Natural course and prognosis of anaplastic gangliogliomas: a multicenter retrospective study of 43 cases from the French Brain Tumor Database.


Author information

Abstract

BACKGROUND: Anaplastic gangliogliomas (GGGs) are rare tumors whose natural history is poorly documented. We aimed to define their clinical and imaging features and to identify prognostic factors.

METHODS: Consecutive cases of anaplastic GGGs in adults prospectively entered into the French Brain Tumor Database between March 2004 and April 2014 were screened. After diagnosis was confirmed by pathological review, clinical, imaging, therapeutic, and outcome data were collected retrospectively.

RESULTS: Forty-three patients with anaplastic GGG (median age, 49.4 y) from 18 centers were included. Presenting symptoms were neurological deficit (37.2%), epileptic seizure (37.2%), or increased intracranial pressure (25.6%). Typical imaging findings were unifocal location (94.7%), contrast enhancement (88.1%), central necrosis (43.2%), and mass effect (47.6%). Therapeutic strategy included surgical resection (95.3%), adjuvant radiochemotherapy (48.8%), or radiotherapy alone (27.9%). Median progression-free survival (PFS) and overall survival (OS) were 8.0 and 24.7 months, respectively. Three- and 5-year tumor recurrence rates were 69% and 100%, respectively. The 5-year survival rate was 24.9%. Considering unadjusted significant prognostic factors, tumor midline crossing and frontal location were associated with shorter OS. Temporal and parietal locations were associated with longer and shorter PFS, respectively. None of these factors remained statistically significant in multivariate analysis.

CONCLUSIONS: We report a large series providing clinical, imaging, therapeutic, and prognostic features of adult patients treated for an intracerebral anaplastic GGG. Our results show that pathological diagnosis is difficult, that survivals are only slightly better than for glioblastomas, and that complete surgical resection followed with adjuvant chemoradiotherapy offers longer survival.
Natural course and prognosis of anaplastic gangliogliomas: a multicent...