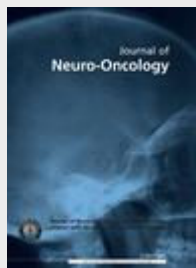


Journal Article



Correlation of endoscopic biopsy with tumor marker status in primary intracranial germ cell tumors

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Summary We retrospectively analyzed the results of eight patients who underwent endoscopic biopsy of a newly diagnosed primary intracranial germ cell tumor (GCT), and correlated tumor pathology with serum and cerebrospinal fluid (CSF) tumor markers and treatment outcome in order to determine the reliability of GCT sampling by this method. A biopsy diagnosis was made in each patient, and the tumor histology correlated with tumor marker measurements for all six patients diagnosed with germinoma and for one with a yolk sac tumor. One biopsy revealed only mature teratoma, an inconclusive result since the patient's serum and CSF tumor markers were elevated. No morbidity was experienced as a result of the operative procedure. Five of six patients diagnosed with germinoma responded completely to radiation therapy and are without evidence of disease, while one suffered a likely germinoma recurrence and was subsequently successfully retreated. We conclude that endoscopic biopsy of marker-negative germ cell tumors is a safe, reliable method of establishing a diagnosis of germinoma. However, endoscopic biopsy may fail to yield an accurate diagnosis in cases of malignant non-germinomatous tumor. We would thus conclude that when primary germ cell tumor is considered, endoscopic tumor biopsy is recommended in patients with a negative biochemical analysis, but not suggested for patients presenting with elevated tumor markers.

Keywords brain tumor - endoscopic surgery - germ cell tumor - tumor marker

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