

**Table 5: CSF Leak Closure Techniques**

Author (Year)	Study Description	Classification Process / Evidence Class	Conclusions
Jho HD, Carrau RL (1997) <sup>66</sup>	Initial assessment of clinical outcomes following endoscopic endonasal transsphenoidal resection of 50 sellar lesions (19 NFPA)	Therapeutic / III	Early assessment of 50 patients who underwent endoscopic endonasal transsphenoidal surgery. Surgery for 19 NFPA cases were closed with autologous fat grafts for CSF leaks or large post-resection cavities. The fat grafts are supported with bone when possible or with absorbable buttress when bone could not be placed. With this technique, 1 postoperative CSF leak (5.3%) was reported in a recurrent pituitary adenoma with a large post-resection cavity. Bone could not be placed and the patient underwent re-operation, and the defect was repaired with a larger autologous fat graft. CSF diversion was not routinely used. For large sellar defects, and when intraoperative CSF leakage was encountered, a free abdominal fat graft was placed within the sellar cavity and anterior wall of the sella reconstructed with bone fragments. The lack of an appropriate control group renders this Class III evidence.