OP27 DIAGNOSTIC ACCURACY OF CLINICAL TESTS FOR SUBACROMIAL IMPINGEMENT SYNDROME (SIS): A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background Shoulder complaints are the third most common cause of musculoskeletal problems. Subacromial impingement syndrome (SIS) is the most frequent cause of shoulder pain. SIS is a clinical syndrome that indicates pain and pathology relating to the subacromial bursa and rotator cuff tendons within the subacromial space.

Objective The aim of this systematic review and meta-analysis is to examine the diagnostic accuracy of clinical tests for diagnosing SIS.

Methods A systematic literature search was conducted to identify all studies that examined the diagnostic accuracy of clinical tests for SIS test with surgery as the reference standard. The methodological quality of selected studies was assessed using the quality assessment of diagnostic accuracy studies (QUADAS) tool. Studies were combined using a bivariate random effects model. Heterogeneity was assessed using the variance of logit transformed sensitivity and specificity.

Results Our systematic literature search yielded 16 articles. Ten studies with 1684 patients are included in the meta-analysis. The Hawkins-Kennedy test, Neer's sign, empty can test are shown to be useful for ruling out rather than ruling in SIS, with greater pooled sensitivity estimates (range 0.69–0.78) than specificity (range 0.57–0.62). A negative Neer's sign reduces the probability of SIS from 45% to 14%. The drop arm test and lift off test have higher pooled specificities (range 0.92–0.97) than sensitivities (range 0.21–0.42) indicating that they are useful for ruling in SIS if the test is positive. The methodological quality of the studies included ranges from moderate to good. However, the time delay between the clinical test and the reference test is not optimal in some studies and it is unclear if the assessors were blinded to outcome of index and reference tests.

Discussion This is the first systematic review to examine the diagnostic accuracy of these common clinical tests, with a surgical diagnosis as the reference standard. However, there is a need for future high quality prospective cohort studies in primary care settings to investigate the diagnostic utility of these clinical tests.

Conclusion This systematic review quantifies the diagnostic accuracy of three clinical tests for SIS. Application of these tests as diagnostic tools may serve to improve appropriate diagnosis and management of individuals with shoulder complaints.