

Cellular implant improves surgical outcome in Dupuytren's disease.

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Hypothesis: Are we able to improve the surgical outcome of strand interruptions in Dupuytren's disease by creating an augmented 'firebreak' effect with an absorbable cellulose implant, a known absorbable adhesion barrier?

Methods: In a case control prospective study, we included 33 operations in 29 patients with a high probability for recurrent disease. The cellulose was implanted in the first 15 patients. Intraindividual control was done in 4 patients. Goniometric evolution was monitored on digital photography and satisfaction was measured on a visual analogue scale (VAS) with a preliminary 1 year follow-up.

Results: With the implant, the postoperative range of motion improved significantly by 36% and remained unchanged after 3 months with a 1 year follow-up. Likewise, the VAS for satisfaction improved more.

Summary: We conclude that cellulose implants may improve the surgical outcome of segmental fasciectomy in Dupuytren's disease by achieving a better finger extension and a high patients' satisfaction.

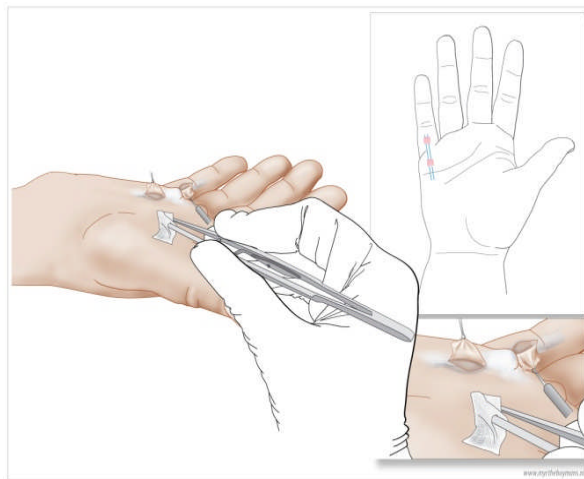


Figure 1: Schematic illustration of the surgical technique in the fifth digit: after segmental strand resection resulting in full finger extension the absorbable cellulose is implanted to mechanically interrupt the fibroproliferative strands.

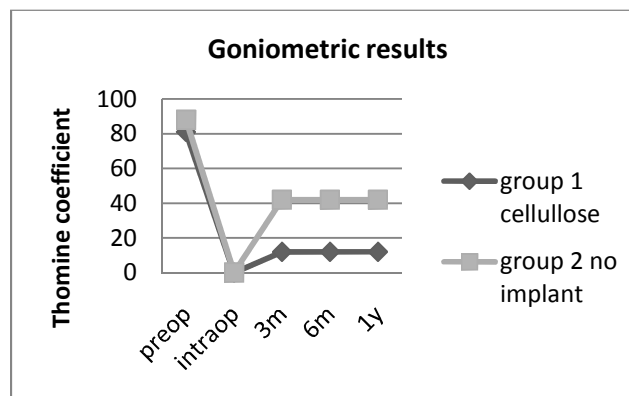


Figure 2: Goniometric evolution of the total extension lack in metacarpophalangeal and in proximal interphalangeal joints in both groups (preop = before the surgery; intraop = during surgery; m = months after

surgery; y = year after surgery). Although the mean preoperative extension lack is similar in both groups as was the full intraoperative correction, in group 1 with the cellulose implant a significantly improved goniometric correction is achieved, which is maintained after 1 year of follow-up.