Convergent construct validity of the 400 points hand function test is better with function the subscore of the PRWE (Patient Rated Wrist Evaluation) questionnaire than with the total score

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Objective.— The 400 points hand function test provides an extensive evaluation of the hand. Its validity has been studied little [1]. The Patient Rated Wrist Evaluation (PRWE) questionnaire has the advantage of having subscores for function and pain. The objective of this study was to measure the convergent validity of the 400 points hand function test with the French version of PRWE. The hypothesis was that there is a better correlation between the 400 points hand function test and the subscore for function of the PRWE-F.

Material and methods.— 30 patients (23 m, 7 w, mean age 42), 14 fractures of the radius, 16 lesions of the carpus. PRWE-F and 400 points hand function test at entry and discharge. Correlation coefficients (Pearson’s r) between the 400 points hand function test and the 3 dimensions of the PRWE-F, with corresponding 95% Confidence Intervals (CI).

Results

PRWE total/400 points:
Entry: r = –0,388 (IC: –0,657 to –0,032) P = 0,0341.
Discharge: r = –0,515 (IC: –0,738 to –0,190) P = 0,0036.

PRWE function/400 points:
Entry: r = –0,419 (IC: –0,677 to –0,069) P = 0,0213.
Entry: r = –0,593 (IC: –0,786 to –0,296) P = 0,0006.

PRWE douleur/400 points:
Entry: r = –0,318 (IC: –0,608 to 0,048) P = 0,0870.
Discharge: r = –0,383 (IC: –0,654 to –0,028) P = 0,0359.

Discussion.— The results confirm the hypothesis of the study. The subscore function of the PRWE presents the best correlation with the 400 points hand function test. The correlations, however moderate and with large confidence intervals, are comparable to those found in the literature (0.52) [2]. The moderate correlation may be explained by the different concepts behind the two tools: the PRWE is a self-evaluation tool where the patient has to imagine given activities (subjective); the 400 points hand function test is a real-situation test (objective). In spite of our relatively small sample, our results are significant and reinforce knowledge about the construct validity of the 400 points hand function test.

References

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The Instrumental Activities of Daily living Profile: An assessment tool to measure the effect of a rehabilitation program on persons’ improvement in activities and participation following an acquired brain injury. Results

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