Postoperative cerebrospinal fluid leaks of the lumbosacral spine: Management with percutaneous fibrin glue.

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Abstract:

PURPOSE: To assess CT-guided injection of fibrin glue for the management of lumbosacral cerebrospinal fluid (CSF) leaks. METHODS: Six consecutive patients with postoperative CSF leaks were treated after CSF aspiration under CT guidance. A solution of cryoprecipitate was simultaneously injected with a 10% calcium chloride solution containing 2000 units of thrombin per milliliter. In one patient, 0.5 mL of iopamidol was added to the calcium chloride/thrombin mixture before injection. Placement of the fibrin glue aggregate was confirmed by CT imaging. To deter mine outcomes we reviewed the patients' records, postprocedure imaging studies, and physical findings, and we interviewed the patients directly. RESULTS: In three patients with postoperative CSF leaks, symptoms resolved after treatment. Despite imaging evidence of successful plug deployment, two other patients still had severe symptoms, and they underwent surgery after 2 and 18 hours, respectively. One patient had a continued CSF leak and a headache after 12 hours; follow-up surgery repaired an unsuspected dural tear just distal to the site of original surgery underneath the lamina and not covered by the fibrin glue. After one of the successful procedures, the patient had a fever and a headache, probably because of aseptic meningitis, which resolved after 2 days. CONCLUSION: Percutaneous CT-guided placement of fibrin glue may provide nonsurgical treatment for postoperative CSF leaks, potentially avoiding a major and technically difficult surgical procedure.