Effect of prior anterior superior iliac spine compression testing on second assessor findings: implications for inter-examiner reliability testing.

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Abstract

BACKGROUND: Osteopathic physicians use palpation to diagnose sacroiliac joint somatic dysfunction (SD) -- including the Anterior Superior Iliac Spine (ASIS) Compression Test for dysfunctional side lateralization. (Literature suggests right-sided lateralization in 80% of asymptomatic individuals). Accurate, reliable tests are crucial however to diagnose SD and kappa (κ) analysis is a gold-standard to determine the degree of interexaminer reliability for tests. Few studies have examined the effect the palpatory examination has on subsequent diagnostic findings and therefore on κ-values.

METHODS: There were two phases to the study -- an agreement phase (to standardize exact performance and reporting criteria) and testing. Palpatators (two DO/MS candidates) agreed to stand on the subject’s right side and alternatively doubly-compress each side two times. After 80% protocol agreement was met, 330 healthy volunteers were recruited and evaluated in random succession. During testing each palpator was blinded to the other’s reporting right-sided ASIS compression positivity or not. κ-values calculated for this study were based upon each examiner designating 10 definitely positive and 10 definitely negative right lateralization tests.

RESULTS: As first palpator, Examiner B diagnosed 79% right-lateralization (130/165) versus 67% for Examiner A (110/165), p<0.009. Examiner A (first) compared to B revealed 72% versus 52% right lateralization, p<0.001. κ-values for first palpator cohorts were moderate and fair respectively (κ_A=0.55, κ_B=0.30).

CONCLUSIONS: Right-sided lateralization preference mirrored the prevalence of 80% cited in the literature for first palpators but was significantly reduced when following another’s palpation.