

ABSTRAK

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Judul Laporan Tugas Akhir : Penatalaksanaan Fisioterapi Pada *Carpal Tunnel Syndrome Bilateral* Dengan *Transcutaneous Electrical Nerve Stimulation, Ultrasound* Dan Terapi Latihan.

Terdiri dari 14 lampiran depan, 107 halaman, 13 tabel, 28 gambar, dan 7 lampiran akhir.

Latar Belakang : Carpal Tunnel Syndrome (CTS) adalah gejala nyeri, kesemutan, dan baal pada pergelangan tangan yang disebabkan oleh kompresi nervus medianus. Di Amerika, 3,8% populasi umum mengalami CTS, dengan perempuan lebih sering terkena dibanding pria. Di Indonesia, kejadian CTS belum banyak diketahui karena sedikitnya laporan. Fisioterapi berperan dalam pemulihan CTS melalui modalitas seperti TENS dan *Ultrasound*, serta terapi latihan *Upper Limb Tension Test 1* (ULTT 1). Penelitian menunjukkan korelasi antara usia dan CTS, terutama pada ibu rumah tangga yang melakukan aktivitas berulang, seperti mencuci. Seorang pasien berusia 62 tahun mengalami gejala CTS akibat pekerjaan rumah tangga.

Metode : Karya Tulis Ilmiah ini bersifat studi kasus, mengangkat kasus pasien dan mengumpulkan data melalui proses fisioterapi. Modalitas yang diberikan adalah *Transcutaneous Electrical Stimulation, Ultrasound*, dan *Upper Limb Tension Test 1*.

Hasil Penelitian : Setelah dilakukan fisioterapi sebanyak 4 kali pertemuan didapatkan hasil adanya penurunan dan berkurangnya spasme otot pada *wrist*, penurunan nyeri pada *wrist dextra* dan *sinistra*, penurunan kesemutan pada *wrist dextra* dan *sinistra*, adanya peningkatan LGS *palmar fleksi wrist dextra* dan *sinistra*, peningkatan kekuatan otot *palmar flexor wrist dextra* dan *sinistra* dan adanya peningkatan kemampuan fungsional aktivitas pasien pada *wrist dextra* dan *sinistra*.

Kesimpulan : Penatalaksanaan fisioterapi dengan *Transcutaneous Electrical Nerve Stimulation, Ultrasound*, dan *Upper Limb Tension Test 1* yang dilakukan pada kasus Carpal Tunnel Syndrome Bilateral selama 4 kali terapi didapatkan adanya penurunan rasa nyeri pada *wrist dextra* dan *sinistra*, penurunan kesemutan pada *wrist dextra* dan *sinistra*, adanya peningkatan LGS *palmar fleksi wrist dextra* dan *sinistra*, peningkatan kekuatan otot *palmar flexor wrist dextra* dan *sinistra* dan adanya peningkatan kemampuan fungsional aktivitas pasien pada *wrist dextra* dan *sinistra*.

Kata kunci : Penatalaksanaan Fisioterapi, *Carpal Tunnel Syndrome, Transcutaneous Nerve Electrical Stimulation, Ultrasound, Upper Limb Tension Test 1*.

Referensi : 2015 – 2025

ABSTRACT

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Title of the Final Project Report : *Physiotherapy Management of Bilateral Carpal Tunnel Syndrome with Transcutaneous Electrical Nerve Stimulation, Ultrasound and Exercise Therapy.*

It consists of 14 front matter appendices, 107 pages, 13 tables, 28 figures, and 7 final appendices.

Background : **Carpal Tunnel Syndrome (CTS)** is a symptom of pain, tingling and numbness in the wrist caused by compression of the *median nerve*. In the US, 3.8% of the general population experience CTS, with women more commonly affected than men. In Indonesia, the incidence of CTS is not widely known because of the lack of reports. Physiotherapy plays a role in CTS recovery through modalities such as TENS and *Ultrasound*, as well as *Upper Limb Tension Test 1 (ULTT 1) exercise therapy*. Research shows a correlation between age and CTS especially in housewives who perform repetitive activities, such as washing. A 62-year-old patient experienced symptoms of CTS due to household chores.

Method : This scientific paper is a case study, raising patient cases and collecting data through the physiotherapy process. The modalities given are *Transcutaneous Electrical Stimulation, Ultrasound, and Upper Limb Tension Test 1*.

Research Result : After physiotherapy was carried out for 4 meetings, the results obtained were a decrease and reduction in *muscle spasm* in the *wrist*, a decrease in pain in the *dextra* and *sinistra wrists*, a decrease in tingling in the *dextra* and *sinistra wrists*, an increase in *palmar fleksion* LGS of the *dextra* and *sinistra wrists*, an increase in the strength of the *palmar flexor* muscles of the *dextra* and *sinistra wrists* and an increase in the functional ability of patient activities in the *dextra* and *sinistra wrists*.

Conclusion : Physiotherapy management with *Transcutaneous Electrical Nerve Stimulation, Ultrasound, and Upper Limb Tension Test 1* performed in cases of *Bilateral Carpal Tunnel Syndrome* for 4 times of therapy obtained a decrease in pain in the *wrist dextra* and *sinistra*, a decrease in tingling in the *wrist dextra* and *sinistra*, an increase in *palmar fleksion* LGS of the *wrist dextra* and *sinistra*, an increase in the strength of the *palmar flexor* muscles of the *wrist dextra* and *sinistra* and an increase in the functional ability of patient activities in the *wrist dextra* and *sinistra*.

Keywords : *Physiotherapy Management, Carpal Tunnel Syndrome, Transcutaneous Nerve Electrical Stimulation, Ultrasound, Upper Limb Tension Test 1.*

Reference : 2015 - 2025