Standard axillary radiographs of the shoulder may mimic posterior subluxation of the lateral end of the clavicle


OBJECTIVES
On standard axillary radiographs of normal shoulders, the clavicle may appear subluxated posteriorly. This subluxation might be viewed as an indication for surgical stabilization in acromioclavicular (AC) injury. The purpose of this study was to assess the reliability of identification of anteroposterior displacements of the AC joint on standard axillary radiographs of the human shoulder.

METHODS
We performed 170 radiographs of the AC joint in 10 cadaveric shoulders using various projection angles. The distance from the anterior margin of the acromion to the distal clavicle was measured to identify an "optimal" view to image the true anteroposterior alignment of normal AC joints.

RESULTS
On the standard axillary view of intact shoulders, we found an average posterior translation of 1.7 mm (range, -3 to 7; SD, 2.8) and of 0.9 mm (range, -5 to 5; SD, 2.8) in an "optimal view," tilted 15 degrees dorsal and 15 degrees lateral.

CONCLUSIONS
The standard axillary radiograph has a very high sensitivity but poor accuracy in identifying a posterior clavicular translation in the AC joint. We could not identify a reliable modification of the axillary radiographic projection to improve the accuracy. Therefore, an apparent posterior subluxation of the clavicle identified on an axillary radiograph is more likely a false positive finding than an identification of a true pathology.

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