Hemi-transseptal versus Combined Transseptal/Transnasal Approach to the Sellar Region: Differences in Incidence of Postoperative CSF Leak Rate

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It was with great excitement that we read the study by Fnais et al, recently published in this journal.¹ The authors presented a retrospective case–control study that compared two different endoscopic endonasal approaches (EEAs) to the sellar region: the recently proposed hemi-transseptal approach (Hemi-T)² and the traditional approach (TA).³ They included 105 and 40 patients who had undergone the Hemi-T and TA, respectively, over a period of 5 years. After statistical analysis, they concluded that the Hemi-T provided a shorter operative time, a decreased postoperative cerebrospinal fluid (CSF) leak rate, and decreased postoperative sinonasal morbidity.¹

The Hemi-T differs from the TA because it starts with a hemi-transfixing septal incision and subperichondral/periosteal elevation of the septal mucosa on one side (usually the left). This septal mucosa is lateralized and sutured to the lateral nasal wall, and a small nasoseptal flap (NSF) is harvested on the other side (usually the right). The posterior bony septum is removed and the sphenoid sinus is widely opened. With that, two surgeons can work through both nostrils—transseptally through the left and transnasally through the right.^{1,2}

It is noteworthy that this approach is similar in many aspects to the technique that our team described in 2008, and has used in most of our surgeries since then, including sellar, parasellar, suprasellar, and even clival tumors.^{4–6} We have called it the “combined transseptal/transnasal approach” (CTT), because this nomenclature clearly describes the gen-

eral concepts of the technique (►**Video 1**). Despite being quite comparable, CTT and Hemi-T present some notable differences.

Video 1

The combined transseptal/transnasal approach to the sellar region. Online content including video sequences viewable at: www.thieme-connect.com/products/ejournals/html/10.1055/s-0037-1620247.

Probably the most important difference between both techniques is that in CTT a full-sized NSF is always harvested at the beginning of the procedure (on the “transnasal side”) as opposed to the smaller NSF that is typically harvested in Hemi-T. Although this might result in worse postoperative nasal crusting, it also presents some major advantages: (1) It exempts the surgeons of having to harvest a larger NSF at the end of the procedure, if the smaller NSF does not fit the skull base defect; (2) it diminishes the risks of creating a large septal perforation, in case a second NSF should be harvested; and (3) it possibly decreases the chances of having a postoperative CSF leak.

Indeed, in the study by Fnais et al the Hemi-T technique was associated with an incidence of intraoperative and postoperative CSF leak rates of 22.0 and 7.0%, respectively.

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If we consider only those patients who had intraoperative CSF leak, the postoperative CSF leak rate for the Hemi-T technique was 31.8% (7/22).¹ On the other hand, Fujimoto et al reviewed the results of the CTT for 91 patients with pituitary adenomas, treated during a period of 4 years. Considering only those patients who had intraoperative CSF leak, the incidence of postoperative CSF leak rate was 11.1% (4/36).⁷ Although these populations of patients might not be exactly comparable, the size of the NSF harvested at the beginning of the surgery could explain such differences, favoring CTT over Hemi-T.

More than 10 years after the description of the NSF,⁸ the postoperative incidence of CSF leak still seems to be the Achilles' heel of EEA, and the problem we and other skull base surgeons struggle with. While "the perfect EEA" is still to be developed, we acknowledge and congratulate Fnais et al for their meaningful work on this challenging subject.

Conflict of Interest

None.

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