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Title

Pilocytic astrocytoma presenting as unilateral torsional nystagmus

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Significance

Torsional nystagmus is a rare neurological finding and is usually associated with brain stem pathology. Furthermore, isolated nystagmus as an initial presenting symptom of a childhood central nervous system tumor is uncommon as it is usually identified later in the disease course, if present at all .

Purpose

This presentation aims to report an uncommon presentation of the most common childhood brain tumor, pilocytic astrocytoma.

Background

Pilocytic astrocytoma is a brain tumor that predominantly affects children and young adults. The majority are found in the cerebellum. Common presenting symptoms are headache, hydrocephalus, fatigue, nausea, vomiting, and weight fluctuation.

Case report: A previously healthy 17-month-old female presented with a 10-day history of unilateral "eye flickering." Neurological examination revealed left-sided gaze evoked horizontal nystagmus and then rotatory nystagmus. Ophthalmic examination revealed a pale and swollen optic nerve. Contrast brain MRI revealed a suprasellar, hypothalamic enhancing 3.2cm mass inseparable from optic chiasm. Patient underwent left frontal pterional craniotomy for biopsy and resection which revealed a pilocytic astrocytoma WHO grade 1. The tumor could not fully be resected given proximity to hypothalamus and optic nerve, so the patient received multiple rounds of chemotherapy. The nystagmus resolved but the tumor persists still.