

Validation of a "Patient-Rated Tennis Elbow Evaluation" (PRTEE) Questionnaire

Authors:

Jan D. Rompe, B. Nafe, C. Theis, T. J. Overend, J. C. MacDermid

Institution:

Dept. of Orthopaedic Surgery, Johannes Gutenberg University School of Medicine, Langenbeckstr. 1, D-55131 Mainz

Background:

Though the most often diagnosed pathology of the upper extremity there is no consensus on how to measure treatment outcome for lateral elbow tendinosis (LET). The aim of the study was to determine the reliability of a questionnaire designed specifically to assess forearm pain and function in patients with a chronic tennis elbow.

Methods:

Seventy-eight patients with chronic, unilateral MRI-confirmed LET (of whom 78 were studied twice without therapy and 38 were studied 3 months after appropriate treatment) completed the 3-section, 15-item patient-rated tennis elbow questionnaire.

Results:

The test-retest reliability coefficient of determination ($R^2 = 0.95$) and internal consistency (Cronbach's $\alpha = 0.94$) were both good. Convergent validity was attested by good correlations with the Disabilities of Arm, Shoulder and Hand Questionnaire (DASH), and the Numeric Rating Scale-based Thomsen test ($R^2 = 0.75$ and 0.87 , $P < 0.0001$). Only a poor correlation was found with the Roles and Maudsley Score and the Upper Extremity Function Scale ($R^2 = 0.02$ and 0.03 , $P = 0.2767$ and 0.1798). Sensitivity to change was demonstrated by correlating pre-treatment - post treatment changes to those in DASH and Thomsen test ($R^2 = 0.66$ and 0.84 , $P < 0.0001$).

Conclusion:

The patient-rated forearm evaluation questionnaire for LET is an internally consistent score, correlating well with other, non-elbow specific scores, and is sensitive to change on treatment.

Clinical Relevance:

Reliability of the score for lateral elbow tendinosis has been confirmed independently in North America, Asia, and Europe. It is therefore recommended as standard scoring system in future clinical trials on tennis elbow.