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Corticosteroid Injection Exhibits Symptomatic Improvement in CTS Patients with Negative EMGs

Brooke G. Garnica

Wayne State University, gu2684@wayne.edu

Aaron R. Prater

Wayne State University

Elizabeth A. Washnock-Schmid

Wayne State University

Alaa Hazime

Henry Ford Health System

Dr. Charles S. Day

Henry Ford Health System

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Corticosteroid Injection Exhibits Symptomatic Improvement in CTS Patients with Negative EMGs

Introduction

While corticosteroid injections for carpal tunnel syndrome (CTS) are effective in patients with mild EMGs, no literature has examined the effectiveness of injections in patients with negative EMGs. We hypothesized that patients with negative EMGs will have minimal symptomatic and functional improvement.

Methods

The Boston Carpal Tunnel Questionnaire (BCTQ) was administered to patients clinically diagnosed with CTS and a negative or mild EMG prior to corticosteroid injection. The BCTQ comprises functional (FSS) and symptom status (SSS) questions. The patient was re-evaluated at 2-weeks, 1-, 3-, and 6-months post-injection. Data were analyzed via one-way ANOVA tests. A post-hoc Benjamini-Hochberg FDR p-value adjustment for multiple comparisons was used to determine significance between time points. Clinically significant improvement was defined as an MCID >0.30. Patients who underwent surgery post-injection were considered to have failed treatment and no longer participated. Analyses were performed using SAS 9.4.

Results

- 33/37 (89.7%) patients (age 50.77 ± 13.20), 15 EMG-mild and 13 EMG-negative participated.
- Corticosteroid injection elicited significant improvement in mean SSS ($p=0.0019$) and mean FSS ($p=0.0118$) scores over time from pre-injection to all documented time points for all patients.
- Patients with negative EMG showed improvement between SSS pre-injection and SSS 2-weeks ($p=0.0150$), and SSS pre-injection and SSS 3-months ($p=0.0225$). This was not true for patients with mild EMGs.

Conclusion

This data suggest corticosteroid injection for CTS evokes symptomatic and functional improvement for all patients. Negative EMG patients experience symptomatic improvement within the first 2-weeks post-injection and continues for up to 3-months, while mild EMG patients experience no improvement.