

Treatment of recurrent malignant glioma with BCNU-loaded biodegradable implants:

Experience of 22 Chinese cases

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Abstract

Objective To evaluate the safety and efficacy of BCNU-loaded biodegradable implants in the management of recurrent malignant gliomas in Chinese patient. **Methods** BCNU-loaded poly lactic-co-glycolic acid (PLGA) implants employed in the current study were developed and supplied by Lanjin Biotech (Jinan, China). The BCNU-loaded PLGA implant is a pale yellow disk with a diameter of 14 mm and a thickness of 1 mm. Ten percent of BCNU loading achieved 20 mg of BCNU per implant. The BCNU-loaded implants were placed into the debulking cavity after the resection of recurrent malignant gliomas. The adverse events within the 28 days after the operation, the overall survival of all patients were recorded. The safety and primary efficacy of the agents were evaluated. **Results** Twenty-two patients (15 male 7 female, age from 30 to 68 years old) with recurrent malignant glioma (AA 3, AO 1, AOA 1, and GBM 17 cases) were treated with the BCNU-loaded implants. The most common adverse event was subgaleal effusion, which was observed in 9 cases. Other drug-related adverse events included rash in 2 cases, thrombocytopenia in 1 case and erythrocytopenia in 1 case, respectively. The median overall survival was 322 days (95% CI, 173-471 days). **Conclusion** The BCNU-loaded biodegradable implants were safe in patients with recurrent malignant gliomas. The agents tended to improve the prognosis of these patients. Prospective clinical trials are warranted to confirm the efficacy of the BCNU-loaded implants.

Key words

biodegradable implants, malignant glioma,