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Original article

Revision surgery for carpal tunnel syndrome: a retrospective study comparing the combination of Canaletto[®] and Dynavisc[®] gel versus Dynavisc[®] gel alone

Chirurgie de reprise du syndrome du canal carpien: étude rétrospective comparant l'implant Canaletto[®] plus gel Dynavisc[®] versus gel Dynavisc[®] seul

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ABSTRACT

The aim of this study was to assess the value of using a Canaletto[®] implant in combination with a gel composed of carboxymethylcellulose and polyethylene oxide in the surgical treatment of recurrent carpal tunnel syndrome (CTS). The case series included 31 patients with 32 hands operated for the second time for recurrent (22 cases) or recalcitrant (9 cases) CTS by neurolysis. The average patient age was 62 years. Dynavisc[®] gel alone was applied around the median nerve in the first 16 cases (Group I). The Canaletto[®] implant combined with Dynavisc[®] gel was used in the last 16 cases (group II). With an average follow up of 8 months (for group I) and 11 months (for group II), the pre/postoperative variation in pain assessed with a visual analog scale was 1.38/10 (group I) and 2.04/10 (group II), the QuickDASH score was 20.1/100 (Group I) and 20.48/100 (Group II), grip strength was 8% (Group I) and 20% (Group II), sensory nerve conduction speed was 23.20 m/s (group I) and 15.51 m/s (group II) and distal motor latency was 1.55 m/s (group I) and 1.21 m/s (group II). Ten patients recovered from hypoesthesia in both groups, 6 patients in group I and 2 patients in group II regained good trophicity of their superficial thenar muscles. Two patients from group II had not improved clinically although their electromyography had become normal. One patient from group II suffered a postoperative infection that required removal of the Canaletto[®] implant. He subsequently improved slightly. Our study found that for recurrent or recalcitrant CTS, the combination of Dynavisc[®] anti-adhesion gel around the median nerve and a Canaletto implant[®] after neurolysis results in outcomes that are as good as Dynavisc[®] alone, with a significant improvement of the QuickDASH score without the Canaletto[®]. In conclusion, the use of Dynavisc[®] gel alone around the median nerve after neurolysis seems to be as effective as other techniques described in literature but less invasive or time-consuming, and not associated with donor site morbidity such as the flexor tendon sheath.

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R É S U M É

Le but de ce travail était de tester l'intérêt d'associer un implant Canaletto[®] à un gel composé de carboxyméthylcellulose et de polyéthylène oxyde dans le traitement chirurgical des récurrences de syndrome du canal carpien (SCC). La série comprenait 31 patients soit 32 mains opérées pour la deuxième fois d'un SCC récidivant (24 cas) ou récalcitrant (7 cas) par neurolyse. L'âge moyen était de 62 ans. Un gel Dynavisc[®] seul a été appliqué autour du nerf médian chez les 16 premiers cas (groupe I). L'implant Canaletto[®] plus gel Dynavisc[®] a été mis en place chez les 16 derniers cas (groupe II). Au recul moyen de 8 mois (groupe I) et 11 mois (groupe II), une variation pré/postopératoire des items suivant a

Mots-clés:

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