

INTISARI

UNIVERSITAS AL-IRSYAD CILACAP
DIPLOMA III FISIOTERAPI
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APLIKASI TERAPI MICRO WAVE DIATHERMY, ULTRASOUND DAN UPPER LIMB TENSION TEST PADA KASUS CARPAL TUNNEL SYNDROME

Terdiri dari 5 BAB, 92 Halaman, 12 Gambar, 11 Tabel

Latar Belakang dan Tujuan Penelitian: *Carpal Tunnel Syndrome* adalah salah satu gangguan pada pergelangan tangan karena terjadi penyempitan pada terowongan karpal. Tujuan dari penulisan Karya Tulis Ilmiah ini mengetahui pengaruh aplikasi *Micro Wave Diathermy* terhadap penurunan derajat nyeri serta *Ultrasound* Terapi dan *Upper Limb Tension Test* terhadap peningkatan aktivitas fungsional pada pasien *Carpal Tunnel Syndrome*.

Metode Penelitian yang Dipakai: Pada laporan karya tulis ilmiah ini, penulis memberikan tindakan fisioterapi pada Ny. N berupa modalitas *Micro Wave Diathermy* yang berguna untuk menurunkan derajat nyeri serta *Ultrasound* Terapi dan *Upper Limb Tension Test* untuk meningkatkan aktivitas fungsional pada kondisi *Carpal Tunnel Syndrome*, untuk instrumen pengukuran menggunakan VAS dan WHDI, tindakan terapi yang dilakukan sebanyak 4 kali terhitung pada tanggal 2, 13, 20, 27 Mei 2025.

Hasil Penelitian: *Micro Wave Diathermy*, *Ultrasound* terapi, dan *Upper Limb Tension Test* merupakan modalitas fisioterapi untuk menangani kasus *Carpal Tunnel Syndrome*, setelah dilakukan tindakan fisioterapi sebanyak 4 kali. Pada laporan didapatkan hasil berupa penurunan derajat nyeri dari T1 sampai T4 dan adanya peningkatan aktivitas fungsional dengan hasil T1 44% (*severe disability*) dan T4 16% (*moderate*). *Micro Wave Diathermy* dapat menurunkan derajat nyeri karena terdapat *healing process* yang memicu proses induksi dan proliferasi didalam tubuh sehingga nyeri berkurang. *Ultrasound* terapi dan *Upper Limb Tension Test* berperan dalam peningkatan aktivitas fungsional karena efek *micro massage* yang bisa melancarkan peredaran darah sehingga membebaskan serabut saraf dari penjepitan. Mobilisasi saraf yang dilakukan pada gerakan *Upper Limb Tension Test* juga bertujuan untuk penguluran saraf sehingga terjadi pemulihan fungsi pada pergelangan tangan.

Kesimpulan: Setelah diberikan tindakan fisioterapi sebanyak 4 kali, didapatkan hasil berupa penurunan derajat nyeri dengan pemberian MWD serta peningkatan aktivitas fungsional dengan pemberian *Ultrasound* Terapi dan *Upper Limb Tension Test*.

Kata Kunci: *Carpal Tunnel Syndrome*, *Micro Wave Diathermy*, *Ultrasound* Terapi, *Upper Limb Tension Test*.

ABSTRACT

UNIVERSITAS AL-IRSYAD CILACAP
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SCIENTIFIC PAPERS

APLIKASI TERAPI MICRO WAVE DIATHERMY, ULTRASOUND DAN UPPER LIMB TENSION TEST PADA KASUS CARPAL TUNNEL SYNDROME

Consists of 5 Chapters, 92 Pages, 12 Figures, 11 Tables

Background and Purpose Of Writing: Carpal Tunnel Syndrome is one of the disorders of the wrist due to narrowing of the carpal tunnel, either due to fascial edema in the tunnel. The purpose of writing this scientific paper is to determine the effect of Micro Wave Diathermy applications on reducing pain levels and Ultrasound Therapy and Upper Limb Tension Tests on increasing functional activity in patients with carpal tunnel syndrome.

The Research Method Used: in this scientific paper report, the author provides physiotherapy actions to Mrs. N in the form of Micro Wave Diathermy modalities which are useful for reducing pain levels as well as therapeutic Ultrasound and Upper Limb Tension Tests to increase functional activity in conditions of Carpal Tunnel Syndrome, for measurement instruments using VAS and WHDI, therapeutic actions carried out 4 times starting on 2, 13, 20, 27 May 2025.

Research Results: Micro Wave Diathermy, Ultrasound Therapy, and Upper Limb Tension Test are physiotherapy modalities to treat Carpal Tunnel Syndrome cases, after 4 times of physiotherapy action. In the report obtained results in the form of a decrease in the degree of pain from T1 to T4 and an increase in functional activity with the results of T1 44% (severe disability) and T4 16% (moderate). Micro Wave Diathermy can reduce the degree of pain because there is a healing process that triggers induction and proliferation processes in the body so that pain decreases. Ultrasound Therapy and Upper Limb Tension Test play a role in increasing functional activity due to the micro massage effect on Ultrasound Therapy which can improve blood circulation so as to free nerve fibers from clamping. Nerve mobilization performed in the Upper Limb Tension Test movement also aims to stretch the nerves so that there is a restoration of function in the wrist.

Conclusion: after being given physiotherapy action 4 times, the results were obtained in the form of a decrease in the degree of pain with the provision of MWD and an increase in functional activity with the provision of Ultrasound Therapy and Upper Limb Tension Test.

Keywords: Carpal Tunnel Syndrome, Micro Wave Diathermy, Ultrasound Therapy, Upper Limb Tension Test.