Marked response of gliomatosis cerebri to temozolomide and whole brain radiotherapy.

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Abstract

Gliomatosis cerebri (GC) represents an unfortunate, rare variant of glioma with a very poor prognosis. Given this lesion's rarity, little information exists on appropriate treatment options. The diffuse, infiltrative nature of GC precludes any surgical resection and limits therapy. Because of the improved survival seen with the use of temozolomide (TMZ) in malignant glioma, a rigorous systematic review of the published literature was performed to ascertain the benefit of TMZ in GC. We identified all GC cases in the literature where there was enough information to ascertain a clear response to a specific chemoradiotherapeutic treatment. In addition to our experience with a recent case, we have identified 61 patients with GC in the published literature who demonstrated a positive radiographic or clinic response after treatment. Statistical analysis of survival was performed by Kaplan-Meier analysis. A positive radiographic and clinical response was seen in patients ranging in age from 4 to 84 years. Overall median survival in patients diagnosed with GC who demonstrated a response after treatment was 25 months, with 1- and 2-year survival rates of 89% and 55%, respectively. The most common treatment regimens for responders included TMZ alone (26.2%), external whole-brain radiotherapy (WBRT) (26.2%), and concomitant TMZ and WBRT (20%). Our patient was treated with concomitant TMZ (150mg/m(2)/day over 5 days) and WBRT (50Gy) and has remained with a complete radiographic response after 36 months. In conclusion, patients with GC confirmed by surgical biopsy should be aggressively treated with concomitant TMZ and WBRT, as marked responses have been seen, and this appears to offer overall survival benefit.

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