

# Pengaruh tendon and nerve gliding exercise terhadap keluhan subjektif dan objektif penderita sindrom terowongan karpal = The effect of tendon and nerve gliding exercise on the patient s subjective and objective complaints who suffers carpal tunnel syndrome / Irene Roma Hasudungan

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## Abstrak

### <b>ABSTRAK</b><br>

Tujuan : Penelitian ini bertujuan untuk mengkaji tendon and nerve gliding exercise (TNGE) yang dikombinasikan dengan penggunaan bidai pergelangan metacarpophalangeal (MCP) netral dalam penatalaksanaan konservatif pada penderita Sindrom terowongan karpal (STK).

Metode : Disain penelitian ini dilakukan secara consecutive sampling pada 33 orang dengan 42 tangan yang telah didiagnosa dengan sindrom terowongan karpal derajat I sampai dengan IV yang ditentukan dengan pemeriksaan EMG ( kriteria Bland ). Total subjek penelitian yang menyelesaikan penelitian sebanyak 20 orang dengan 29 tangan. seluruh subjek mendapat latihan TNGE yang dikombinasikan dengan penggunaan bidai MCP netral. TNGE bertujuan untuk melatih tendon dan saraf, dimana pada latihan tendon terdapat lima gerakan dan pada latihan saraf terdapat 6 gerakan, masing – masing gerakan dilakukan secara berurutan.

Penelitian berlangsung selama enam minggu dimana setiap minggu dilakukan penilaian subjektif dan pada akhir minggu keenam ditambahkan penilaian objektif dengan EMG. Seluruh rangkaian gerakan pada masing – masing tujuan latihan diulang setiap sepuluh kali. Latihan dilakukan tiga kali sehari dan setiap gerakan ditahan selama 5 detik. Keluhan pasien dinilai dengan penilaian Subjektif dengan Functional Status Scale (FSS) dan Symptom Severity Scale (SSS) dan penilaian Objektif dengan pemeriksaan EMG menilai KHS sensorik, Distal latensi motorik dan sensorik.

Hasil : 29 tangan dianalisa dalam penelitian ini. Penilaian subjektif FSS dan SSS membandingkan antara minggu pertama dengan minggu selanjutnya. FSS1 16,14 ± 4,61 FSS2 13,0 (9 – 18), p < 0,001, SSS1 26,0 (17 – 48) SSS2 23,14 ± 6,26, p < 0, 004, FSS1 16,14 ± 4,61 FSS3 12 ± 3,14, p < 0, 001, SSS1 26,0 (17 – 48) SSS3 19,0 (13 – 33), p < 0, 001, FSS1 16,14 ± 4,61 FSS4 10,0 (8 – 17), p < 0, 001, SSS1 26,0 (17 – 48) SSS4 17,0 (13 – 31), p < 0, 001, FSS1 16,14 ± 4,61 FSS5 10,0 (7 – 16), p < 0,001, SSS1 26,0 (17 – 48) SSS5 15,0 (11 – 26), p < 0, 001, FSS1 16,14 ± 4,61 FSS6 9,0 (7 – 16), p < 0,001, SSS1 26,0 (17 – 48) SSS6 14,0 (11 – 26). p < 0,001. Hasil penilaian objektif KHS sensori pre – post intervensi 50,0 (26,4 – 67,9) - 50,0(25,6 – 67,50), p = 0,717, Distal latensi motorik pre – post intervensi 4,8 ± 1,16 - 4,8 ± 1,16, p = 1,000, Distal latensi sensorik pre – post

intervensi 2,8 (1,7-4,7) - 2,8 (2-5), p = 0,457.

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<b>ABSTRACT</b><br>

**Purpose :** This research is aimed to assess the tendon and nerve gliding exercise (TNGE) which is combined with the use of wrist splints neutral metacarpophalangeal (MCP) in the conservative procedures for patients with Carpal Tunnel Syndrome (CTS).

**Methods :** This research was designed and conducted using consecutive sampling on 33 people in which 42 hands have been diagnosed with 1st to 4th degree Carpal Tunnel Syndromes, determined using EMG scan (Bland criteria). The number of research subjects totals up to 20 people and 29 number of hands. All of the subjects received a TNGE exercise combined with the use of neutral MCP wrist splint. The TNGE exercise is done to train the tendon and the nerves, where in the tendon exercise there are five movements and in the nerves exercise there are 6 movements, each movement being done consecutively. The entire set of movement in each exercise was repeated ten times. The exercise is done three times a day and each movement is held steady in position for five seconds. The patient's complain was assessed by the Subjective Assessment using Functional Status Scale (FSS) and Symptom Severity Scale (SSS) and the Objective Assessment using EMG scan to evaluate the NCV sensory, distal motor latency and distal sensory latency levels.

**Results :** 29 hands were analyzed in this research. The FSS dan SSS subjective assessment compared between the first week and the following weeks. FSS1 16,14 ± 4,61 FSS2 13,0 (9 – 18), p < 0,001, SSS1 26,0 (17 – 4 ) SSS2 23,14 ± 6,26, p < 0, 004, FSS1 16,14 ± 4,61 FSS3 12 ± 3,14, p < 0, 001, SSS1 26,0 (17 – 48) SSS3 19,0 (13 – 33 ), p < 0, 001, FSS1 16,14 ± 4,61 FSS4 10,0 (8 – 17), p < 0, 001, SSS1 26,0 (17 – 48) SSS4 17,0 (13 – 3 ), p < 0, 001, FSS1 16,14 ± 4,61 FSS5 10,0 (7 – 16), p < 0,001, SSS1 26,0 (17 – 48) SSS5 15,0 (11 – 26), p < 0, 001, FSS1 16,14 ± 4,61 FSS6 9,0 (7 – 16), p < 0,001, SSS1 26,0 (17 – 48) SSS6 14,0 (11 – 26), p < 0, 001. The NCV sensory pre – post intervention objective assessment reveals: 50,0 (26,4 – 67,9) - 50,0(25,6 – 67,50), p = 0,717, Distal motor latency pre – post intervention at 4,8 ± 1,16 - 4,8 ± 1,16, p = 1,000, Distal sensory latency pre – post intervention at 2,8 (1,7-4,7) - 2,8 (2-5), p = 0,457.