Reoperation for Recurrent High-Grade Glioma: A Current Perspective of the Literature.

Hervey-Jumper SL, Berger MS.

Abstract

Optimal treatment for recurrent high-grade glioma continues to evolve. Currently, however, there is no consensus in the literature regarding the role of reoperation in the management of these patients. In this analysis, we reviewed the literature to examine the role of reoperation in patients with WHO grade III or IV recurrent gliomas, focusing on how reoperation affects outcome, perioperative complications, and quality of life. An extensive literature review was performed using Pubmed and Ovid Medline databases for the period January 1980 through August 2013. A total 31 studies were included in the final analysis. Of the 31 studies with significant data from single or multiple institutions, 29 demonstrated a survival benefit or improved functional status following reoperation for recurrent high-grade glioma. Indications for reoperation included new focal neurological deficits, tumor mass effect, signs of elevated intracranial pressure, headaches, increased seizure frequency, and radiographic evidence of tumor progression. Age was not a contraindication to reoperation. Time interval of at least 6 months between operations and favorable performance status (Karnofsky Performance Status [KPS] score ≥ 70) were important predictors of benefit from reoperation. Extent of resection at reoperation improved survival, even in patients with subtotal resection at initial operation. Careful patient selection, such as avoiding those individuals with poor performance status and bevacizumab within 4 weeks of surgery, is important. While limited to retrospective analysis and patient selection bias, mounting evidence suggests a survival benefit in patients receiving a reoperation at the time of high-grade glioma recurrence.

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