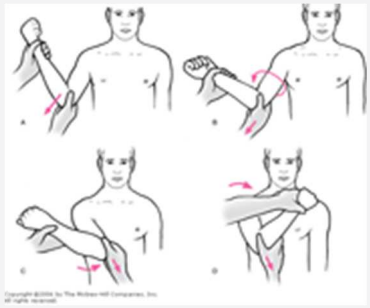
Stimson technique

Patient prone w/ dislocated limb hanging over the side.
Extra weight applied.
Addition of intra-articular LA assists.
Relocation in 20-30mins.

Scapular Manipulation

Begins like *Stimson method*
Scapula pushed medially using thumbs (stabilising the superior part)

Milch technique
Patient supine
Gradual abduction & external rotation of shoulder
w/ elbow fully-extended traction is applied.
other hand can help manipulate humeral head into place



External Rotation technique
Patient supine, arm *ADDUCTED,* elbow flexed to 90*.
Arm slowly externally rotated
No traction is applied.
Must be done VERY slowly.

Cunningham technique
Patient sitting upright w/ back vertical
Arm *ADDUCTED* and vertically downwards. Elbow flexed at 90*.
arm on doc's shoulder, doc's wrist over patient's forearm
Operators spare hand massages *trapezius, deltoid & biceps*
Ask patient to hold their 'shoulder blades' together and sit up straight.

Spaso technique
Supine, arm lifted vertically while traction applied, slight external rotation
No evidence that immobilisation reduces recurrence rate; 4/52 for 1st dislocation, few days for recurrent
OT if >4 dislocations

Posterior dislocation (<1%)

Radiologically:
Loss of *half-moon* (elliptical overlap of humeral head & glenoid)
Lightbulb (or drumstick) appearance of humeral head.
Rim sign - ↑ distance b/ween anterior glenoid & articular surface of humeral head.
Reverse Hill-Sachs deformity. Impaction fracture of anteromedial head.

Subacromial > subglenoid, subspinous

MOI: int rotation and adduction; electrocution and seizures
May be bilateral
Can also occur with blow to anterior shoulder
Often associated with posterior glenoid and reverse Hill-Sachs deformity; NVI less common

Reduction
Traction with arm at 90 deg abduction and external rotation; or traction to adducted arm and assistant pushes humeral head anteriorly

Complications
posterior glenoid rim, reverse Hill-Sachs (# humeral head/shaft/lesser tuberosity)

Luxatio erecta

Inferior dislocation
Results from *hyperabduction force* which levers the humeral neck against the acromion.
Inferior capsule tears.
Presentation: Humerus fully *ABDUCTED,* elbow flexed; Hand on or behind head.

Reduction via upward & outward traction of humerus.
ORIF may be required if humeral head *button-holed* through capsule.
Complications: significant risk NVI (60% neuro injury, usually axillary)
80% have rotator cuff injury or #; # proximal humerus
Management: need reduction ASAP via traction on abducted arm in line of humerus - clunk then swing arm into adduction

Rotator Cuff Tears/Tendinopathy

Suprapinatus, subscapularis, infraspinatus, teres minor
Chronic impingement between acromion & coracoacromial lig ± superimposed acute injury. Tears also in acute shoulder dislocation.
Pain & loss of strength on flexion, abduction & external rotation.
Positive drop test (passive abduct to 180o, ask pat to adduct: below 90o arm may drop as rotator cuff used instead of deltoid)
Painful arc 70-120o
USS inv of choice. MRI an alternative. Xray may show calcification in tendons & rule out #
Mx: Rest, NSAID, physio. Sx if severe rupture.

Subacromial Bursitis

Cushions coracoacromial lig from supraspinatus.
Assocs: Repetitive throwing, lifting, supraspinatus tendinitis, RA, gout.
Features: Tender over greater tuberosity of humerus, painful abduction arc 70-120o.
Inv: USS may show bursa fluid or tendon/bursa impingement on acromion.
Mx: Rest, sling only for few days, NSAID, physio. Steroid/LA if persistent.