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Brief Report

Tendencias en el post-quirúrgico para el síndrome del túnel del carpo. Práctica clínica actual[☆]



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ABSTRACT

Background and objectives: Evidence and specific interventions after carpal tunnel release are limited. The main purpose of this study was to elucidate the current practice patterns of professionals from around the world after carpal tunnel release.

Material and methods: A 15-item English survey was designed and distributed via email and through social networks to professionals from different countries. A descriptive study of the items was carried out comparing them with the published evidence.

Results: In our study, we identified a great variety in the post-surgical approach of carpal tunnel syndrome in 23 different countries.

Discussion and conclusions: There are no common criteria in the techniques used after surgical decompression of the median nerve.

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Tendencias en el abordaje posquirúrgico del síndrome del túnel del carpo. Práctica clínica actual

RESUMEN

Antecedentes y objetivos: La evidencia y las pautas para el uso de intervenciones específicas después de la liberación del túnel carpiano son limitadas. El objetivo principal de este estudio fue determinar los diferentes enfoques terapéuticos empleados en la práctica clínica habitual entre los profesionales de diferentes países tras la liberación del nervio mediano en la muñeca.

Material y métodos: Se diseñó una encuesta de 15 ítems en lengua inglesa, que fue distribuida por correo electrónico y a través de las redes sociales a profesionales de diferentes países.

Resultados: En nuestro estudio identificamos una gran variedad en el abordaje posquirúrgico del síndrome del túnel del carpo en 23 países diferentes.

Discusión y conclusiones: No hay criterios comunes en las técnicas de tratamiento empleadas tras la liberación del nervio mediano en la muñeca.

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Palabras clave:

Descompresión del túnel del carpo

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Introduction

Carpal tunnel syndrome is the most common entrapment neuropathy,¹ but evidence and guidelines for the use of specific interventions after carpal tunnel release are limited.²

Published studies show that intervention in postoperative treatment following carpal tunnel release must combine different

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therapeutic techniques to facilitate gradual progression of activities and the incorporation of everyday patient activities.^{3,4} However, the non-existence of clinical practice guidelines on postsurgical approach after release of the median nerve through its pathway through the wrist has led to substantial, discordant differences in the literature.^{2–4} The aim of this study was to discover current treatment bases following carpal tunnel release with a survey distributed through social networks to specialist professionals in different countries, to determine current practice patterns after decompression of the median nerve through its carpal tunnel pathway.

Material and methods

Between December 2017 and March 2018, a cross-sectional study was conducted through a personal survey. The procedure was approved by the University of Malaga Ethics Committee of Experimentation (CEUMA for its initials in Spanish) (CEUMA 45-2016H register). An incidental sample was taken, which was non probabilistic, of specialist professionals, rehabilitation specialists, physiotherapists, and occupational therapists from different countries belonging to the International Federation of hand therapists (IFHT), who were contacted through Facebook and Twitter, or personally through email.

An ad hoc questionnaire was designed which comprised 15 questions assessing the current practice patterns after surgical decompression of the median nerve. All items were multiple choice questions. The first 5 questions covered personal and professional data of the participants and the following 10 questions referred to the use of the different intervention techniques described in the literature.^{5,6}

Results

A total of 123 questionnaires in 23 different countries were analysed. A total of 73 hand therapists from 27 different countries were personally contacted via email. It was impossible to determine the number of professionals who received the survey through social networks. Immediately after surgery, sensory re-education was the treatment of choice for 39% of participants, and only 18% chose immobilisation. Ice therapy was the physical therapy of choice (91%). 41% of participants started strengthening work with flexors of the fingers and wrist after 15 days and 81% of respondents used neuronal mobilisation techniques. Patient education was one essential part of the therapeutic process in 32% of cases and over half (55%) prescribed exercises in the home as part of their physiotherapy programme.

Discussion

The aim of this study was to assess and determine the different techniques of post-surgical intervention used after release of the median nerve in the wrist, to determine whether common treatment guidelines existed among the different professionals of the different countries. Despite previous studies showing that different types of intervention offer benefits in the reduction of patient symptoms,⁷ only neuronal mobilisation techniques are used by the majority of respondents (81%). Ultrasound also appears to be widely used in clinical practice (66%), although evidence is lacking regarding the use of this therapy because the studies which describe its use appear to be linked to other therapies such as laser or to neuronal mobilisations.⁸ We were unable to determine from the survey whether these techniques are used jointly or separately by the study participants.

Regarding the use of laser, despite not being able to demonstrate significant differences in objective symptoms such as pain or re-employment, there are studies such as those of Alves et al.⁹ where it is concluded that patients who receive therapy with low level laser after surgical release of the median nerve obtained better functional results than those of the control group. Notwithstanding, with regards to physical therapies, the application of ice the first few days after surgery was the most regularly used clinical practice technique: it was applied by 91% of respondents.

Electrostimulation was used by only 24% of respondents, despite the fact that studies such as those by Gordon et al.¹⁰ and Li et al.¹¹ concluded that this technique offered rehabilitation benefits. However, they based their outcomes on the electromyographical response, without assessing quality of life or functional measurements, intensity of pain, mobility or muscular strength.

One of the most controversial factors in the postsurgical approach for carpal tunnel release is postsurgical immobilisation.¹² Bury et al.¹³ found no significant differences between the use of a tailor-made orthosis and loose bandages, but they did not compare the effects of immobilisation versus mobilisation immediately after surgery and we therefore cannot know what effect immobilisation would have on pain, sensitivity, strength or return to work. Bhatia et al.¹⁴ and Martins et al.¹⁵ did not find any statistically significant differences in postoperative pain scores between patients who were immobilised and those who were not. However, results such as those of Mathur et al.¹⁶ suggested that immobilisation had negative effects on the recovery of strength and return to work. Other authors found no benefits in postoperative immobilisation^{13,17} and added that 80% of participants in the group with the cast experienced discomfort compared with the group with immediate mobilisation. It is of note that, according to our results, only 18% of participants included immobilisation with orthosis or plaster cast in the postoperative programme, and non-use would therefore be justified with scientific evidence in this respect.

Conclusions

Although there are few theoretical recommendations regarding postoperative approach to carpal tunnel syndrome, our study identified a wide variability of them. This variability may be due to the lack of studies on the effect of one specific technique compared to any other for recovery of strength, sensitivity or return to work after the operation. Given the high prevalence of this condition and lack of scientific evidence in this respect, future studies need to aim at research into the effects of techniques described in the literature to produce international guidelines of clinical practice for a more appropriate approach after carpal tunnel release surgery.

Study limitation

The sample size and low participant response in some countries, clearly related to the type of sample used, limits the generalisation of our findings and the possibility of establishing comparative analysis between the therapeutic tendencies of different countries. Furthermore, in order to reduce as much as possible the time spent filling in the survey and aiming at the main study objective, the profile of the respondents was not determined with regard to available resources or patients treated. Finally, the fact that the sample was stratified by variables of interest would have led to individual analysis of each one of them. Again, the lack of a larger sample was an impediment in this regard.

Conflict of interests

The authors have no conflict of interest to declare.

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