ACCURACY OF MEDIAL AND LATERAL MENISCAL PALPATION USING ULTRASOUND IMAGING VERIFICATION

Calley DQ, Bengtson JD, Langseth GT, Warshaw ME

Mayo Clinic Rochester

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BACKGROUND AND PURPOSE

Accuracy in knee meniscal palpation as part of a physical examination is helpful in determining a physical therapy differential diagnosis. Meniscal palpation most often occurs in a seated or supine position. The purpose of this study was to determine the accuracy of both medial and lateral meniscal palpation by examiners with different levels of physical therapy experience, and to determine the influence of supine and seated positions on palpation accuracy.

MATERIALS AND METHODS

Twenty-four healthy adults (12 females), ages 20-39 participated. Three randomized examiners with varying levels of experience placed a paper clip across the center of the medial and lateral joint line of the right knee in each position. Ultrasound imaging was used to assess palpation accuracy and palpation distance from the center of the meniscus.

ANALYSIS:

Accuracy was determined for each examiner with 95% confidence intervals. McNemar's test of marginal homogeneity was used to compare accuracy between the two positions. Cochrane's Q test was used to compare accuracy between examiners.

RESULTS:

Palpation accuracy of the medial meniscus was 100%, 95.8%, and 66.7% in seated and 29.2%, 25.0%, and 41.7% in supine respectively for the three examiners. For the lateral meniscus, palpation accuracy was 100%, 91.7%, 87.5% in seated and 45.8%, 58.3% and 70.8% in supine. Using McNemar's test, the seated position was more accurate for two examiners ($p<.001$ and $p<.001$ to .021) but not the third examiner ($p=.238$ to .344).

CONCLUSIONS:

Medial and lateral meniscal palpation in seated was more accurate than supine for two of the three examiners. Examiner experience did not positively influence palpation accuracy in the seated position.

IMPLICATIONS:

Palpation accuracy of the medial and lateral meniscus is improved in a seated position. Years of clinical experience do not correlate with improved accuracy rates when palpating the medial and lateral meniscus.