

IMAGES IN EMERGENCY MEDICINE

Neurology

Headache and weakness in a young adult female

Chance A. Dodson MD | Jeffrey M. Goodloe MD

Department of Emergency Medicine, University of Oklahoma School of Community Medicine, Tulsa, Oklahoma, USA

Correspondence

Jeffrey M. Goodloe, MD, Department of Emergency Medicine, University of Oklahoma School of Community Medicine, Tulsa, OK 74104.

Email: jeffrey-goodloe@ouhsc.edu

1 | PATIENT PRESENTATION

A 20-year-old female with history of headache presented for chief complaint of weakness. The patient's public housing authority counselor called for an ambulance when she found the patient too weak to climb stairs during a welfare check. She was cachectic-appearing and reported eating only applesauce due to food insecurity. Physical examination was otherwise significant for truncal ataxia when standing. In the emergency department, the patient had a single episode of urinary incontinence.

Head computed tomography (CT) was obtained, with Figure 1 (showing axial image) and Figure 2 (showing coronal image) of brain depicting 2.5 cm right intraventricular third ventricle mass (arrow) with mixed density consistent with ependymoma versus dermoid tumor occluding the cerebral aqueduct resulting in third and lateral ventricle hydrocephalus.

2 | DIAGNOSIS

2.1 | Right intraventricular third ventricle mass with mixed density consistent with ependymoma versus dermoid tumor occluding the cerebral aqueduct resulting in third and lateral ventricle hydrocephalus

Patient was admitted with neurosurgery consult. Over a 24-hour observation, the patient remained clinically stable and repeat CT brain did not show significant change. Later in hospitalization, the patient decompensated and required emergent ventriculostomy with measured intracranial pressure (ICP) of 62 mm Hg.

3 | DISCUSSION

Intracranial neoplasms of the third ventricle are rare, accounting for less than 1% of brain tumors.¹ These may obstruct ventricular out-

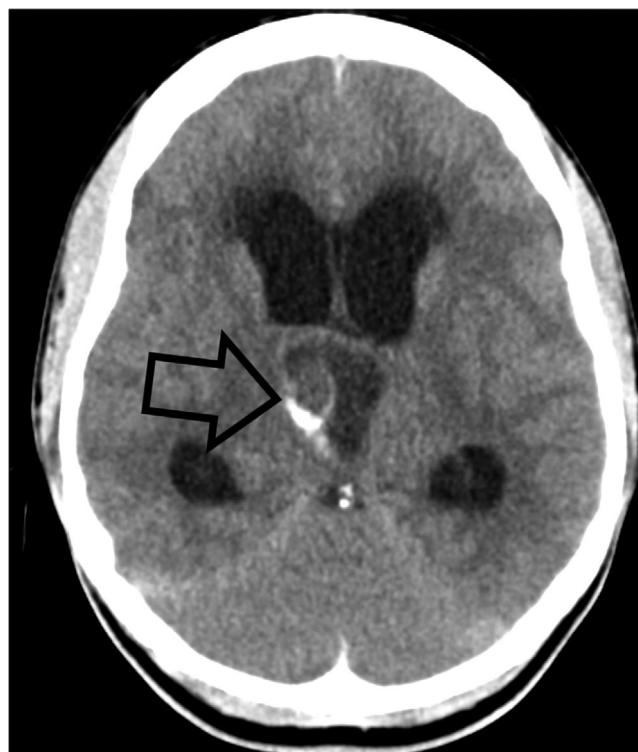


FIGURE 1 Axial computed tomography (CT) of brain depicts 2.5 cm right intraventricular third ventricle mass (arrow) with mixed density consistent with ependymoma versus dermoid tumor occluding the cerebral aqueduct resulting in third and lateral ventricle hydrocephalus

flow resulting in intracranial hypertension (ICH) with variable signs and symptoms, including headache, nausea, altered mental status, vision changes, or even sudden death depending on the rate of change of ICP.² CT findings, including midline shift and effacement of basal cisterns, are not always present with ICH. ICP monitoring is often required for diagnosis, treatment, and dynamic pressure monitoring. One noninvasive

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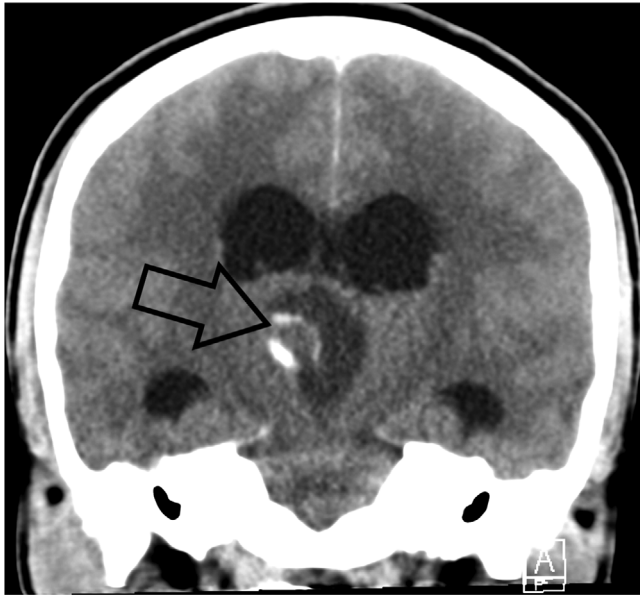


FIGURE 2 Coronal computed tomography (CT) of brain depicts 2.5 cm right intraventricular third ventricle mass (arrow) with mixed density consistent with ependymoma versus dermoid tumor occluding the cerebral aqueduct resulting in third and lateral ventricle hydrocephalus

method for ICP estimation is measurement of the optic nerve sheath diameter, which may be of value while awaiting definitive neurosurgery management.³

AUTHOR CONTRIBUTIONS

Chance A. Dodson and Jeffrey M. Goodloe evaluated and managed this patient in the emergency department setting. Chance A. Dodson received consent from the patient for image sharing at the time of inpatient admission. Chance A. Dodson obtained the CT images and wrote the first draft of the case presentation. Jeffrey M. Goodloe reviewed and edited the first draft and finalized the case presentation. Jeffrey M. Goodloe transferred the manuscript from *Annals of Emergency Medicine* to *JACEP Open* on behalf of both authors.

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