

The role of human-derived fibrin sealant in the reduction of postoperative flexor tendon adhesion formation in rabbits.

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Abstract:

This study assessed the role of a novel fibrin sealant (Vivostat) in adhesion reduction after flexor tendon surgery. The deep flexor tendons of the 2nd and 4th digits of the left paw of 20 rabbits were exposed and a standard partial injury was performed on each. The rabbits were randomized to either immediate post-injury treatment with Vivostat or no treatment. In each case active movement of the 2nd digit was prevented while the 4th digit was allowed to move normally. The two groups were assessed at 14 days for adhesion formation with a tensiometer. The right paw acted as the unoperated control. Results showed that there was no significant difference in the force needed to remove the tendon from its sheath when comparing the two Vivostat-treated groups to the unoperated controls. There was, however, a highly significant difference in this force between the non-Vivostat-treated groups and the unoperated controls. This suggests a beneficial effect of Vivostat in reducing post surgical tendon adhesion formation.