

Reliability of clinical shoulder instability tests – an inter-examiner study

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Introduction. Young active people often experience shoulder problems related to glenohumeral instability. To obtain an accurate diagnosis the use of clinical tests are fundamental. However, reliability of these tests is lacking.

Aims. To investigate the inter-examiner reliability of six clinical shoulder instability (SI) tests.

Materials and methods. A three-phase standardized protocol for reliability studies was used. Inclusion criteria were males and females (aged 18-60). Impaired subjects, equal to the index condition SI, were included as follows; at least one positive instability test out of six besides a sense of shoulder instability and/or prior shoulder injury. Unimpaired subjects had no prior shoulder injuries and no current shoulder pain. The six clinical tests included: the Apprehension, Relocation and Surprise besides Load and Shift, Gagey and Sulcus sign test. Two examiners with six-months clinical experience performed the tests. Cohens kappa and Prevalence-And-Bias-Adjusted-Kappa (PABAK) statistics were calculated, and interpreted as follows: 0.00-0.40 (poor-fair); 0.41-0.80 (moderate-substantial); and 0.81-1.00 (almost perfect).

Results. In the study phase 40 subjects were included (11 males, age 27 ± 8 , 13 impaired and 27 unimpaired). Cohens kappa varied from poor-substantial (0.39-0.77) with Gagey as the only test with substantial reliability (kappa 0.77). However, by calculating PABAK kappa improved considerably, corresponding to 0.74-0.94.

Conclusions: PABAK calculations of the inter-examiner reliability of the frequently used clinical tests for SI proved to be substantial to almost perfect. Validity of the current tests is required when monitoring SI patients involved in future interventions.