

Effects of a platelet gel on early graft revascularization after anterior cruciate ligament reconstruction: a prospective, randomized, double-blind, clinical trial.

PRP applied to an ACL graft at surgery improves the healing to bone. This may be especially important when using allografts to speed recovery. - Kelly Cunningham, MD

Abstract

BACKGROUND: Slow graft healing in bone tunnels and a slow graft ligamentization process after anterior cruciate ligament (ACL) reconstruction are some of the reasons for prolonged rehabilitation.

AIMS: The purpose of this study was to determine if the use of platelet gel (PG) accelerates early graft revascularization after ACL reconstruction.

METHODS: PG was produced from autologous platelet-rich plasma and applied locally. We quantitatively evaluated the revascularization process in the osteoligamentous interface zone in the bone tunnels and in the intra-articular part of the graft by means of contrast-enhanced magnetic resonance imaging (MRI).

RESULTS: After 4-6 weeks, the PG-treated group demonstrated a significantly higher level of vascularization in the osteoligamentous interface (0.33 ± 0.09) than the control group (0.16 ± 0.09 , $p < 0.001$). In the intra-articular part of the graft, we found no evidence of revascularization in either group.

CONCLUSION: Locally applied PG enhanced early revascularization of the graft in the osteoligamentous interface zone after ACL reconstruction.

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