ABSTRACT

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Clinical study of apatinib plus temozolomide for the treatment of recurrent high-grade gliomas.

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OBJECTIVES: Recurrent high-grade glioma, a malignant tumor of the brain or spinal cord associated with poor prognosis with a median survival of <6 months. Recurrent high-grade glioma does not have standard treatment even if some strategies have some effect in recurrent gliomas. Apatinib, as a tyrosine kinase inhibitor shown to be effective in treating the lung and gastric cancer. The present study investigated the efficacy and safety of apatinib in combination with dose-dense regimens of temozolomide for treating recurrent glioma.

PATIENTS AND METHODS: Eighteen patients with recurrent high-grade glioma were enrolled and treated with apatinib (500 mg/day) and TMZ (50 mg/m2/day). Patients who achieved partial response or stable disease continued treatment. Administration of drug was terminated for patients with progressive disease, who could not tolerate toxicity, and who required discontinuation due to other medical conditions.

RESULTS: From the 18 cases, only 17 were included in the evaluation of the curative effect of the drug and in that four showed partial responses, ten had stable disease, remaining three exhibited progressive disease. The disease control rate was 82.3% (14/17). Progression-free and overall survival was found to be 4 months and 9.1 months, respectively. Three patients became transiently capable of self-care (Karnofsky performance status >70). Cognition and quality of life improved after treatment and from the safety perspective, three most common adverse reactions included epilepsy (24.1%), hypertension (20.7%), and fatigue (17.2%).

CONCLUSION: Apatinib and TMZ may represent an alternative treatment option for patients with recurrent high-gradeglioma, especially those with a low Karnofsky performance status. However, studies using a larger sample size are required to confirm these findings.

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relationships that could have appeared to influence the work reported in this paper.