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Suturing In Endoscopic Endonasal Surgery: Pitfalls And Surgical Nuances

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Objective:
This study was performed to evaluate the efficacy and pitfalls of our suturing technique for endoscopic skull base reconstruction (ESBR) following endoscopic endonasal surgery (EES).

Methods:
A total of 123 patients who underwent EES (127 surgeries) between October 2014 and May 2017 were reviewed. Our surgical algorithm for ESBR in EES was categorized based on intraoperative cerebrospinal fluid (CSF) leakage graded as follows: Grades 0 or 1, dural suturing with abdominal fat graft or packing of gelatin sponge into the cavity; Grade 2, method for grade 1 with addition of mucosal flap or nasoseptal flap; Grade 3, duraplasty in fascia patchwork closure with nasoseptal flap. Bony reconstruction was not required, and there was no postoperative bed rest or lumbar drainage (LD) insertion in any of the cases. The clinical outcomes were analyzed.

Results:
Postoperative CSF leakage after EES was mostly prevented (98.3%) by our algorithm without postoperative LD or bed rest. On the other hand, reconstruction surgery was required for postoperative CSF leakage in two cases: one with prior multi-EES and radiotherapy, and another patient with poor compliance due to communication difficulties. Both of the latter patients were obese.

Conclusions:
Watertight suturing technique is a worthwhile reconstructive method following EES.