

Diagnostic Utility of the Active Compression Test for the Superior Labrum Anterior to Posterior (SLAP) Tear: A Systematic Review and Meta-Analysis

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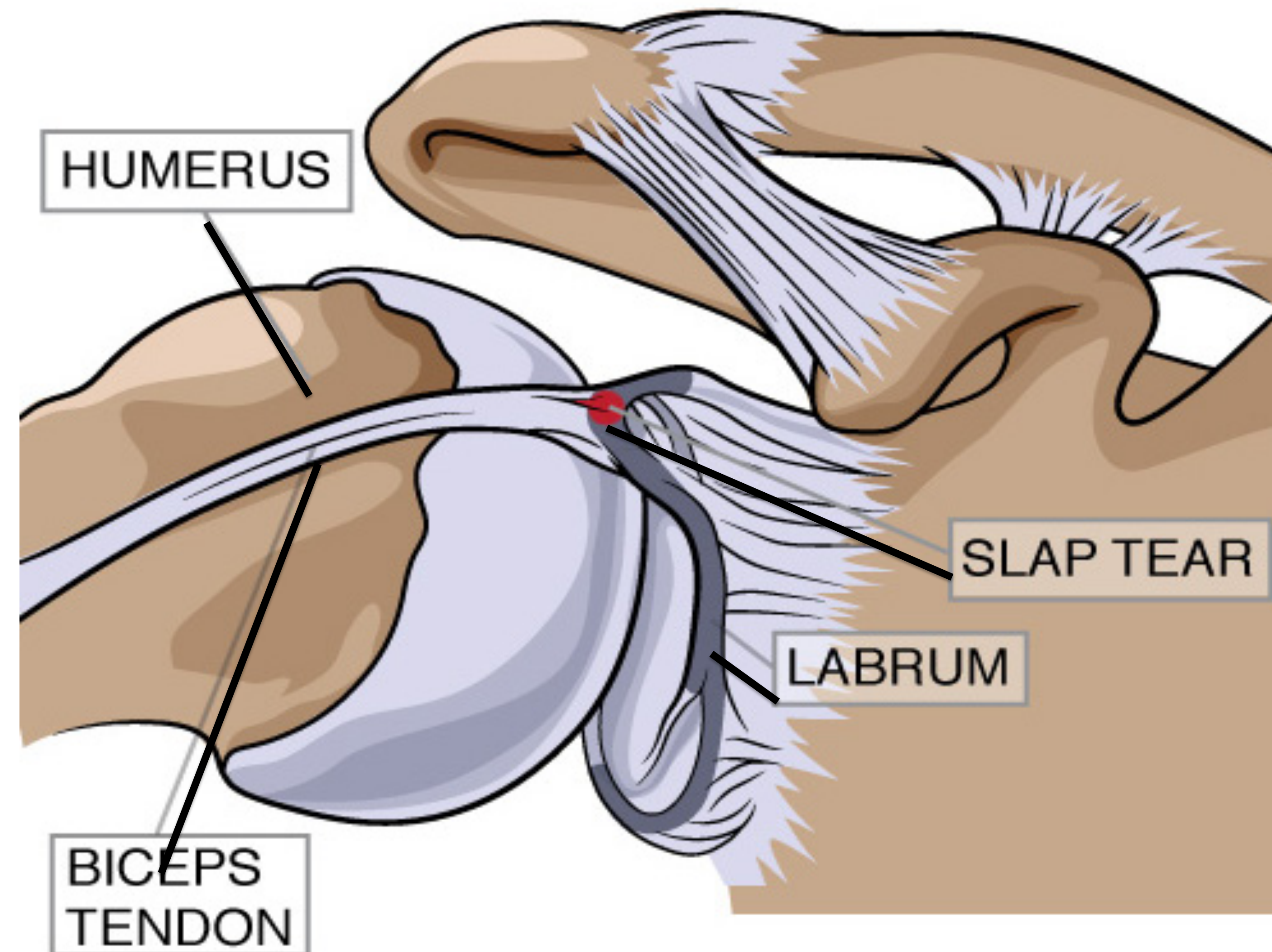
Background

A SLAP tear is a common injury to the glenoid labrum due to increased anatomical stress during repetitive movements or trauma of the shoulder.

The Active Compression Test is a clinical maneuver used by 70% of physicians to assess the likelihood of a tear being present.

There have been three previous systematic reviews looking at the sensitivity and specificity of the Active Compression Test.

The most recent comprehensive review, Hegedus et al., cautioned against the use of this test, concluding that it has overall poor diagnostic accuracy.



<http://www.thepinsta.com/slap-tear-rotator-cuff>

Conclusion

The Active Compression test alone does not show great use as a diagnostic or screening test for SLAP lesions. It may, in conjunction with other special tests, provide more conclusive evidence of a potential SLAP lesion.

Clinical Relevance

Physical therapists, orthopedic surgeons, and medical doctors continue to employ the Active Compression test in their diagnoses and treatment sessions even with available evidence suggesting the opposite. This systematic review and meta-analysis shows just how ineffective the Active Compression test is and how little it tells a clinician about a potential labral pathology.

Purpose

The aim of this systematic review and meta-analysis was to compile the available evidence of the Active Compression test, evaluate its diagnostic accuracy, and determine likelihood ratios and pre/post-test probabilities.

Methods

The study design is a systematic review of studies published in English from 1999-2018 and subsequent meta-analyses of data from studies.

Authors utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for determining study inclusion/exclusion and Quality Assessment of Diagnostic Accuracy Studies (QUADAS-2) scale for risk of bias and applicability concerns.

