



Title	How accurate is physical examination in diagnosing subacromial impingement?
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Outcome of the Deltoid-flap Operation in Massive Rotator Cuff Tears in Elderly

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Introduction: The repair of massive rotator cuff tear by direct repair is often impossible. In these cases, the deltoid flap operation is one of the options. This retrospective study was to evaluate our local result of deltoid flap operation in case of massive cuff tears with the elderly patients.

Materials and Methods: Between 2007 and 2012, a total of 6 patients (5 male, 1 female; mean [range] age, 66.8 [55-83] years) suffered from a massive rotator cuff tear with the deltoid flap operation done in our unit. The mean follow-up time was 20.8 (range, 7-33) months. Clinical outcomes included pain score in visual analogue scale, subjective satisfaction rate (1 poor to 10 excellent), and range of moment. Radiologically, any increase of osteoarthritic changes and upward humeral head migration was assessed.

Results: All patients had a substantial improvement in pain relief (mean pain score dropped from 6.1 to 1.8), and gave a high rate of satisfaction (mean score of 6.7 which was good). The ranges of movement of shoulder were maintained or improved in majority of patients. No case showed the increase of osteoarthritic changes over glenohumeral joint and the upward humeral head migration radiologically.

Discussion and Conclusion: Our study showed that the deltoid flap operation over massive cuff tear is a good option in those relatively old-age patients in terms of better pain relief, high rates of satisfaction, and optimally restored range of movement.

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How Accurate is Physical Examination in Diagnosing Subacromial Impingement?

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Introduction: Primary subacromial impingement occurs when coracoacromial complex impinges the rotator cuff during movement of shoulder. The study aimed to investigate the accuracy of 5 described impingement signs in predicting a type III acromion found during shoulder arthroscopy.

Methods: A total of 103 shoulder arthroscopies performed by the senior author between July 2008 and June 2013 were recruited. Significant subacromial impingement was defined as a type III acromion (hooked acromion with and without subacromial osteophyte). Patients were assessed in a preoperative assessment clinic 1 week before the index operation. Five impingement signs, including 2 active signs (painful arc and Jobe's test) and 3 passive signs (lateral impingement sign, Neer and Hawkins impingement signs), were investigated. Correlation between the impingement signs and type III acromion was examined using Chi-square test. The sensitivity and specificity of the impingement signs were reported.

Results: Type III acromion was found in 45% of the shoulders examined. The percentages of positive impingement signs elicited in the preoperative period were: active painful arc (61%), Jobe's test (69%), lateral impingement sign (58%), Neer impingement sign (37%), and Hawkins sign (59%). Only lateral impingement sign ($p = 0.018$) and Hawkins sign ($p = 0.047$) were significantly associated with type III acromion identified intra-operatively, with respective sensitivity and specificity of 73%, 53% and 73%, 54%.

Conclusions: Passive impingement tests were more reliable in predicting the presence of type III acromion identified during shoulder arthroscopy.