

Bevacizumab for the Treatment of High-Grade Meningiomas: Is There New Evidence? [Letter]

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Dear editor

Meningiomas grades II and III represent 10% to 25% of all meningiomas. After the World Health Organization modified the criteria for the diagnosis of these tumors, this number increased, and some articles showed a prevalence up to 35%.¹ The treatment of these tumors is challenging and involves not only surgical resection but also some adjuvant treatment. Mainly for the meningioma grade III treatment, pharmacotherapy can be considered; however, it is still evidence level IV.¹ Bevacizumab is an anti-angiogenic therapy, a monoclonal antibody that binds to the VEGF-A isoforms and thereby inhibits the activation of VEGF signaling pathways, avoiding neovascularization.² It is a promising medication for non-benign meningiomas. Bai published an interesting article regarding the treatment of this condition. It is a retrospective study with a robust sample considering the rareness of these conditions. They could observe a homogeneous sample between both groups, and the results revealed better outcomes considering progression-free survival (PFS) and overall survival (OS) for the patients who were treated with the bevacizumab protocol.³

These findings are inspiring and promising. However, some considerations should be made. Usually, it is recommended to perform stereotactic radiosurgery or fractionated radiotherapy after resection of meningiomas grades II and III, even in gross total resection.¹ This was not cited by the author. This could lead to different outcomes considering unbalanced groups for this adjuvant treatment. Gamma knife was performed just after the recurrence.

The location of the tumor also represents an important issue. The Simpson grade is not precise mainly for skull base tumors. Usually, there is a misunderstanding in this classification resulting in bias, mainly if any group had more skull base meningiomas than the other. Besides, the author separates the resection into gross total and subtotal resection. There is a controversy regarding Simpson III, which is usually considered as gross total resection.¹ Indeed, there is a large difference between grades III and IV, considering the volume of residual tumor. Simpson grade IV has a broad spectrum, from small to large residual tumors. Therefore, this can correspond to a selection bias, considering grade III usually has a better prognosis than grade IV. One of the groups could have more grade IV; thus, this impacts the overall survival and progression-free survival. Besides, it is a retrospective study, with many limitations, including the lack of blindness and non-randomization, so, the results can be compromised.

The efforts to find new therapies for some diseases like non-benign meningiomas are very important. Shih et al published a prospective study in which 18 patients received everolimus and bevacizumab, resulting in amelioration of the PFS, mainly in 6 patients (35%); however, no tumor response was observed.⁴ In a systematic review published by Franke et al, including two prospective trials, five retrospective series, and 4 case reports, a total of 92 patients, showed improvement in PFS.⁵ Despite all the comments, this study represents a trend and new horizons in the demand for more evidence and new treatments for intracranial tumors.

Disclosure

The authors report no conflicts of interest in this communication.

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