Occult tumors presenting with negative imaging: analysis of the literature.

Departments of Neurosurgery.

Abstract
Some patients presenting with neurological symptoms and normal findings on imaging studies may harbor occult brain tumors that are undetectable on initial imaging. The purpose of this study was to analyze the cases of occult brain tumors reported in the literature and to determine their modes of presentation and time to diagnosis on imaging studies. Methods A review of the literature was performed using PubMed. The authors found 15 articles reporting on a total of 60 patients with occult tumors (including the authors' illustrative case). Results Seizures were the mode of initial presentation in a majority (61.7%) of patients. The initial imaging was CT scanning in 55% and MRI in 45%. The mean time to diagnosis for occult brain tumors was 10.3 months (median 4 months). The time to diagnosis (mean 7.5 months, median 3.2 months) was shorter (p = 0.046) among patients with seizures. Glioblastoma multiforme (GBM) was found more frequently among patients with seizures (67.6% vs 34.8%, p = 0.013). The average time to diagnosis of GBM was shorter than the time to diagnosis of other tumors; the median time to diagnosis was 3.2 months for GBM and 6 months for other tumors (p = 0.04). There was no predilection for side or location of occult tumors. In adult patients, seizures may be predictive of left-sided tumors (p = 0.04). Conclusions Based on the results of this study, the authors found that in patients with occult brain tumors, the time to diagnosis is shorter among patients with seizures and also among those with GBM.

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