

PENATALAKSANAAN FISIOTERAPI PADA KASUS *CARPAL TUNNEL SYNDROME DEXTRA* DI RUMAH SAKIT PMI BOGOR

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Abstrak

Latar Belakang: *Carpal Tunnel Syndrome* (CTS) merupakan gangguan neuromuscular pada ekstremitas atas yang disebabkan oleh kompresi nervus medianus di dalam terowongan karpal. Kondisi ini ditandai dengan gejala berupa nyeri, *parestesia*, penurunan kekuatan otot, serta keterbatasan lingkup gerak sendi yang dapat mengganggu aktivitas fungsional sehari-hari. CTS lebih banyak ditemukan pada wanita dibandingkan pria dan umumnya berkaitan dengan aktivitas repetitif tangan dalam jangka panjang. **Tujuan:** Penelitian ini bertujuan untuk mengetahui pelaksanaan fisioterapi menggunakan kombinasi modalitas *Ultrasound* dan *Nerve Gliding Exercise* dalam menurunkan nyeri, *parestesia*, meningkatkan lingkup gerak sendi, kekuatan otot, serta kemampuan fungsional tangan pada pasien CTS dextra di Rumah Sakit PMI Bogor. **Metode:** Penelitian ini menggunakan metode studi kasus pada seorang pasien perempuan berusia 73 tahun yang didiagnosis CTS *dextra*. Penelitian dilaksanakan sebanyak 4 kali pertemuan pada tanggal 09 hingga 19 Februari 2026 di Rumah Sakit PMI Bogor. Pengumpulan data dilakukan melalui anamnesis, pemeriksaan fisik, pengukuran nyeri menggunakan *Numeric Rating Scale* (NRS), pengukuran Lingkup Gerak Sendi (LGS) menggunakan goniometer, pemeriksaan kekuatan otot dengan *Manual Muscle Testing* (MMT), pemeriksaan sensibilitas, tes spesifik CTS, serta evaluasi fungsional menggunakan *Boston Carpal Tunnel Questionnaire* (BCTQ). Intervensi yang diberikan berupa *Ultrasound* dan *Nerve Gliding Exercise*. **Hasil:** Hasil evaluasi menunjukkan penurunan intensitas nyeri berdasarkan NRS, peningkatan lingkup gerak sendi yang diukur menggunakan goniometer, peningkatan kekuatan otot berdasarkan nilai MMT, serta peningkatan kemampuan fungsional tangan yang dinilai melalui kuesioner BCTQ. **Kesimpulan:** Kombinasi intervensi fisioterapi berupa *Ultrasound* dan *Nerve Gliding Exercise* terbukti efektif dalam menurunkan nyeri dan *parestesia*, meningkatkan lingkup gerak sendi, kekuatan otot, serta kemampuan aktivitas fungsional tangan pada pasien CTS *dextra*.

Kata Kunci: *Carpal Tunnel Syndrome*; *Ultrasound*; *Nerve Gliding Exercise*; *Nervus Medianus*; Fisioterapi.

PHYSIOTHERAPY MANAGEMENT OF CARPAL TUNNEL SYNDROME RIGHT AT PMI HOSPITAL, BOGOR

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Abstract

Background: Carpal Tunnel Syndrome (CTS) is a neuromuscular disorder of the upper extremity caused by compression of the median nerve within the carpal tunnel. This condition is characterized by symptoms such as pain, paresthesia, decreased muscle strength, and limited joint range of motion that may interfere with daily functional activities. CTS is more commonly found in women than men and is generally associated with long-term repetitive hand activities. **Objective:** This study aimed to determine the implementation of physiotherapy using a combination of Ultrasound and Nerve Gliding Exercise modalities in reducing pain and paresthesia, improving joint range of motion, muscle strength, and hand functional ability in patients with right-sided CTS at PMI Hospital Bogor. **Methods:** This study used a case study method on a 73-year-old female patient diagnosed with right-sided CTS. The study was conducted over 4 sessions from February 9 to 19, 2026, at PMI Hospital Bogor. Data collection was carried out through history taking, physical examination, pain measurement using the Numeric Rating Scale (NRS), joint range of motion measurement using a goniometer, muscle strength examination using Manual Muscle Testing (MMT), sensory examination, CTS-specific tests, and functional evaluation using the Boston Carpal Tunnel Questionnaire (BCTQ). The interventions provided were Ultrasound and Nerve Gliding Exercise. **Results:** The evaluation results showed a decrease in pain intensity based on the NRS, an increase in joint range of motion measured using a goniometer, improved muscle strength based on MMT scores, and enhanced hand functional ability assessed through the BCTQ questionnaire. **Conclusion:** The combination of physiotherapy interventions in the form of Ultrasound and Nerve Gliding Exercise was proven effective in reducing pain and paresthesia, improving joint range of motion, muscle strength, and functional hand activity in patients with right-sided CTS.

Keywords: Carpal Tunnel Syndrome; Ultrasound; Nerve Gliding Exercise; Median Nerve; Physiotherapy.