

Evaluation of a fibrin sealant free of bovine-derived components in an experimental vas anastomosis study.

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Abstract:

Objectives: The risk of transmission of bovine spongiform encephalopathy cannot be excluded from the use of bovine-derived products. The present study was undertaken to evaluate the performance of a new fibrin glue free of bovine-derived components in vas anastomosis and to compare this product to conventional vas anastomosis with fibrin glue. **Methods:** Bilateral delayed vas anastomosis was performed in 40 Sprague-Dawley rats. All animals underwent a fibrin glue-assisted vas anastomosis with three transmural sutures tied prior to fibrin glue application. The composition and preparation of fibrin glue was similar for all vas anastomoses except the fibrinolysis inhibitor component which was aprotinin (3,000 KUI/ml) in group 1 and tranexamic acid (10 mg/ml) in group 2. The animals (20 rats in both groups) were sacrificed 7 weeks postoperatively and evaluated for gross patency, presence of sperm granuloma and tensile strength measurements at the anastomosis site. **Results:** No difference was found between the 2 groups for all parameters evaluated whether a bovine-derived or a synthetic fibrinolysis inhibitor component was used. **Conclusion:** This study showed that tranexamic acid, a fibrinolysis inhibitor, can be substituted for conventional fibrin glue thereby avoiding the risks of bovine products. Copyright (C) 2000 S. Karger AG, Basel.