Is percutaneous suturing superior to open fibrin gluing in acute Achilles tendon rupture?.

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Abstract:

PURPOSE: Open fibrin gluing is reported to enable anatomical reconstruction with less soft tissue compromise than suture repair. Our main objective was to compare the complication rate, function, pain and disability of the two operative approaches of percutaneous suture using the Paessler technique and open fibrin gluing.

METHODS: Sixty-four patients (two centres, retrospective cohort study, 2000-2009) who had undergone acute Achilles tendon repair with either percutaneous suture (n=27; 44 years) or open fibrin glue (n=37; 45 years) took part in a follow-up examination after a median of 63 months (range, six to 180). Ankle range of motion, calf and ankle circumferences and return to work and sports activities were evaluated. Isokinetic und sonographic evaluation results were retrieved.

RESULTS: Complications were noted in 22 patients (34 %). Delayed wound healing without evidence of surgical site infection was found in three patients in the fibrin group and two patients in the suture group. Postoperative scar tenderness described as pain at the rim of the shoe was significantly more frequent in the suture group (p=0.03). Re-rupture requiring re-operation occurred in one patient. Transient paresthesia of the heel occurred in 12 patients. No sural nerve lesions were reported. There was no significant difference between groups regarding lower leg circumference, disability, or function. Ultrasound and isokinetic measurements did not reveal a

significant difference between the two methods.

CONCLUSIONS: The present study suggests that open fibrin gluing is a reasonable alternative to percutaneous repair of acute ruptures of the Achilles tendon and both techniques can yield reliably good results.