

Abstract.

Comparison of treatment results for patients with carpal tunnel syndrome using the classic and modified minimal opening method.

Background.

Surgical treatment is the only radical treatment in CTS. It gives the highest percentage of permanent cures and the number of complications is low. The aim of this form of treatment is to release (decompress) the compressed median nerve. Most often, this goal is achieved by cutting the transverse carpal ligament (TCL). To reduce the frequency of symptoms of the so-called recurrent CTS, a modified minimal opening technique with additional greater decompression of the median nerve was started. This effect can be achieved by longitudinally excising a fragment of the TCL ligament approximately 4 mm–6 mm wide along its entire course. The assessment of the impact of the described technique on the symptoms, functional condition of the hand and the frequency of complications in patients with CTS is the main topic of the following dissertation.

Objective of the work.

The aim of this study is to compare the results of surgical treatment of patients using the classic and modified minimal opening method.

Material and methods

The study included 120 patients operated on in the One-Day Surgery Operating Room in Tarnów. The study group included 87 women and 33 men aged between 29 and 82 years (average 54.69 years). The average age of women in the study population was 54.9 years and of men 54.2 years

The following research tools were used to assess treatment results:

- a) assessment of the intensity of subjective feelings and functional disorders using the Levin questionnaire consisting of two parts: the Symptom Severity Scale and the Functional Status Scale
- b) assessment of the intensity of hand pain using the NRS scale (Numerical Rating Scale)
- c) assessment of the functional capacity of the limb based on the Quick DASH questionnaire
- d) assessment of global grip strength using a hand-held SAEHAN hydraulic dynamometer
- e) assessment of the sensory sensitivity threshold in the area supplied by the median nerve using the light touch - deep pressure test (Semmes-Weinstein Monofilament Examination - SWME).
- f) assessment of the nerve's sensitivity to unfavorable conditions and factors using provocation tests: Phalen and Durkan
- g) assessment of the frequency of postoperative complications

The assessed parameters were assessed in the hospital's Trauma and Orthopedic Surgery Clinic of the Hospital. L. Rydygiera in Brzesko in the following periods:

- immediately before surgery,
- in the 3rd month,
- 6 months after surgery.

Conclusions

1. The degree of symptom improvement (SSS) and sensory threshold did not significantly depend on the surgical technique.
2. Pain reduction between months 3 and 6 was greater with the modified technique.
3. Between months 3 and 6, a more pronounced improvement in hand and limb function was noted with the modified technique.
4. Grip strength improved more rapidly with the modified technique.
5. Complications were rare and comparable between the techniques.
6. Modification may be a valuable alternative in patients for whom faster functional recovery is crucial.