

USING A COMBINATION OF THREE CLINICAL TESTS FOR DETECTING MENISCAL TEARS INCREASES THE ACCURACY OF THE CLINICAL EXAMINATION

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Background and Aims

Recent studies indicate that using combination of two or more clinical tests for detecting meniscal tear gets a higher sensitivity and specificity than any clinical test performed individually. The aim was to investigate the validity of combination of three clinical tests for detection of meniscal tear (Thessaly Test, joint line tenderness, McMurray Test) and compare it with the results of another combination of three clinical tests (Ege Test, Steinmann I Test, atrophy of the thigh muscles) as well as with all six clinical tests performed individually.

Methods

The study involved 84 participants who were divided into two groups: the "OP group" consisting of participants diagnosed with a meniscal tear and who consequently underwent arthroscopic meniscectomy, and the "CN group" comprising of healthy participants with no history of knee injury. Two independent observers recorded the results of six clinical tests: Thessaly Test, joint line tenderness, McMurray Test, Ege Test, Steinmann I Test, and atrophy of the thigh muscles. The tests were grouped into two combinations of three tests each. The first combination included Thessaly Test, joint line tenderness and McMurray Test, while the second combination comprised of remaining three tests. Cochran's Q Test was used to calculate interobserver variability for both combinations of tests and for each test performed individually.

Results

First combination of three clinical tests when considering the combination positive if two tests are positive had high sensitivity of 95%, specificity of 90.9%, and an overall accuracy of 92.9%. Furthermore, when compared to clinical tests performed individually, the combination demonstrated superior results.

Conclusion

This study shows that using a combination of three clinical tests for detection of meniscal tear (Thessaly Test, joint line tenderness, McMurray Test), when considering the combination positive if two tests are positive, has greater accuracy than six tests performed individually. There were no statistically significant differences between observers.

Keywords: Meniscus; Exercise; Athletes.