

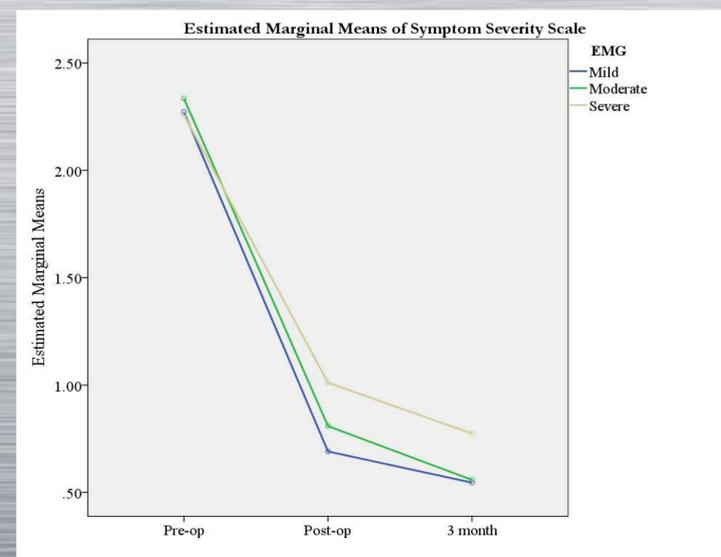
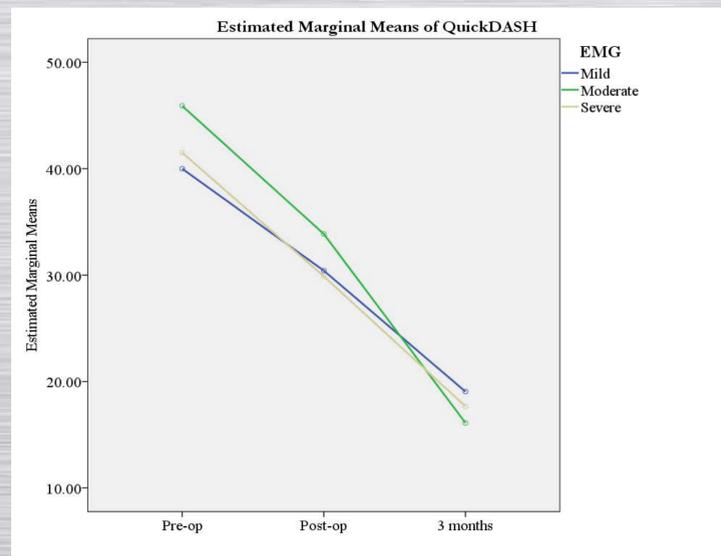
INTRODUCTION

The value of electrodiagnostic testing (EMG) severity as a prognostic indicator of clinical results following carpal tunnel release (CTR) remains controversial and our current understanding is largely limited to retrospective reviews. The aim of this study was to 1) prospectively evaluate the degree of symptomatic and functional postoperative improvement relative to preoperative EMG severity, and 2) test the hypothesis that symptom relief after CTR will differ based on EMG severity.

MATERIALS & METHODS

Consecutive cases of EMG-confirmed CTR were prospectively enrolled. Data was collected preoperatively, and at 2 weeks and 3 months postoperatively. Demographic, EMG severity (mild, moderate, or severe), surgical parameters, QuickDASH questionnaire, Symptom Severity Scale (SSS), Functional Status Scale (FSS), Pain Catastrophizing Scale (PCS), and Visual Analogue Scale (VAS) data were collected and analyzed.

TABLE & FIGURE



RESULTS

A total of 295 patients were enrolled. By EMG severity, there were 20 patients with mild, 126 with moderate, and 110 patients with severe grades preoperatively. There was a significant improvement in QuickDASH, SSS, and FSS scores from the pre-op to the 2-week and 3-month post-op visits, in all categories of EMG severity ($p < 0.05$). There was no significant difference by the extent of recovery by the 2-week and 3-month visit relative to EMG severity ($p > 0.05$). Pain decreased dramatically at 2 week post-op, but there was no additional significant difference in VAS scores between the 2-week and 3-month post-op visits ($p < 0.05$). Again, postoperative pain improvement occurred regardless of EMG severity. Lastly, there were no major complications or re-operations in any groups.

DISCUSSION

CTR demonstrated consistently significant prospective improvement in functional outcomes regardless of EMG severity at 3 months. The extent of postoperative improvement following CTR was not statistically different between groups with differing EMG severity. This information can be of value to surgeons and patients as they plan surgery and discuss postoperative outcomes.