

# Commentary: Toward Supratotal Resection of Clival Chordoma: Combined Endoscopic Endonasal and Contralateral Transmaxillary Approaches

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The authors present a case of surgical treatment of residual clival chordoma, through an elegant combined endonasal and contralateral transmaxillary approach.<sup>1</sup> The surgical strategy is interesting as an alternative to the classical anterior petrosal approach, which represents an alternative for such radical removal.

The title “Toward Supratotal Resection of Clival Chordoma” demonstrates the goal of the authors in aggressive resection of the lesion. The surgical removal of skull base chordomas is the most important tool in order to achieve a better control of the disease, and the concept of supratotal removal is a logical and reasonable proposition.<sup>2</sup> This concept is crucial, and the total removal should be pursued adding different approaches, previous to any other adjuvant therapies.

Nevertheless, such “supraradical” removal is difficult to obtain in skull base chordomas, and suitable only in small lesions of the midline, because of the limits of bone infiltration, which are very hard to define. Despite aggressive removal, local recurrence ranges from 43% to 85%.<sup>3,4</sup> The petroclival involvement is challenging, and the anterior and posterior petrosal approaches, endoscopic transphenoidal approach, with lateral extensions, are not a warranty for total resection of the bone involvement. In this case, the posterior cavernous sinus was completely involved by chordoma, and the dural involvement of such region is unlikely to be radically removed. The authors presented pathological evidence of negative dural margins at the level of the tentorium (superior margin) and at the level of the lower clivus (inferior margin), demonstrating concern with an aggressive resection.

The total removal should be supported by histological analysis of the dural involvement, as

presented by the authors, but also by pathological evidence of negative bone margins. Otherwise, one may achieve marginal margins, but no real supratotal removal.

The surgical seeding of chordomas is well documented as a consequence of the implantation of tumor along the surgical corridors.<sup>5</sup> Surgical approaches through the cavernous sinus and petroclival region carry the risk of tumoral seeding, because it is difficult to isolate the adjacent regions from contamination by tumor cells. Such aspect represents an important bias in order to achieve an effective control of petroclival chordomas.

The authors should be complimented by the message of supratotal removal in a challenging skull base chordoma, the most important idea shared by their very good work.

#### Disclosure

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

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