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# Atypical Presentation of Frontal Lobe Tumor (Glioblastoma) in an Adolescent: A Case Report

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PUBLISHED ABSTRACT

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## ABSTRACT

**Introduction:** Malignant brain tumors in childhood occur less frequently than non-malignant ones and glioblastoma multiforme has been identified as the most common and aggressive [1]. These tumors usually present with typical neurologic symptoms including signs of raised intracranial pressure [2]. The case study describes an atypical presentation of glioblastoma in a previously healthy adolescent male with several distractors that could have led to a delay in diagnosis. This highlights the need to have a high index of suspicion for serious underlying illness when managing pediatric patients presenting with apparently trivial symptoms.

**Case Presentation:** A 15-year-old previously healthy adolescent male presented with a 2-week history of non-projectile, non-bilious, non-bloody vomiting, usually post-prandial, about 4–5 episodes per day. He had associated periumbilical pain, burning sensation during voiding, chills, poor feeding, weakness, and weight loss. Physical examination was significant for dry mouth and generalized abdominal tenderness. He was initially managed with famotidine and polyethylene glycol in the pediatrician's clinic prior to presentation in the ED for persistent symptoms. Results of investigations, including complete blood count, complete metabolic panel, urine analysis, culture, and toxicology were unremarkable. He tested positive for Influenza A and Respiratory Syncytial Virus. Abdominal x-ray was suggestive of constipation. On admission, he received intravenous fluids, pantoprazole, famotidine, and oseltamivir with some improvement in symptoms. On day 2, he complained of throat pain and intermittent low intensity bitemporal headache rated 5/10 which subsided with acetaminophen. On day 3, urinary and fecal incontinence were noted. Additional history of recent travel to Ecuador and prolonged contact with a family member with gastrointestinal tuberculosis was obtained so Quantiferon Gold was sent. Psychiatry was consulted because of his flat affect and poor communication and assessment of adjustment disorder from medical illness was made. On day 4 of admission, neurologic exam revealed significant neck stiffness and suspicion of left abducens nerve palsy. Urgent brain computed tomography scan without contrast showed a large slightly hyperdense mass centered within the left frontal lobe that appeared to cross the anterior corpus callosum and measured roughly 7.6 × 5.8 × 4.3 cm (***Figure 1***). The patient was transferred to the

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Pediatric Intensive Care Unit where he received a dose of intravenous Dexamethasone and then transferred to a tertiary hospital with a Pediatric Neurosurgery service. The patient had persistent raised intracranial pressure with waxing and waning neurologic findings. He underwent tumor resection on day 6 of admission. Frozen section was suggestive of glioblastoma multiforme and pathology showed grade IV glioblastoma. Surgery was followed by radiation and chemotherapy with temozolomide [3].

**Conclusion:** Vomiting, typically early morning projectile vomiting, is a classic presenting symptom of increased intracranial pressure. However, this patient had several red herrings on presentation and history that could explain his symptoms. Premature closure and anchoring can lead to missing serious diagnoses presenting as a seemingly routine pediatric illness.

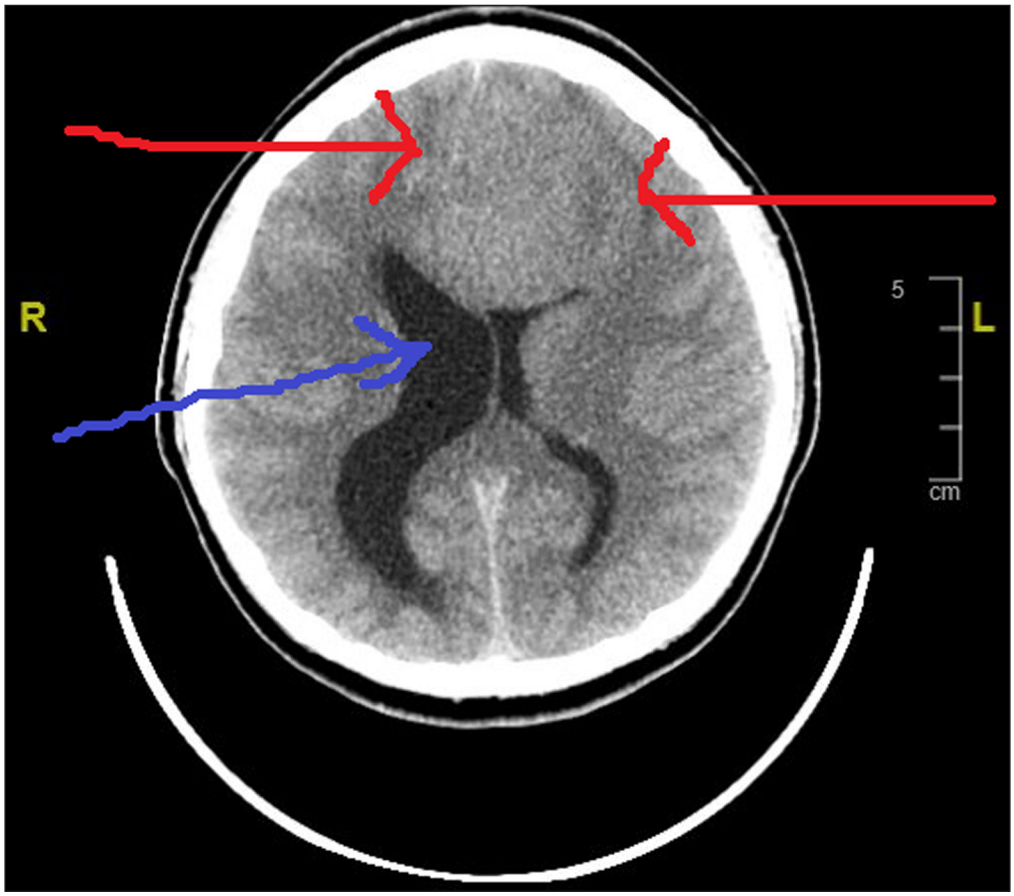


**Figure 1** Brain CT imaging of index patient (red arrows: frontal lobe tumor; blue arrow: dilated lateral ventricle).

## COMPETING INTERESTS

The authors have no competing interests to declare.

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