

CORRELATION BETWEEN ACROMIOHUMERAL DISTANCE AND ROTATOR CUFF TEAR

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Rotator cuff tear causing narrowing of the subacromial space quantified as acromiohumeral distance, which can be measured from shoulder x - ray and MRI. This study, is to determine the mean acromiohumeral distance measurement of rotator cuff tear in local population and to correlate between x - ray and MRI. This is a retrospective study conducted in a single centre from 2014 - 2018. Mean value of measured acromiohumeral distance from x-ray and MRI were calculated. The presence of rotator cuff tear, muscle atrophy and fatty degeneration were analyzed. 100 patients' X-Ray were recruited with mean age of 52 (± 11.4). 59% of them were male. Half of the patient presented with complete tear of supraspinatus tendon. The mean acromiohumeral distance for complete tear based on x-ray measurement was 6.30mm(± 0.96), while the MRI was 6.00mm(± 0.88). There was positive correlation between the two factors($p < 0.001$). Out of 100 patients only 26% associated with muscle atrophy and 7% with fatty degeneration. The acromiohumeral distance does not correlate with muscle atrophy and fatty degeneration (P value 0.100 and 0.317). X-ray and MRI both give significant reading correlation, usage of MRI over x-ray is more superior because it can detect soft tissue injury with lesser radiation. Western study showed that from x-ray, distance below 7mm associated with complete tendon tear. From this study the mean acromiohumeral distance in Malaysian population for complete tear is lower and the distance has no correlation with muscle atrophy and fatty degeneration.

Keywords: Correlation, Acromiohumeral Distance, Rotator Cuff Tear