Massive rupture of suprasellar dermoid cyst into ventricles

Case illustration

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This 27-year-old man with a 2-year history of progressive visual loss in his left eye was admitted for an episode of sudden decreased level of consciousness and partial recovery with persistent confusion. Contrast-enhanced computerized tomography (CT) scanning revealed a sellar mass lesion with hypodense material floating on ventricular cerebrospinal fluid (CSF) (Fig. 1 left). Magnetic resonance (MR) images showed a tumor in the suprasellar region with the fat/fluid level spilling into the dilated ventricles (Fig. 1 center and right).

The patient underwent a pterionofrontal craniotomy for resection of the tumor and a transient ventriculostomy. Postoperatively he made an excellent recovery.

Intracranial dermoid cysts are rare congenital tumors that are usually benign and slow growing. Most arise in the midline basal cisterns and produce symptoms by interfering with spinal fluid pathways or vascular structures or by cyst rupture into the subarachnoid space or ventricular system. The latter event releases keratin and cholesterol breakdown products that create irritation and may cause a chemical meningitis or ventriculitis that can be severe and long lasting. However, asymptomatic cases are not uncommon.

The imaging characteristics of dermoid cysts depend on the contents of the lesion. On CT scanning these lesions are demonstrated to be homogeneous, with an attenuation value similar to that of CSF. The hair and sebaceous content give the cyst a heterogeneous MR image signal, but the abundant lipid produces a high signal intensity on T1-weighted images. Massive spilling of the sebaceous contents into the ventricles is shown as a fat/fluid level, with the fatty component floating on the fluid component.

References


Fig. 1. Radiological studies obtained in a 27-year-old man suffering from confusion caused by intraventricular rupture of a dermoid tumor. Left: Axial CT scan showing a sellar mass and ventricular fat. Center and Right: Axial and coronal T1-weighted MR images demonstrating a suprasellar heterogeneous tumor and sebaceous material floating on ventricular CSF and in the subarachnoid space over the convexity.

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