

[Email to a colleague](#)[Home](#) | [Library](#)

Abstract: 2008 Apr 28

Association of preoperative depression and survival after primary resection of malignant brain astrocytoma

Author(s):

Matthew J. McGirt,MD
Frank Attenello,MS
Muraya Gathinji,MS
Khoi Than,MD
Kaisorn L. Chaichana,BS
Ghazala Dato,BS
Alessandro Olivi,MD
Jon D. Weingart ,MD
Henry Brem, MD
Alfredo Quinones-Hinojosa,MD

Introduction: Clinical depression has been shown to negatively influence the morbidity and mortality of multiple disease states. It remains unstudied if clinical depression affects survival after surgical management of malignant brain astrocytoma. We set out to determine whether patients with a preoperative diagnosis of clinical depression experience decreased survival independent of treatment modality or degree of disability. **Methods:** We retrospectively reviewed 1043 consecutive cases of craniotomy for malignant brain astrocytoma (World Health Organization (WHO) grade III or IV). The independent association of a preoperative diagnosis of clinical depression and subsequent survival was assessed via multivariate proportional hazards regression analysis. **Results:** A total of 1043 craniotomies (618 for primary resection and 425 for secondary resection) were performed for malignant brain astrocytoma (glioblastoma multiforme (GBM): 820, anaplastic astrocytoma (AA): 223). Mean age and Karnofsky Performance Scale (KPS) score on admission was 51±16 years and 80±10, respectively. Postoperative temodar was administered in 204 cases (20%). A subsequent resection was performed a mean of 10±6 months after surgery in 134 cases (13%). A preoperative diagnosis of clinical depression occurred in 49 cases (5%). Adjusting for all variables associated with survival in this model, age (p=0.001), KPS score (p=0.001), tumor grade (p=0.001), primary resection (p=0.06), temodar (p=0.005), and subsequent resection (p=0.006), preoperative depression was independently associated with decreased survival (relative risk (95% confidence interval (CI)); 1.48 (1.0-2.19), p less than 0.05) and was most noted at 12 months (15% vs. 41%) and 20 months (0% vs. 21%) after surgery. **Conclusions:** In our experience, a preoperative diagnosis of clinical depression was associated with decreased survival in patients undergoing surgical resection for malignant astrocytoma, independent of the degree of disability, tumor grade, or subsequent treatment modalities. Recognition and treatment of this comorbid state may contribute to improved outcomes in the treatment of malignant brain astrocytoma.

Keywords:

Survival
glioblastoma multiforme
depression
malignant astrocytoma

Article ID: 48861