

Reconstruction of the sellar floor following transsphenoidal surgery using gelatin foam and fibrin glue.

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Abstract:

Objective: To introduce a new principle of sellar reconstruction and to evaluate the effectiveness of absorbable gelatin foam and fibrin glue for sellar reconstruction. Methods: A total of 176 consecutive patients who underwent surgery for pituitary adenomas, cysts, chordomas, or subdiaphragmatic craniopharyngiomas in the sella turcica between January 2001 and April 2003 at Peking Union Medical College Hospital were enrolled. Different techniques of sellar closure and indications for each specific condition were retrospectively reviewed. Results: Seventy-seven (43.7%) patients developed a visible cerebrospinal fluid (CSF) leakage during surgery. Intraoperative CSF leakage were repaired simply with gelatin foam and fibrin glue in 62 (35.2%) patients, and with autologous fat graft and sellar floor reconstruction in 15 (8.5%) patients. Postoperative CSF rhinorrhea occurred only in 1 case. There were no visual deterioration, allergic rhinitis, meningitis, pneumocranium, granulomas, or other complications associated with the reconstruction procedure. Conclusion: The procedure of using gelatin foam and fibrin glue and principle of cranial base reconstruction is safe and effective in preventing postoperative complications following transsphenoidal surgery.