

ABSTRACT

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Administration of valproic acid improves the survival of patients with glioma treated with postoperative radiotherapy.

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Objective

The aim of this study was to investigate the impact of valproic acid(VPA) on survival and prognosis of patients with glioma who underwent postoperative radiotherapy.

Methods

We obtained the case data with brain glioma who underwent postoperative radiotherapy from 2012 January to 2019 December. This cohort was heterogeneous. We conducted single factor analysis and multiple factors analysis of the basic features, pathological classification, therapies of all 185 patients using Kaplan-Meier survival curve, log-rank survival significance test and Cox-regression analysis model.

Results

By the end of the last follow-up, 94 patients had died and 96 had recurred in all 185 cases. The median follow-up time of this study was 47 months. The median overall survival (OS) and progression-free survival (PFS) times were 34 and 27 months, respectively. The 1-, 3- and 5-year OS rates were 86.49%, 48.11%, and 14.60%, respectively. The 1-, 3- and 5-year progression-free survival rates were 80.00%, 43.78%, and 12.97%, respectively. Univariate analysis revealed that age, pathological grade, and VPA administration were all associated with patients' prognosis ($p < 0.05$). A Cox multivariate analysis revealed that being 47 or older, having a high pathological grade (WHO Grades III and IV), and not taking VPA were all adverse prognostic factors for OS and PFS in patients with glioma.

Conclusion

Age, pathological grade, and VPA administration are the influencing factors for the prognosis of glioma patients with postoperative radiotherapy. Patients with glioma who received VPA had a more favorable prognosis and a lower recurrence rate.

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