Sellar repair with fibrin sealant and collagen fleece after endoscopic endonasal transsphenoidal surgery.

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Abstract:

OBJECTIVE: To determine, in patients undergoing sellar repair after endoscopic endonasal transsphenoidal surgery, the clinical efficacy of a combination of fibrin sealant/collagen fleece compared to the use of fibrin sealant or collagen fleece alone, in preventing CSF-related (cerebrospinal fluid) postoperative complications.

METHODS: From a retrospective analysis of our series of 242 consecutive endoscopic transsphenoidal procedures, in 56 out of the 90 cases in which the sella had been repaired, fibrin sealant and/or collagen fleece was employed, both in combination with one or multiple layers of other materials. The incidence of postoperative CSF leaks and the need for a postoperative lumbar drainage in the groups of fibrin sealant or collagen fleece treated patients were compared to the group of patients treated with the fibrin sealant/collagen fleece combination.

RESULTS: In 2 out of 16 fibrin sealant treated patients a postoperative CSF leak presented, and in 6 out of these 16 subjects a postoperative lumbar drainage was necessary; patients who received a fibrin sealant/collagen fleece combination exhibited no detectable postoperative CSF leak, and no postoperative lumbar drainage was used.

CONCLUSIONS: Closure of the sella turcica with fibrin sealant in combination with a collagen fleece is a safe and effective method to prevent CSF fistulas. When used in combination, the collagen

fleece enhances the sealing and tissue regeneration properties of the fibrin sealant, thus reducing the incidence of postoperative CSF leaks, obviating the need for a lumbar drain placement.