Efficacy and safety of Dynavisc® gel in prevention of scar adhesions recurrence after flexor tendons tenolysis in zone 2.

Multicenter retrospective cohort study

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AIM: *Dynavisc® is a novel surgical product made of carboxymethylcellulose (CMC) and Polyethylene Oxide (PEO) designed to reduce post-surgical adhesions in tendons surgery. A multicenter retrospective cohort study was performed to investigate the clinical safety and efficacy of the Dynavisc® gel in reducing post-surgical adhesions after flexor tenolysis in zone 2.*
MATERIAL OF STUDY: *Thirty-one patients suffering from stiff finger after flexor tendon repairs in zone 2 treated with standard release with (18 Dynavisc®-treated group) or without (13 controls) anti-adhesion gel application into the flexor tendon sheath and around the site of the tenolysis, were collected in five different hand surgery units. Safety profile and functional outcomes (based on TAM test and the The Quick-DASH questionnaire) were examined from patients' charts and analyzed.*
RESULTS: *The application of Dynavisc® posed no safety concerns and it was not related to any additional complication. The Dynavisc®-treated group showed greater progressive improvement of TAM value in all visits with superior TAM value at T(90) and T(180) compared to the control group.*
DISCUSSION: *Tendon adhesions are the main cause of flexor tendon surgery failure. Multiple strategies (i.e. robust tendon repair, early rehabilitation and lubricant or barrier agents) have been proposed to minimize their formation. Among different products described in the literature Dynavisc® showed a significant role in limiting adhesions formation in a recent experimental study.*
CONCLUSIONS: *This clinical study confirm the safety of Dynavisc® gel application in hand surgery demonstrating its potential long-term benefits after flexor tendon tenolysis.*

KEY WORDS: Flexor Tendon Repair, Tendon Adhesions, Tenolysis

Introduction

Trauma, surgery, infection and inflammatory diseases involving tendon are frequently associated with tendon gliding impairment due to the formation of adhesions from the extrinsic healing process [1,2].
Due to anatomical configuration of the narrow digital canal containing superficial and deep flexor tendons, tendon injuries in zone 2 have always been a challenge for hand surgeons with significant risk of functional failure due to adhesions or rupture [3,4].
Once developed, adhesions are responsible for limitations in finger flexion and extension [5,6].
Accurate suturing technique and early rehabilitation fol-

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