Efficacy of fibrin glue versus sutures for attaching conjunctival autografts in pterygium surgery: A systematic review with metaanalysis and trial sequential analysis of evidence.

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Abstract:

Previous meta-analyses have been conducted to compare the efficacy of fibrin glue (FG) versus sutures in pterygium surgery; however, additional clinical trials have since been published. Therefore, we conducted an updated meta-analysis to further explore the association between FG application in pterygium surgery, and the recurrence rate, complication rate, and surgical duration. An electronic literature search for eligible studies published before July 29, 2016 was conducted across multiple databases. Odds ratios (ORs), standardized mean difference (SMD), and 95% confidence intervals (CI) were calculated. Publication bias of the included articles was evaluated by funnel plots. Differences in recurrence rate and complication rate between the FG and suture groups were evaluated in terms of OR with 95% CI, and SMD with 95% CI were used to estimate the difference in surgical duration. Trial sequential analysis (TSA) was used to determine whether the currently available evidence was sufficient and conclusive. Twenty-four studies were included in this study. The pooled ORs for recurrence rate and complication rate were 0.35 and 1.121, respectively. The pooled SMD for surgical duration was -4.142. The TSA results indicated that evidence of the effect was sufficient in the recurrence group and surgical duration group. Although there was no difference in complication rate between FG and sutures, the apparent advantages of FG over sutures are shorter surgical duration and greater reduction in the recurrence rate of pterygium.