Subjects from studies had a *related* shoulder dysfunction (including a SLAP tear) and were examined using the Active Compression Test AND underwent arthroscopic or MRI evaluation.

Authors gathered additional information on Snyder's classification (Type I-IV) of labral tears when provided in any included studies.

Analysis

Meta-Analysis: Full Composite of Studies (n = 18)

SLAP Lesion Diagnosis (All Forms)	Diagnosis of Other Conditions
631 = True Positive	915 = False Positive
252 = False Negative	987 = True Negative
Sensitivity = 71.5 (68.8, 74.0)	Specificity = 51.9 (50.7, 53.1)
(+) Likelihood Ratio = 1.48 (1.39, 1.57)	(-) Likelihood Ratio = 0.55 (0.49, 0.62)

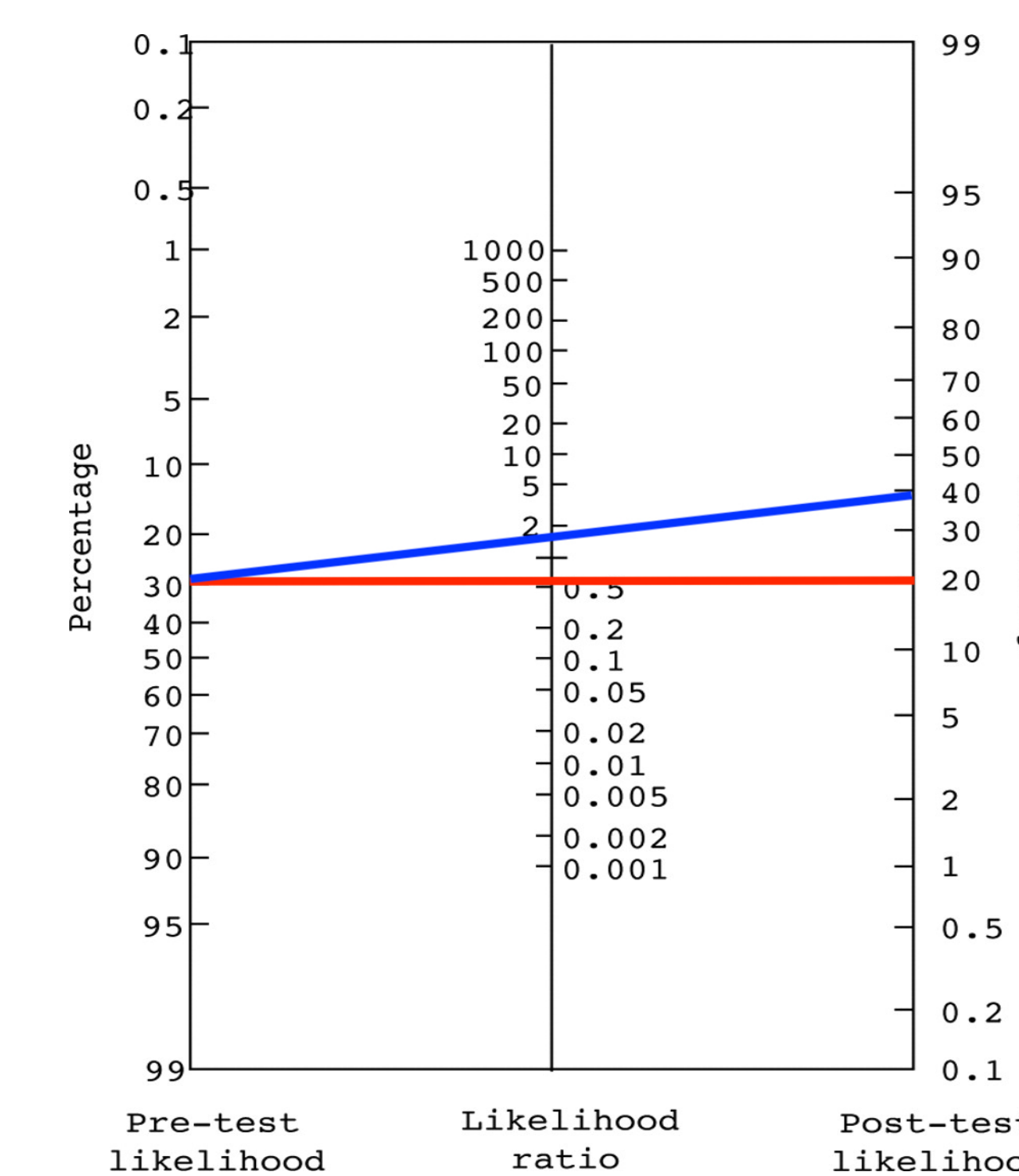
Meta-Analysis: Studies with O'Brien Removed (n = 17)

SLAP Lesion Diagnosis (All Forms)	Diagnosis of Other Condition
578 = True Positive	914 = False Positive
252 = False Negative	775 = True Negative
Sensitivity = 69.6 (66.9, 72.3)	Specificity = 45.9 (44.5, 47.2)
(+) Likelihood Ratio = 1.28 (1.21, 1.36)	(-) Likelihood Ratio = 0.66 (0.58, 0.74)

References

Hegedus EJ, Wright AA, Cook C. Orthopedic special tests and diagnostic accuracy studies: house wine served in very cheap containers. Br J Sports Med. 2017 Nov;51(22):1587-9. doi: 10.1136/bjsports-2017-097633.

Results



The Fagan's Nomogram indicates the change in the post-test probability from the pre-test probability with a positive or negative test result.

Blue indicates a positive test result
Red indicates a negative test result

