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Titel des Beitrags:
Critical shoulder angle combined with age predict five shoulder pathologies: a retrospective analysis of 1000 cases.

Abstract:
Acromial morphology has previously been defined as a risk factor for some shoulder pathologies. Yet, study results are inconclusive and not all major shoulder diseases have been sufficiently investigated. Thus, the aim of the present study was to analyze predictive value of three radiological parameters including the critical shoulder angle, acromion index, and lateral acromion angle in relationship to symptomatic patients with either cuff tear arthropathy, glenohumeral osteoarthritis, rotator cuff tear, impingement, and tendinitis calcarea. A total of 1000 patients’ standardized true-anteroposterior radiographs were retrospectively assessed. Receiver-operating curve analyses and multinomial logistic regression were used to examine the association between shoulder pathologies and acromion morphology. The prediction model was derived from a development cohort and applied to a validation cohort. Prediction model’s performance was statistically evaluated. The majority of radiological measurements were significantly different between shoulder pathologies, but the critical shoulder angle was an overall better parameter to predict and distinguish between the different pathologies than the acromion index or lateral acromion angle. Typical critical shoulder angle-age patterns for the different
shoulder pathologies could be detected. Patients diagnosed with rotator cuff tears had the highest, whereas patients with osteoarthritis had the lowest critical shoulder angle. The youngest patients were in the tendinitis calcarea and the oldest in the cuff tear arthropathy group. The present study showed that critical shoulder angle and age, two easily assessable variables, adequately predict different shoulder pathologies in patients with shoulder complaints.