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O-BC-11 - Use of the 'gasket seal' technique closure for reducing cerebrospinal fluid leakage after endoscopic endonasal transsphenoidal approach

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Resumen

Objectives: An appropriate skull defect reconstruction after endoscopic endonasal transsphenoidal (EET) approach is essential for avoiding postsurgical cerebrospinal fluid (CSF) leakage. The “gasket seal” technique was introduced by Leng et al. for minimal-access endoscopic cranial base surgery with a reduction in the incidence of CSF leakage. We report the rate of CSF leakage after EET surgery in our centre before and after introducing the “gasket seal” technique.

Material and methods: We searched for the EET surgeries performed in our centre from 2008 to 2015 and conducted a univariate analysis comparing the incidence of CSF leakage during the time before and after the introduction of the “gasket seal” closure for reconstructing midline skull base defects. In a posterior multivariate analysis we controlled the effect of the technique with confounding variables like the tumour size, cavernous sinus invasion, complete or partial resection, intraoperative CSF leakage and preoperative lumbar drain placement.

Results: Ninety-one cases were included, and 58 of them were treated after introducing the “gasket seal” closure. The incidence of CSF leakage before using this technique was 33.6% and 10.34% after ($p = 0.008$). In the multivariate analysis the presence of intraoperative CSF leakage was the only factor associated to postoperative fistula.

Conclusions: Our results confirm the use of the “gasket seal” technique as a useful option for cranial base reconstruction after EET to reduce the incidence of CSF leakage.