ABSTRACT

FP 42: Tension pneumocephalus from an occult anterior skull base defect in a patient with a ventriculoperitoneal shunt without clinically apparent rhinorrhea

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Background: We present a case of tension pneumocephalus resulting from an occult anterior skull base defect in a 22 year-old patient with a ventriculoperitoneal shunt without clinically apparent rhinorrhea. We review existing literature on the incidence, diagnosis, and management.

Design: Case report

Setting: Tertiary Public Hospital

Patient: 22 year-old Male

Case description:
A 22 year-old male with a Chiari malformation and obstructive hydrocephalus underwent ventriculoperitoneal shunting, after which he presented with severe headache and vomiting five months after the procedure. Imaging (radiograph and cranial CT) revealed pneumocephalus and was managed medically by the neurosurgery service with resolution. In the interim, he developed lower extremity weakness, vomiting, persistent headaches, and blurring of vision. Repeat radiographs and cranial CT revealed recurrence of the pneumocephalus. A paranasal sinus CT requested by the Otorhinolaryngology service showed a suspicious bony defect at the fovea ethmoidalis on the left. Nasal endoscopy was unremarkable and there was no clinically apparent rhinorrhea. Endoscopic repair of the anterior skull base defect was done using septal mucosal flap with subsequent resolution of the pneumocephalus and improvement of symptoms.

Conclusion:
An occult skull base defect should be investigated in patients with ventriculoperitoneal shunts presenting with tension pneumocephalus even in the absence of clinically apparent rhinorrhea. Surgical intervention in these cases is warranted to prevent further progression of symptoms and development of complications.