

CAT

Use of wrist splints for managing CTS

Clinical Bottom Line(s):

1.Nocturnal splinting may relieve CTS symptoms.

Citation: Werner et al “Randomized Control Trial of Nocturnal Splinting for Active workers with symptoms of Carpal Tunnel Syndrome” Archives Physical Medicine and Rehabilitation vol 86; January 2005

Three/four part clinical question.

Does nocturnal wrist splinting of Midwestern auto-assembly plant workers (identified through active surveillance) with symptoms consistent with CTS (but without an established diagnosis,) improve symptoms and median nerve function as well as impact medical care?

The study: Randomized Control Trial

The study patients: 112 workers at a midwestern auto assembly plant with symptoms of CTS recruited by survey from 2636 assessed for eligibility.

Control Group: This group received education (20 minute video on CTS and ergonomic factors). N=49, Mean age 44 (control), 45 (treatment)

Experimental Group: This group received education (20 minute video on CTS and ergonomic factors)and wore custom wrist splints (neutral position) for six weeks. N=63

The evidence:

Levine Symptom Severity score improvement was significant in experimental group.

The nerve conduction test showed improved median nerve health for the treatment group at 12 months.

Comments:

1.Limitations:

- Power of the Levine symptom severity score was .49. Future studies needed to validate findings.
- Three and six month data was not presented because less than half of the subjects completed the questionnaire.
- Low number of subjects and demographics reduce generalizability.
- This study used subjects with symptoms consistent with --CTS but not necessarily having the diagnosis established.
- Patient compliance (splint use) was not accurately reported by subjects
- Lack of complete data limits the interpretation of the outcome measures.

2. Only 5 subjects went on to surgical release at the one year mark but it was not reported which group they were from.

3. No effect for subjects with chronic symptoms. Chronic symptoms were described as those patients who were awakened by their symptoms at night.

Appraiser by: 2LT Brian Gray

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Kill or update by: