

ABSTRACT

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The Efficacy and Safety of Adjuvant Lomustine to Chemotherapy for Recurrent Glioblastoma: A Meta-analysis of Randomized Controlled Studies.

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INTRODUCTION: Lomustine is regarded as 1 common anti-vascular endothelial growth factor agent. The efficacy of adjuvant lomustine to chemotherapy remains controversial for recurrent glioblastoma. We conduct this meta-analysis to explore the influence of adjuvant lomustine on treatment efficacy of recurrent glioblastoma.

METHODS: We have searched PubMed, EMBASE, Web of Science, EBSCO, and Cochrane library databases through August 2019 and included randomized controlled trials assessing the efficacy and safety of adjuvant lomustine for recurrent glioblastoma.

RESULTS: Four randomized controlled trials are included in the meta-analysis. Overall, compared with the control group for recurrent glioblastoma, adjuvant lomustine has no substantial effect on objective response (risk ratio [RR], 1.32; 95% confidence interval [CI], 0.91 to 1.93; $P = 0.15$), complete response (RR, 1.76; 95% CI, 0.26-11.90; $P = 0.56$), progressive response (RR, 1.32; 95% CI, 0.88-1.99; $P = 0.18$), median progression-free survival (standard mean difference [SMD], 0.73; 95% CI, -0.65 to 2.11; $P = 0.30$), or median overall survival (SMD, 0.26; 95% CI, -0.30-0.83; $P = 0.36$), but results in the increase in 6-month progression-free survival (SMD, 1.71; 95% CI, 0.38-3.04; $P = 0.01$). There is no increase in grade ≥ 3 adverse events after adjuvant lomustine treatment (RR, 1.55; 95% CI, 0.84-2.89; $P = 0.16$) compared with control intervention.

CONCLUSIONS: Adjuvant lomustine to other chemotherapy may provide no obvious benefits for the treatment of recurrent glioblastoma.

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