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Xanthogranuloma is a rare third ventricular mass that obstructs the foramen of Monro. CT of xanthogranulomas has been reported; however, to our knowledge, this is the first report of MR of a third ventricular xanthogranuloma [1–3].

Case Report

A 38-year-old woman presented to the emergency room with a 7-day history of severe headache, nausea, and vomiting. The neurologic examination was normal. Both CT and MR showed a mass at the foramen of Monro (Fig. 1).

The CT appearance was atypical for colloid cyst; therefore, the diagnosis of xanthogranuloma was suggested. The mass was surgically removed, and the final pathologic diagnosis was xanthogranuloma.

Discussion

Xanthogranulomas of the choroid plexus are found in approximately 1.6%–7% of autopsies [3]. They characteristically arise in the region of the glomus of the choroid plexus of the lateral ventricles and are small (<10 mm), multiple, often bilateral, and asymptomatic [4]. They rarely occur in the third ventricle, and all reported cases in this location have been symptomatic because of the obstruction of the foramen of Monro [4].

Histologic examination demonstrates lipid-laden cells and cholesterol clefts, with giant cells, chronic inflammatory cells, fibroblasts, and hemosiderin, surrounded by a fibrous capsule that may calcify.

The pathogenesis of xanthogranulomas is still debated; however, many authors believe that xanthogranulomas of the choroid plexus may be related to colloid cysts [5]. This hypothesis is supported by the occasional association of both histologies in a single lesion [2, 6]. Hadfield et al. [7] suggested that the colloid material itself incited a granulomatous reaction. Shuangshoti et al. [8] suggest that desquamative epithelium of the choroid plexus enters the interstitium, where the cells accumulate lipid as they degenerate. Subsequent disruption of the lipid-laden cells provokes a foreign-body-type reaction. Hadfield et al. [7] and Shuangshoti et al. [8] also suggest that hemorrhage into the choroid plexus contributes to the formation of xanthogranulomas.

CT of xanthogranulomas [1–4] shows relative hypodensity with variable rim enhancement and stromal calcifications. The MR of this case revealed hyperintense signal on T1-weighted (600/20 [TR/TE]), proton-density-weighted (2000/20), and T2-weighted (2000/80) images. The high-intensity signal on T1-weighted images may reflect the cholesterol content of the lesion or metabolic products of hemorrhage.

The major differential considerations for an anterior third ventricular mass include colloid cyst, ependymoma, giant cell astrocytoma, and other glial tumors. The MR signal of colloid cyst is quite variable, but some lesions are hyperintense on both T1- and T2-weighted images [9, 10]. Colloid cysts frequently are dense on CT and typically exhibit little or no enhancement.

Xanthogranuloma is a rare third ventricular mass that should be considered in the differential diagnosis of lesions that obstruct the foramen of Munro.

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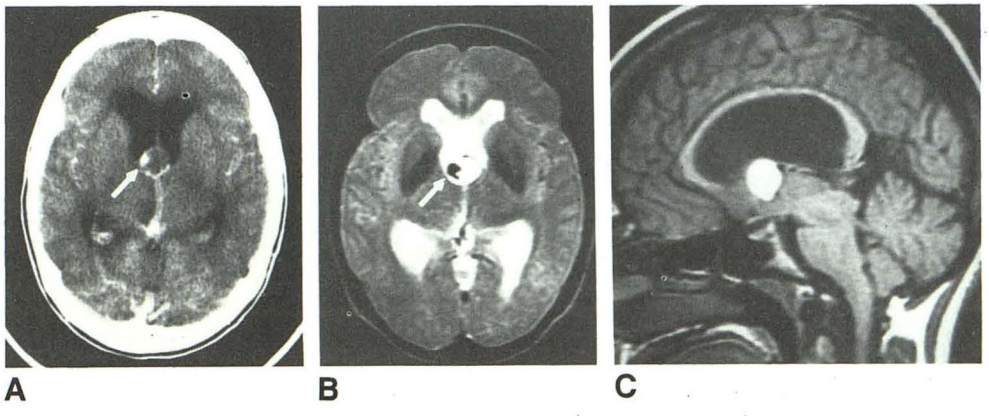

Fig. 1.—Third ventricular xanthogranuloma.

***A*, Contrast-enhanced CT shows a round 1.5 × 1.5 cm anterior third ventricular mass. Mass is slightly hypodense to brain, and calcification (*arrow*) is noted in right margin. Lateral ventricles are symmetrically dilated.**

***B* and *C*, MR images. Axial T2-weighted image (2000/80) (*B*) and sagittal T1-weighted image (600/20) (*C*) reveal a hyperintense mass obstructing foramen of Monro. Focal hypointense signal (*arrow*) corresponds to calcification seen on CT.**