

Early psychological stress after forearm nerve injuries: a predictor for long-term functional outcome and return to productivity.

**Jaquet JB, Kalmijn S, Kuypers PD, Hofman A, Passchier J, Hovius SE.
Ann Plast Surg. 2002 Jul;49(1):82-90.**

Abstract

Forearm and wrist injuries can result in a nonfunctional hand caused by loss of motor and sensory functions. Psychological stress is known to accompany traumatic hand injuries and may therefore affect functional outcome. The authors conducted a retrospective study of 107 patients diagnosed with a median, ulnar, or combined median-ulnar nerve injury (79% response rate) who completed a questionnaire package consisting of the Impact of Event Scale (IES); Disabilities of Arm, Shoulder, and Hand; and a questionnaire concerning return to work and time off work. In an outpatient setting, motor and sensory recovery were examined. Ninety-four percent of those studied experienced early psychological stress. Thirty-six percent of patients reported sufficient symptoms 1 month postoperatively to be classified as in need for psychological treatment (IES score > 30 points). Combined median-ulnar nerve injuries (mean, 35.0 +/- 20.3 points [standard deviation]) were accompanied by a higher psychological stress compared with single nerve injuries (median injuries: mean, 24.2 +/- 20.6 points; ulnar injuries: mean, 22.6 +/- 19.5 points; $p = 0.049$ and $p = 0.021$ respectively). Multiple linear regression adjusting for age, gender, and severity of the trauma revealed an association between the IES score and the functional symptom score (beta = 0.51; 95% confidence interval [CI], 0.35-0.65), mean time off work (beta = 0.44; 95% CI, 0.25-0.75), and motor recovery (grip: beta = 0.37; 95% CI, 0.09-0.65; tip-pinch: beta = 0.46; 95% CI, 0.13-0.80). Patients with higher scores on the IES were found to be at increased risk for incapacity for work (odds ratio, 3.32; 95% CI, 1.60-6.91). Higher education was found to be a protecting variable for posttraumatic psychopathology (beta = -0.23; 95% CI, -6.05--0.246). This study demonstrated a high level of early posttraumatic psychological stress after forearm and wrist nerve injuries. These data provide evidence that functional outcome and work resumption are influenced negatively by early psychological stress, independent from severity of the somatic trauma. This indicates that outcome after upper extremity nerve injuries may be influenced positively by psychological intervention.