

Evaluation of autograft characteristics after pterygium excision surgery: Autologous blood coagulum versus fibrin glue.

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Abstract:

Purpose: To compare graft outcomes following pterygium excision and conjunctival autograft fixation using patient's in situ autologous blood or standard fibrin glue-assisted conjunctival autograft adhesion. **Methods:** Outcomes of 23 consecutive eyes which underwent pterygium excision and conjunctival autograft with autologous in situ blood coagulum (group I) were compared with historical case controls (20 eyes) that had undergone fibrin glue-assisted conjunctival autograft (group II). Primary outcome measure was graft stability. Secondary outcome measure was severity of graft inflammation at day 1, day 7, 3 months, and 6 months. **Results:** The two groups were similar regarding age, gender, uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), refractive error, tear function tests, and pterygium size. Mean surgical time was similar for the two groups (14.2 \pm 2.74 min, group I; 12.25 \pm 1.88 min, group II; $P=0.1$); with the mean difference in operative time being 1.95 min (95% CI, 0.48-3.42 min). Postoperatively, there was a statistically significant reduction in astigmatism and improvement in UCVA, BCVA, and spherical equivalent in all eyes. No difference was found in mean epithelial defect healing time, UCVA, BCVA, astigmatism, tear film break-up time, and Schirmer I and II at 6 months between the two groups. Initial graft stability was better for group II at 1 month ($P=0.001$) but was similar for both groups at 6 months. Median score of graft inflammation was significantly more for group II during the first week ($P<0.05$; Wilcoxon rank-sum test). **Conclusion:** Autologous blood may be used as an effective alternative with lesser postoperative inflammation in comparison to glue-assisted autograft fixation.