

Recurrence Rate and Graft Stability With Fibrin Glue Compared With Suture and Autologous Blood Coagulum for Conjunctival Autograft Adherence in Pterygium Surgery: A Meta-Analysis.

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Abstract:

PURPOSE:: To minimize recurrence and improve graft stability after pterygium surgery, conjunctival autograft adherence is done using fibrin glue (FG) or autologous blood coagulum (ABC). But there are studies that have reported conflicting or inconclusive results. This meta-analysis was conducted to evaluate the postoperative recurrence rate and graft stability after using FG, sutures, and ABC. **METHODS::** MEDLINE, Cochrane databases, and ICTRP were searched and PRISMA guidelines as well as recommended meta-analysis practices were followed. The odds ratio was calculated to estimate the effect size to assess the difference in recurrence and graft stability between the groups. Heterogeneity across the studies was explored using subgroup analyses and quality assessment using the Cochrane risk of bias tool and sensitivity analysis. **RESULTS::** After screening, 30 studies were included for meta-analysis. The random model analysis for recurrence revealed an effect size of 0.44 [95% confidence interval (CI), 0.32-0.60], and subgroup analysis for studies comparing FG and sutures showed an effect size of 0.38 (95% CI, 0.27-0.53). In case of studies comparing FG and ABC, the random model analysis revealed an effect size of 1.01 (95% CI, 0.45-2.26). The random model analysis for graft stability revealed an effect size of 0.87 (95% CI, 0.57-1.31). In subgroup analysis, the random model revealed an effect size of 0.39 (95% CI, 0.17-0.88) indicating significant better graft stability with FG over ABC. **CONCLUSIONS::** This meta-analysis reveals the superiority of FG over sutures as the use of FG can significantly reduce the recurrence rate, but no significant difference in graft stability was found between FG and sutures. No significant difference was found

in the recurrence rate between FG and ABC, but graft stability was found to be better with FG compared with ABC.

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