The Use of Fibrin Glue in Pterygium Surgery with Amniotic Membrane Transplantation: A Systematic Review and Meta-Analysis

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Introduction:
Amniotic membrane transplantation (AMT) has been used in pterygium surgery instead of conjunctival autograft to reduce the rate of recurrence. This is the first meta-analysis to compare the outcomes of using fibrin glue versus sutures with AMT in pterygium surgery.

Methods:
This study was conducted as per the PRISMA guidelines. Five electronic databases were used to include all studies comparing use of fibrin glue versus sutures in pterygium surgery with AMT.

Results
Four RCTs enrolling 180 patients were identified.

Primary outcomes - Conjunctival inflammation:
A statistically significant less amount of conjunctival inflammation was seen in the fibrin glue group (OR = 0.21, CI = 0.08 to 0.50, P = 0.0005).

Secondary outcomes:
Fibrin glue had significantly less cases of graft loss compared with sutures. No statistically significant difference was found in amniotic membrane graft outcomes, time to recurrence and subconjunctival haemorrhage.

Conclusion:
Fibrin glue is comparable to the sutures used in the pterygium surgery with amniotic membrane transplantation. More studies are required to further support the findings of this study.

Pterygium recurrence:
There was no statistically significant difference seen in the odds ratio analyses (OR = 0.74, CI = 0.33 to 1.70, P = 0.48)