

Correlation between five clinical subacromial impingement tests and manual muscle tests of the supraspinatus.

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Purpose: The purpose of this study was to determine whether a correlation exists between five subacromial impingement (SI) tests and weakness of the supraspinatus muscle. **Methods:** The sample size consisted of 105 patients who presented to this facility during a 1-yr study of shoulder complaints and were evaluated by 1 of 10 chiropractors. Bilateral shoulder complaints were noted in 6 of the patients and were included in the study to increase the original sample size to 111. The sample size was reduced to 71 eliminating patients who did not demonstrate a positive finding in 1 of the 5 subacromial impingement tests. The five clinical subacromial impingement tests were the following: Neer's Impingement Test (NIT), Hawkins' Impingement Test (HIT), Clancy's Impingement Test (CIT), Feder's Impingement Test (FIT) and Dawbarn's Test (DT). The two rotator cuff manual muscle tests were the standing supraspinatus at 30 degree abduction test (S30) and the sidelying supraspinatus test at 45 degrees (S45). Weakness was defined as a muscle demonstrating 5-/5 or less when manually muscle tested. Data was correlated between each positive SI test and the corresponding supraspinatus manual muscle test for the remaining 71 cases. **Results:** The data comparing weakness of the supraspinatus muscle with positive findings in the five clinical subacromial impingement tests were as follows: S30 and NIT (65%); HIT (73%); CIT (68%); FIT (74%); DT (100%); S45 and NIT (53%); HIT (69%); FIT (74%);and DT (100%). **Conclusion:** The highest correlation in both the S30 and S45 manual muscle tests was the DT, however, this data was statistically insignificant because of the low number of DT performed. FIT demonstrated the highest clinical correlation in both the supraspinatus tests followed by HIT, CIT and NIT respectively. There seems to be a definite correlation between subacromial impingement and supraspinatus muscle weakness.

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