The Wandering Intraventricular Cyst Causing Hydrocephalus

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Disclosures

• None
Introduction

• Hydrocephalus is a common neurosurgical disease that affects approximately 1 in every 500 children.

• Common etiologies include: post-intraventricular hemorrhage due to prematurity, myelomeningocele, posterior fossa tumors, aqueductal stenosis, and meningitis.

• Intraventricular cysts are an uncommon cause of hydrocephalus and typically cause it by obstructing CSF flow.

• These cysts can be congenital, infectious, or neoplastic in origin. They are typically stationary and migration is limited to case reports.
Case Report

- An ex-38 weeker female was born by caesarean section to a 36-year-old G1P0000 mother.
- Routine prenatal imaging at 26 weeks was normal. At 36 weeks, the amniotic fluid was low and a fetal MRI showed enlargement of the left lateral ventricle.
- APGARS were 9 and 9 at 1 and 5 minutes after birth.
- Head circumference was 35.5cm (65th percentile). Anterior fontanelle was soft and flat.
Case Report

- An MRI brain showed an 18x10x13mm cyst with central CSF characteristics and peripheral enhancement within the left foramen of Monro causing obstructive hydrocephalus and transependymal flow. There was no evidence of a scolex.
- Infectious workup for toxoplasmosis, rubella, CMV, herpes, and neurocysticercosis was negative.
- Patient had no episodes of bradycardia or apnea.
Case Report

• Repeat imaging obtained 1 week later showed a decrease in ventricular size.
• An MRI obtained at 3 weeks of life showed a further decrease in the size of the ventricles.
• Patient was found at 3 month follow up to have a tense fontanelle with a head circumference of 40.5cm (78th percentile).
Case Report

• An MRI showed the cyst had migrated into the 3rd ventricle, obstructing the cerebral aqueduct and causing triventricular hydrocephalus.

• She underwent an endoscopic cyst resection, third ventriculostomy, and Ommaya reservoir placement.

• Patient did well postoperatively and follow up imaging shows stable asymmetric ventriculomegaly with no recurrence of the cyst.
Discussion

• Intraventricular cysts are an uncommon lesion in the pediatric population and an even rarer cause of obstructive hydrocephalus.
• These lesions are typically stationary as they are usually tethered to the ventricle wall or arise from the brain parenchyma itself.
• Numerous case reports have been reported on lesions that migrate between the ventricles, but these are primarily parasitic lesions such as neurocysticercosis or choroid plexus tumors.
Summary Point

• Hydrocephalus is a common surgically correctable pediatric neurosurgical disease.
• It is rarely caused by intraventricular lesions.
• This is the first case of a cyst that migrated between ventricles causing obstructive hydrocephalus that was not secondary to a neoplastic or parasitic etiology.
• This case demonstrates the importance of obtaining current preoperative imaging as surgical plans can change due to evolving pathologies.