Anaplastic intraventricular oligodendroglioma: case report and review of the literature.

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BACKGROUND: Intraventricular oligodendroglioma remains a rare diagnosis, with high-grade/anaplastic IVO being an even rarer subtype. These lesions vary in regard to tumor grading and clinical presentation, as compared with their intraparenchymal counterparts. A case report and review of the previous literature regarding IVO and tumor grading were conducted. CASE DESCRIPTION: A case report of a patient with an anaplastic oligodendroglioma confined entirely within the ventricular system is presented. The patient underwent gross total surgical resection with perioperative shunt placement, yet developed aggressive recurrence of disease. The literature regarding the clinical presentation, methodology of diagnosis, and treatment of IVO was reviewed. Thirty-three studies reporting 70 patients with IVO were identified in the literature. Only 2 previous case reports of high-grade/anaplastic IVO were identified. Accurate diagnosis of these lesions, including immunohistochemistry, electron microscopy, and molecular/chromosomal subtyping, is imperative. Surgical resection with frequent perioperative shunting, as well as chemotherapy, remains the mainstay of therapy. Adjuvant therapies may differ significantly according to the tumor grade and molecular subtype. CONCLUSIONS: Intraventricular oligodendroglioma remains an infrequently encountered lesion, yet is usually found to be low grade at the time of surgery. Anaplastic IVO is an exceedingly rare lesion, with only 3 case reports in the literature. Future therapy for these aggressive lesions may be based on susceptibility to various chemotherapeutic agents according to molecular subtyping.