

20. Other; Pain, infection, imaging technics and miscellaneous

Preliminary report on a new adhesion gel barrier (Dynavisc[®]) in Hand Surgery.

Di Giuseppe Piero

Battiston Bruno 1 - Berzero Francesco 2 - Di Giuseppe Piero 3 - Messina Jane 4 -

Moneta Maria Rita 5 - Torretta Ferruccio 4 - Tos Pierluigi 1.

(1) CTO Hospital, Turin, Italy; (2) Galeazzi Institute, Milan, Italy; (3) Fornaroli Hospital, Magenta, Italy; (4) G. Pini Hospital, Milan, Italy; (5) Paideia Hospital, Rome, Italy.

PURPOSE

Treatment of adhesions in hand surgery is still a challenge, because of technical difficulties and high risk of recurrences. Several different products and devices are available, to avoid post-operative adhesions, most of them used in the past by all of us. In this preliminary study we evaluate safety in the early postoperative period and long term functional results deriving from the application of a recently developed anti-adhesion gel. A similar gel is well established in Spinal Surgery since 2002, with over than 300.000 patients treated worldwide.

METHOD

Since April 2012, we are testing a new anti-adhesion gel (Dynavisc[®] by Fziomed-USA), based on a biocompatible co-polymer, carboxymethylcellulose (CMC) and polyethylene oxide (PEO), that seems to be a real progress in this field thanks to its unique properties of visco-elasticity and persistence (nearly 30 days) around the tendons and/or peripheral nerves. This study is based on a shared protocol than considers post-operative pain evaluation, occurrence of post-operative complications like wound healing delay (dehyscence), oedema or haematoma that can hinder early mobilization, the most important aspect of this surgery, and late results. In cases of tenolysis, the recovery of ROM (Range of Motion) and TAM (Total Active Motion) were evaluated. In cases of neurolysis, pain disappearance or reduction according to the VAS score and sensitivity recovery were evaluated. Results were recorded according to a standard evaluation form. A very early preliminary experience was presented during a workshop at the FESSH meeting in 2012 in Belgium.

RESULTS

At the moment, in 30 cases of Tenolysis and Neurolysis treated, no adverse events or post-operative complications were observed, thus allowing early mobilization and therapy. Functional results are evaluated at 30 and 60 days after surgery. The most important advantage in cases of Tenolysis is

painless post-operative immediate mobilization in almost all patients and consequently a recovery of TAM at 30 days, of about 60-70%. In Neurolysis cases reduction of symptoms in the first month was significant and is now being evaluated in a longer follow up.

Results and observations on the overall clinical case log are presented and discussed.

CONCLUSION

Preliminary experience on this new anti-adhesion gel barrier in a multicenter study on cases of Tenolysis and Neurolysis, secondary to trauma or surgery, has been positive in terms of tolerability and efficacy. Persistence and viscosity are the most relevant properties of Dynavisc® that, in our opinion, has improved our outcomes.