The Effectiveness of Splinting for Sleep Disturbance in Carpal Tunnel Syndrome

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Objectives

A controlled prospective objective and subjective study which evaluated the effectiveness of night splinting compared to non-splinting and surgery for insomnia severity in patients with carpal tunnel syndrome (CTS).

Patients and Methods

Sleep characteristics were monitored for several days without a brace, with a brace and after surgery. The sleep measurements included actigraph worn on the wrist during night, a “sleep log” that conveyed subjective impressions as to how they had slept and a short insomnia instrument, the Insomnia Severity Index (ISI).

Results

The ISI scores demonstrated that a night splint improved significantly insomnia symptoms compared to no splinting, but surgery significantly improved insomnia symptoms compared to splinting. The “sleep log” scores demonstrated that the differences between the sleep log quality and the number of waking's without a splint were significant compared to the scores with the splint and to the scores after surgery. The "sleep log" scores did not demonstrate a significant difference in quality or number of waking's between splint and surgery. The actigraph failed to demonstrate significant differences between each of the treatment methods.

Conclusions

Night splinting reduce the number of wakings and improves sleep quality when measured using ISI score and a "sleep log".