

Surprising Findings in 3633 Adults with Shoulder Dislocation

Injuries traumatic enough to dislocate the shoulder can also cause other additional damage to the surrounding soft tissues and bone. Recognizing how often this happens is important in making sure surgeons assess each shoulder carefully for other injuries.

In order to find out how often associated injuries occur along with traumatic anterior (forward direction) shoulder dislocations, the records of over 3600 patients were reviewed. The researchers looking for this information relied on ultrasound studies to confirm such injuries. The presence and prevalence of nerve damage, fractures, and rotator cuff injuries were reported.

The most common associated injuries included axillary nerve palsy, brachial plexus injury, detachment of the rotator cuff, and fracture of the greater tuberosity (bony bump on the head of the humerus). Any combination of these injuries was also possible.

Patients in the study ranged in ages from 13 to 104. Two-thirds of the group was male; the remaining one-third was female. Initial treatment was to reduce the dislocation. This was done by sedating the individual and performing a procedure to put the shoulder back in the socket.

This type of reduction is called a closed reduction because the patient is conscious during the procedure and surgical incision is not required. For most of the patients in this group, closed reduction was effective. In a small number of cases (24), general anesthesia was required to complete the closed reduction and in three cases, open reduction was needed.

Patients were followed at regular intervals. Anyone who did not improve had an ultrasound or MRI test done to look for residual soft tissue or bony changes. Motor and sensory testing was done when there were any signs of nerve deficits or nerve palsy.

As it turned out, there was about 40 per cent of the total group who had more than just an isolated shoulder dislocation. One-third was fractures or rotator cuff tears and the rest were either neurologic injuries or a combination of injuries. Rotator cuff injuries affecting just one tendon were observed in 44 per cent of the group. More than half (55.6 per cent) damaged more than one of the four tendons that make up the rotator cuff.

Younger patients with sports injuries were more likely to be male and have single nerve lesions. Older patients (60 years old and older) were at greater risk of multiple-nerve injuries. Women who dislocated the shoulder during low-energy falls made up the bulk of this second age group.

Further analysis of the patients revealed that older women who fall are actually the group at greatest risk for shoulder dislocations and especially dislocation with associated injuries involving nerve damage. Anyone with a rotator cuff tear or greater tuberosity fracture was also at increased risk for nerve deficits.

In summary, early identification of injuries associated with shoulder dislocation is important when planning treatment and discussing prognosis. Unseen, undiagnosed, and untreated damage to the surrounding cartilage, bone, nerves, muscles, tendons, and other soft tissues can compromise final outcomes. As this study showed, the number of times such associated injuries occurs is much more often than previously suspected.

Surgeons are advised to carefully examine even what looks like a simple anterior shoulder dislocation. If there has been a force powerful enough to dislocate the shoulder, damage to the nearby areas is also possible. Even low-energy falls when affecting older adults can result in additional injuries.

On the basis of the findings in this study, routine imaging is recommended for shoulder dislocations in anyone 60 years or older. Patients can be counseled more appropriately about necessary treatment and the possibility of delayed recovery in such cases.

Reference: C. M. Robinson, BMedSci, FRCSEd, et al. Injuries Associated with Traumatic Anterior Glenohumeral Dislocations. In *The Journal of Bone and Joint Surgery*. January 2012. Vol. 94A. No. 1. Pp. 18-26.