Neurosurgical Forum

LETTERS TO THE EDITOR

Endoscopic endonasal resection or open surgery for pediatric craniopharyngioma

TO THE EDITOR: We studied with keen interest the article by Madsen et al.¹ regarding endoscopic endonasal surgery (EES) (Madsen PJ, Buch VP, Douglas JE, et al: Endoscopic endonasal resection versus open surgery for pediatric craniopharyngioma: comparison of outcomes and complications. *J Neurosurg Pediatr* 24:236–245, September 2019). We commend the authors for analyzing this clinically pertinent question. The authors concluded that EES had a comparable or superior extent of resection over open surgery. The recurrence rate and need for adjuvant radiotherapy was lower in the EES group.

As mentioned by the authors, preoperative volume is a significant factor determining the extent of resection in cases of craniopharyngioma. In the initial cohort, the median preoperative volume in the open group was approximately thrice the volume in the EES group (18,429 mm³ vs 6,244 mm³) and neared statistical significance ($p = 0.06$). The authors, rightly, did a matched cohort analysis and found no significant difference in the extent of resection between the two groups. We believe that the initial cohort analysis and conclusions are not pertinent in the presence of a major confounding factor. Hence, we wish to use the “comparable or superior” phrase with caution while drawing conclusions and comparing the extent of resection between the two groups. The authors have themselves stated that open surgery may be better in large tumors with lateral extension. Hence, a conclusion stating that the extent of resection between the two groups is comparable seems more apt.

Similarly, the authors also concluded that the recurrence rate and need for adjuvant radiotherapy was lower in the EES group. Even in the initial cohort, the recurrence rate and need for adjuvant radiotherapy is not significantly different in the two groups. Hence, such conclusions should also be drawn with caution.

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Disclosures

The authors report no conflict of interest.

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Response

We greatly appreciate the interest of Dr. Sardana and colleagues in our work. As they point out, comparisons drawn in our initial cohort (including extent of resection, need for adjuvant therapies, and recurrence rates) should be taken with caution because the difference in preoperative tumor size was notable and neared statistical significance. This was the impetus for performing the matched cohort analysis to control for preoperative tumor size, which found an equivalent tumor size between the groups, more frequent gross-total resections, fewer pseudoaneurysms, and decreased restricted diffusion in the EES group.

All surgeries in the open and EES groups were performed by the same surgeon. This finding led us to comment that EES has equivalent if not better ability to maximize extent of resection for tumors of similar size. Furthermore, because the recurrence rate and need for adjuvant therapies are tied to the ability to achieve a gross-total resection, this also lends an advantage to the approach. We of course agree that definitive conclusions are hard to draw from a limited retrospective study such as ours, which is why we did not overstate our conclusion. However, we hope our work encourages further study of this approach to appropriately delineate its role in the management of pediatric craniopharyngioma.

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