Shoulder Dislocation

Shoulder Dislocations
Extent: 45-60 minutes
Instructor: one
Students: 2-4
Equipment: skeleton shoulder model or anatomical diagrams

Activity Outline:

General Goal: This station has two main goals. First is to drill students in the procedure for reducing a shoulder dislocation. Second is to discuss in some detail the theory and pathophysiology of anterior shoulder dislocations.

➤ Students and instructor will discuss, and during subsequent simulated reduction will verbalize, criteria for diagnosing anterior shoulder dislocation:
  ➤ proper mechanism of injury (indirect injury);
  ➤ patient can't bring arm across chest to touch opposite shoulder (instructor will note that this applies only to anterior dislocations but this accounts for the vast majority of shoulder dislocations); and
  ➤ student can see and feel a "notch and hole" on exam of the shoulder.

➤ Students and instructor will discuss, and during subsequent simulated reduction will verbalize, criteria for attempting shoulder reduction in the field, and the reasons for them:
  ➤ must be long transport time, and must have on-line command or standing orders (discuss the sequelae of leaving shoulder out, including damage to bones, blood vessels, nerves; and role of reduction for pain control); or,
  ➤ if can't evacuate patient unreduced (e.g., small passage); or
  ➤ if absent neuro or vascular status (note that this is a criterion for reduction on the street, too); or
  ➤ so patient can self-rescue, if required for safety.

➤ Students will discuss advantages and disadvantages of hanging traction vs. direct reduction.
  ➤ Passive nature of hanging traction -- less likely to cause harm
  ➤ Need for adequate location for hanging traction
  ➤ Need to use carefully-padded sling for hanging weight to avoid neurovascular compromise from the sling

➤ Various techniques for direct reduction:
  ➤ Some of which may cause danger of humerus fracture especially in older patients (e.g., Hippocratic "dirty sock method" with foot in axilla).
  ➤ Also some other manipulation techniques including scapular manipulation and simply bringing into the extended and externally-rotated position.
  ➤ Some interesting variations such as "Eskimo technique" (traction upwards on patient lying on uninjured side) that can be accomplished by one person on the Greenland ice floes.
  ➤ WEMSI has chosen "Milch technique" which is traction slightly upward with shoulder extended and externally rotated ("throwing a baseball" overhand) as being easy and having high rate of success.

➤ Students will discuss and practice an appropriate detailed neurovascular check for a suspected shoulder dislocation:
  ➤ neurovascular and ROM check of distal extremity:
  ➤ radial pulse and capillary refill
  ➤ check sensation in three distributions in hand (e.g., thenar eminence, little finger, and back of web space of thumb), and in forearm, and in "patch" area over shoulder; document
  ➤ check active range of motion (have patient try to perform)
  ➤ check motor strength in three distributions in hand (finger-spreading, thumb/little-finger opposition, holding fingers extended against resistance)

➤ Students will see instructors perform a simulated shoulder reduction, and then
practice shoulder reduction, on a (simulated) team member who slipped and hit outstretched hand against tree; patient has had dislocations before and has self-diagnosed:

➤ Position patient properly (on back, with arm extended and externally rotated; “throwing a baseball”) and position assistant (on opposite side, with sling around patient’s chest for countertraction.)

➤ Apply proper amount of force (verbalize this is half of force to be used in actuality); apply slowly and gently yet firmly increase force, and stop if patient indicates markedly increasing pain; generally at 30°-45° angle higher than lateral unless patient comfort directs otherwise; use “figure 8 sling” on elbow

➤ Verbalize: that this is to be continued for 15 minutes; verbalize that additional elevation may be tried.

➤ Once it is reduced, place arm across chest and immobilize.

➤ Repeat entire neurovascular check.

Checklist

➤ Ask: verbalize criteria for diagnosing shoulder dislocation:
  ❏ proper mechanism of injury (indirect injury)*
  ❏ can’t bring arm across chest to opposite shoulder*
  ❏ WEMT can see and feel a “notch and hole” on exam of the shoulder*

➤ Ask: verbalize criteria for attempting reduction in the field
  ❏ must be long transport time, and must have on-line command or standing orders; or,
  ❏ if can’t evacuate patient unreduced (e.g., small passage)
  ❏ if absent neuro or vascular status
  ❏ so patient can self-rescue, if required for safety

➤ Ask: verbalize advantages and disadvantages of hanging traction vs. direct reduction.

➤ Tell student: no location nearby for hanging traction so must use direct method; perform shoulder reduction on (simulated) team member who slipped and hit outstretched hand against tree; patient has had dislocations before and has self-diagnosed; perform technique and verbalize as needed:

  ❏ Verbalize use of medication and/or suggestion/guided imagery/hypnosis as appropriate*

  ❏ Neurovascular and ROM check (sequence not required)
    ❏ radial pulse and capillary refill*
    ❏ sensation in three distributions in hand (thenar eminence, little finger, and back of web space of thumb), forearm, and “patch” area over shoulder; document*
    ❏ active range of motion (student asks patient to try)
    ❏ motor strength in three distributions in hand (finger-spreading, thumb/little-finger opposition, holding fingers extended against resistance)*

  ❏ Position patient properly (on back, with arm extended and externally rotated; “throwing a baseball”) and position assistant on opposite side, with sling around patient’s chest for countertraction.*

  ❏ Apply proper amount of force* (verbalize this is half of force to be used in actuality); apply slowly and gently yet firmly increase force, and stop if patient indicates markedly increasing pain; generally at 30°-45° angle higher than lateral unless patient comfort directs otherwise; use “figure 8 sling” on elbow; verbalize danger of impairing circulation with sling

  ❏ Ask student to verbalize roughly how long this is to be continued: 15 minutes

  ❏ Ask student to verbalize additional options if doesn’t seem to be working: acceptable answers: more elevation of arm, manipulation of humeral head, medication, other methods

  ❏ Once reduced, place arm across chest and immobilize.*

  ❏ Repeat entire neurovascular check.*