

Glioblastoma multiforme with oligodendroglial component (GBMO): favorable outcome after post-operative radiotherapy and chemotherapy with nimustine (ACNU) and teniposide (VM26)

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Abstract

Background

The presence of an oligodendroglial component within a glioblastoma multiforme (GBM) is considered a prognostically favorable factor, but the clinical outcome of patients with glioblastoma multiforme with oligodendroglial component (GBMO) after combined post-operative radiotherapy and chemotherapy has rarely been reported.

Methods

We analyzed overall and progression-free survival in a group of ten consecutive patients initially diagnosed with GBMO between 1996 and 2004 (4.2% of all GBM patients). Median (range) age was 54 (34–73) years, 90% were resected and median radiotherapy dose was 54 (45–60.6) Gy. 80% of patients received post-operative chemotherapy with nimustine (ACNU) and VM26 (teniposide) for a median of 3.5 (1–6) cycles, the remainder were treated with post-operative radiotherapy alone. All specimens were reviewed by an experienced neuropathologist.

Results

Neuropathological re-evaluation revealed GBM with an oligodendroglial component of 30% or less in five cases, predominant oligoastrocytic tumors with focal areas of GBM in four patients and WHO grade III oligoastrocytoma with questionable transition to GBM in one patient. Four of ten patients were alive at 40, 41, 41 and 82 months. The median overall survival (Kaplan-Meier) was 26 months, the 2-year survival rate was 60% (progression-free survival: 9.8 months and 40%, respectively).

Conclusion

In conclusion, patients with GBMO treated with post-operative radiotherapy and chemotherapy with ACNU/VM26 had a better prognosis than reported for GBM in modern chemoradiation series.