Endoscopic third ventriculostomy

To the Editor: We read with great interest the recent article by Grand and Leonardo (Grand W, Leonardo J: Endoscopic third ventriculostomy in adults: a technique for dealing with the neural (opaque) floor. Clinical article. J Neurosurg 114:446–453, February 2011) regarding the direct technique of endoscopic coring (“cookie cut”) in cases with a thick floor of the third ventricle. They described the method precisely and used it in 41 adult patients. With a section inside the tuber cinereum between the infundibulum and mammillary body, the underlying membranes and vasculature were exposed, and the endoscope penetrated the membrane into the prepontine space. There were no perioperative deaths or vascular injuries.

In our experience with endoscopic third ventriculostomy (ETV) in pediatric hydrocephalus, we have encountered opaque or neural floors in some cases. Seeing the basilar artery during the ETV helps us to perform a safe procedure and to avoid any probable vascular damage. But whenever the floor is very thick, the basilar artery is not visible and this guide is not available. Removing the cookie cut from the thick floor can be associated with vascular damage. Fortunately, the authors did not have any major complications, but they can happen and can create a catastrophe.

To avoid any damage to the major vasculature and the subsequent catastrophic bleeding, we believe in the dorsum sella as a good anatomical landmark, which guides us to find the best route. Care is taken to remain in the midline; the floor is pierced with the tip of the endoscope by compressing the floor on the dorsum sella. The hole is enlarged by inflating a Fogarty catheter. Being in the midline prevents any damage to the neural fibers passing through the lateral parts of the dorsum sella. We found this method a safe and stress-free method in cases of hydrocephalus with a thick floor of the third ventricle.

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Disclosure

The authors report no conflict of interest.

Response: We appreciate the interest and comments of Drs. Nejat and El Khashab. We have used the technique of “stripping” the dorsum sella with the endoscope when there was a narrow entry into the prepontine cistern as visualized during the ETV as a foreshortened distance between the mamillary bodies and the infundibular recess. Although a narrow prepontine cistern might be predicted on preoperative MR imaging, this is not always the case. Knowing the diameter of the endoscope (4.6 mm), the relative size of the “entry zone” on the floor is easily determined by “sizing” the tuber cinereum as one closely approaches the floor of the third ventricle. Ideally, one wants to penetrate in the midline midway between the infundibular recess and the anterior edge of the mamillary bodies. However, if the tip of the endoscope fits squarely on the neural floor between the mamillary bodies and the infundibulum, a routine cookie cut of the floor is performed to expose the membranous floor and basilar complex. The degree of pressure required on the floor is learned with experience. If there is a narrow entry between the basilar artery and dorsum sella after the neural floor is removed, the endoscope can be pressed up against the dorsum, and the Liliequist membrane is stripped and torn posteriorly to then insert the endoscopic apparatus between the basilar artery and clivus and to lyse any secondary membranes. We have used the balloon technique rarely and mostly with a very patulous membranous floor rather than a neural floor. As we mentioned in our paper, the endoscopic apparatus as described is used as an instrument with a “see as you go” procedure, with prepenetration assessment of the basilar complex and its configuration, which should minimize risk of injury to the basilar complex. The above letter makes a good point in that when having difficulty with atypical anatomy or a narrow entry zone, localizing the dorsum by “walking” the endoscope posteriorly from the infundibular recess and palpating the bony edge of the dorsum and then stripping backward and slightly inferiorly will tear the Liliequist membrane and slide into the prepontine cistern. If there is a neural covering over the dorsum, it is removed initially, which exposes the underlying membranous structures and position of the basilar complex. We have now performed 155 ETVs in adults, and 62 neural floors have been encountered with no injury to the basilar vasculature or the perforators. There are certainly many varied and valid techniques for performing an ETV. There is a learning curve to the one we have described, but we have found that it works well for us.

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Glioblastoma with dural tail

To The Editor: We read with great interest the article by Wu et al. (Wu B, Liu W, Zhu H, et al: Primary glioblastoma of the cerebellopontine angle in adults. Case report. J Neurosurg 114:1288–1293, May, 2011), in which the authors described the clinical and neuroradiological findings for an extraaxial cerebellopontine angle (CPA) glioblastoma with a dural-tail sign. In their study, the preoperative MR imaging findings mimicked those of a CPA meningioma with a dural-tail sign. Therefore, they reported that neuroimaging features such as the presence of intratumoral hemorrhage, findings suggestive of necrosis, a well-defined margin, and peritumoral edema disproportional to the size of the extraaxial lesions were useful for the preoperative diagnosis of primary CPA glioblastomas. We completely agree with the authors and wish to provide further comment on the issue of glioblastomas mimicking meningiomas. Majós et al. reported that neuroimaging features such as the presence of intratumoral hemorrhage, findings suggestive of necrosis, a well-defined margin, and peritumoral edema disproportional to the size of the extraaxial lesions were useful for the preoperative diagnosis of primary CPA glioblastomas.

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