

The Correlation between Acromion Types, Subacromial Space Dimensions and Acromial Undersurface Degenerative Changes: An Anatomical Study among Egyptians

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Abstract

The correlation between acromion types and the dimensions of subacromial space is a matter of debate especially with accompanying degenerative changes on the inferior surface of acromion. Acromions were sorted into three types in 132 scapulae by measuring the acromion inclination angle. Subacromial space surface area and its relative ratio to the total surface area of the scapula were measured. Scapulae in each acromial type were divided into two groups: normal scapulae with smooth inferior surface of acromion and degenerative scapulae with osteophytes or facies articularis acromialis on the inferior surface of acromion. Then, the measured parameters were compared between the different types of acromion as well as between normal and degenerative scapulae. The incidence of acromion types was 31.8% type I, 51.5 % type II and 16.7 % type III. No significant difference in the subacromial space surface area between the three types of acromion. The degenerative signs were more common in acromion type III. The ratio of two areas was significantly decreased in acromion type III. Moreover, there was a significant decrease in subacromial space surface area and the two areas ratio in degenerative scapulae with acromion type III. In the collected Egyptian scapulae, type II (curved) acromion was the commonest type and the degenerative signs on the inferior surface of acromion were more prevalent in type III (hooked) acromion. There was a significant decrease in the subacromial space 2 surface area to the total surface area of the scapulae in type III (hooked) acromion and particularly with accompanying degenerative signs.

Key Words: acromion types, subacromial space dimensions, osteophytes, facies articularis acromialis.

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