

Patrón de revascularización de injertos de tendones flexores rotos en reconstrucción de ligamento cruzado anterior: un estudio histológico.

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Abstract

Introduction: For successful anterior cruciate ligament (ACL) reconstruction, revascularisation and histological maturation are necessary, as their failure can cause graft rupture.

Purpose: The purpose of this study was to describe differences in the histological maturation of early failed plasty (less than 12 months after surgery) and late failed plasty (more than 12 months after surgery) in patients with re-rupture after ACL reconstruction with hamstring tendons.

Material and methods: A descriptive observational study was conducted on a consecutive series of 20 patients whose ACL reconstruction had failed. Graft biopsy samples were obtained during the revision surgery from the proximal, medial, and distal graft remnants. The samples were evaluated by light microscopy, and the vascularity and maturation of the samples were established by histological scoring.

Results: The most common aetiology of reconstruction failure (86.6%) was a specific event with non-contact mechanism. The patients with re-rupture of their ACL plasty less than 12 months after surgery had substance vessels that were less deep. The distal segment of the graft in those patients showed a delay in histological maturation with fewer collagen fibres.

Conclusion: In patients whose ACL grafts failed less than 12 months after surgery, a lower distribution of blood vessels and collagen fibres was found that were less ordered in the distal graft. These results indicate a delay in maturation, which leads to a higher risk of graft failure.