

**PENATALAKSANAAN *CARPAL TUNNEL SYNDROME* DENGAN KOMBINASI
MODALITAS *ULTRASOUND*, *TENS*, SERTA LATIHAN *NERVE GLIDING*
UNTUK MENGURANGI NYERI DAN MENINGKATKAN AKTIVITAS
FUNGSIONAL**

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Abstrak

Latar Belakang: *Carpal Tunnel Syndrome* bilateral (*CTS*) menyebabkan nyeri, kesemutan, dan keterbatasan rentang gerak pada kedua tangan, yang mengganggu aktivitas sehari-hari. Penelitian ini mengkaji efektivitas kombinasi terapi ultrasound (*US*), *TENS*, dan latihan pelumasan saraf dan tendon dalam menangani gejala-gejala tersebut. **Metode:** Studi kasus ini dilakukan pada seorang ibu rumah tangga (45 tahun) yang menjalani pengobatan tiga kali seminggu. Kemajuan pasien dipantau menggunakan skala *Numeric Rating Scale* (*NRS*), kekuatan otot (*MMT*), dan rentang gerak (*goniometer*). **Hasil:** Setelah tiga sesi terapi, terjadi penurunan tekanan dan nyeri yang terkait dengan gerakan pada pasien. Selain itu, terdapat peningkatan signifikan pada kekuatan otot dan rentang gerak sendi (*ROM*), yang secara langsung berkaitan dengan peningkatan kinerja fungsional tangan. **Kesimpulan:** Penggunaan modalitas fisioterapi ultrasonografi (*US*), *Transcutaneous Electrical Nerve Stimulation* (*TENS*), dan latihan gliding spesifik terbukti efektif dalam meredakan gejala klinis dan meningkatkan mobilitas pada pasien dengan *CTS* bilateral.

Kata Kunci: *Carpal Tunnel Syndrome* bilateral, *Ultrasound*, *TENS*, *Gliding Exercise*, Kemampuan Fungsional

**MANAGEMENT OF BILATERAL CARPAL TUNNEL SYNDROME
MANAGEMENT WITH A COMBINATION MODALITY OF ULTRASOUND,
TENS, AND NERVE GLIDING AND TENDON GLIDING EXERCISE TO REDUCE
PAIN AND IMPROVE FUNCTIONAL ACTIVITY**

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Abstract

Background: *Bilateral carpal tunnel syndrome (CTS) causes pain, tingling, and limited range of motion in both hands, which interfere with daily activities. This study examined the effectiveness of a combination of ultrasound therapy (US), TENS, and nerve and tendon lubrication exercises in managing these symptoms.* **Methods:** *This case study was conducted on a housewife (45 years old) who underwent treatment three times a week. The patient's progress was monitored using a Numeric Rating Scale (NRS), muscle strength (MMT), and range of motion (goniometer).* **Results:** *After three therapy sessions, there was a decrease in pressure and pain associated with movement in the patient. In addition, there was a significant increase in muscle strength and joint range of motion (ROM), which was directly related to improved functional performance of the hands.* **Conclusion:** *The use of physiotherapy modalities of ultrasound (US), transcutaneous electrical nerve stimulation (TENS), and specific gliding exercises proved effective in relieving clinical symptoms and improving mobility in patients with bilateral CTS.*

Keywords: *Bilateral Carpal Tunnel Syndrome, Ultrasound, TENS, Gliding Exercise, Functional Ability*