AB048. Evidence of effectiveness of neoadjuvant camrelizumab and apatinib in patients with recurrent high-grade gliomas

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Background: Recurrent high-grade glioma (HGG) is a challenge with limited treatment options and a poor prognosis. We conducted an open-label phase II study: neoadjuvant camrelizumab and apatinib in patients with recurrent high-grade gliomas (NCT04588987), and interim analysis showed very promising results. We are further searching for evidence of the effectiveness of this strategy.

Methods: Patients with recurrent HGG received neoadjuvant treatment with camrelizumab (intravenous injection 200 mg on day 1) and apatinib (oral 250 mg per day on days 1–7), and 14 days later received surgery for recurrent tumor resection. Sequential therapy began 2 weeks after surgery with the biweekly camrelizumab (200 mg) and 4 weeks after surgery with the daily apatinib (250 mg) until investigator assessed progressive disease or unable to tolerate toxicity. The primary endpoint was overall survival (OS). When patients suspected progress during per-protocol treatment, re-surgery for resection of lesion was done, and the tissue was further examined.

Results: Between October 9, 2020, and March 30, 2024, 24 patients were enrolled [19 glioblastomas, one World Health Organization (WHO) grade 4 diffuse astrocytoma, three anaplastic astrocytoma, and one anaplastic oligodendroglioma]. Nineteen patients with interim analysis data, and showed the median progression-free survival (PFS) was 4.8 months [95% confidence interval (CI): 4.4–5.2], the median OS was 12.9 months (95% CI: 9.3–16.4) respectively, with a median follow-up time of 17.5 months (95% CI: 9.0–26.1). There were two patients who suspected progress and received second surgery. One patient showed real tumor progression with active tumor cells. While another patient the histology revealed mainly necrosis with inflammatory cells. Five patients initially showed increased enhancement on magnetic resonance imaging (MRI) but without increased symptoms, and showed continuous improvement when receiving further treatment.

Conclusions: This immuno-target combination neoadjuvant therapy in recurrent HGG demonstrated encouraging efficacy and revealed some evidence of efficacy, and worth to further investigate.

Keywords: Apatinib; camrelizumab; neoadjuvant therapy; recurrent high-grade glioma (recurrent HGG)

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://cco.amegroups.com/article/view/10.21037/cco-24-ab048/coif). Only the study drugs (camrelizumab and apatinib) were provided free of charge by Jiangsu Hengrui Medicine Co., Ltd., China. The authors have no other conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013) and approved by the Ethics Committee of Sun Yat-sen University Cancer Center (IRB No. 2020-149), and written informed consent was obtained from the patient.

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