Simple intraoperative technique for minor dural gap repair using fibrin glue and oxidized cellulose.

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Abstract:

INTRODUCTION: Several methods have been proposed to achieve a watertight dural closure, including the use of fibrin sealant to reinforce sutures. We propose a fast technique using oxidized cellulose and fibrin glue to achieve firm and watertight closure of minor dural defects in supratentorial cranial surgery.

TECHNICAL NOTE: Oxidized cellulose is cut to the shape of the dural defect and applied as an onlay graft. Fibrin sealant is then applied over the cellulose and the dural margins defect. The web conformation of oxidized cellulose avoids adhesion of fibrin glue to the underlying cortical surface of the brain. This technique has been applied in 45 of 467 supratentorial craniotomies during two consecutive years. The procedure was performed in few seconds. Postoperatively, three patients developed subgaleal fluid collection, which resolved conservatively in two cases. There were no other complications or reoperations.

CONCLUSION: We used a piece of oxidized cellulose, reinforced by fibrin glue, as a sutureless graft with more ease and less technical demand than other techniques. The reported technique is a fast and valid alternative to small dural defect closure methods.