Abstract

Combination of bevacizumab, a monoclonal antibody to vascular endothelial growth factor (VEGF), and temozolomide: Study of cases


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Background: The prognosis for glioblastoma multiforme remains poor. Survival is generally limited to less than 1 year. Currently available standard treatments have not allowed, thus far, to prolong survival significantly. Response rates observed in clinical trials evaluating glioblastoma multiforme are usually less than 20%. Knowing that malignant gliomas have high concentrations of VEGF receptors, and the higher the VEGF receptor concentration, the worse the prognosis, we decided to evaluate the efficacy of bevacizumab in malignant brain tumor patients. Bevacizumab is a humanized IgG1 monoclonal antibody to VEGF, which is synergistic with chemotherapy for most malignancies. We performed a phase II study combining bevacizumab with irinotecan for patients with malignant gliomas and observed an unprecedented response rate of 63%. Methods: Building on those results, we decided to treat a number of our patients with voluminous unresectable disease with bevacizumab and temozolomide as an upfront regimen. Temozolomide is an oral methylating agent known effective for primary malignant brain tumor patients. A phase III trial, first presented at the ASCO meeting of 2003, demonstrated the efficacy of temozolomide for newly diagnosed glioblastoma multiforme patients, establishing temozolomide as the new standard of care. Given the known results with temozolomide as monotherapy and the combination of bevacizumab with irinotecan, we treated patients with temozolomide and bevacizumab upfront. Results: With this new combination, some patients demonstrated dramatic improvement clinically and radiographically. The combination has been well tolerated thus far, with no incidence of hemorrhage or arterial thrombosis observed. Conclusions: Results will be updated at the time of presentation.

Author Disclosure

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