

Xanthogranuloma of the Sellar Region

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To the Editor: A 36-year-old female patient was admitted to Peking Union Medical College Hospital complaining of 6 years of headache. Magnetic resonance imaging (MRI) showed an intrasellar lesion with homogeneous hyperintense on T1-weighted images and

T2-weighted images and inhomogeneous contrast enhancement by the gadolinium administration [Figure 1a and 1b]. Rathke's cleft cyst was initially diagnosed preoperatively, and the tumor was totally resected by transsphenoidal surgery. Histopathology revealed that granulomatous tissue consisted of cholesterol clefts, lymphoplasmacellular infiltrates, marked hemosiderin deposits, and multinucleated foreign body giant cells around cholesterol clefts [Figure 1e-1g]. Immunohistochemical staining showed strong positive of CD68, but negative of S100 and SMA [Figure 1h-1j], which was consistent with a diagnosis of xanthogranuloma of the sellar region. Postoperatively, MRI scans showed that there is no residual tumor [Figure 1c and 1d], and her severe headache was improved rapidly, the endocrine laboratory tests indicated that all the results were within normal limits. The most recent follow-up MRI was scanned at 36 months postoperatively and there was no sign of tumor recurrence.

Xanthogranulomas, known as cholesterol granulomas, are characterized by both granuloma and xanthoma. Xanthogranulomas in central nervous system mainly arise in the choroid plexus and most of them are located in the trigone of the lateral ventricle.^[1] However, xanthogranulomas of the sellar region are very rare, and it is difficult to preoperatively diagnose xanthogranulomas of the sellar region because there is no specific clinical and radiological feature. Therefore, it is necessary to clarify the natural history, pathogenesis, treatment, and prognosis of xanthogranulomas by accumulating more cases with xanthogranuloma.

Although the histogenesis and pathogenesis of xanthogranulomas still remain unclear, it has been generally postulated that xanthogranuloma is granulomatous degeneration induced by chronic inflammatory processes, hemorrhage, or infarction in circumscribed area.^[2]

There are no typical radiological features for xanthogranulomas of the sellar region. According to the previously reported literatures, about 70% of xanthogranulomas show marked hyperintensity of

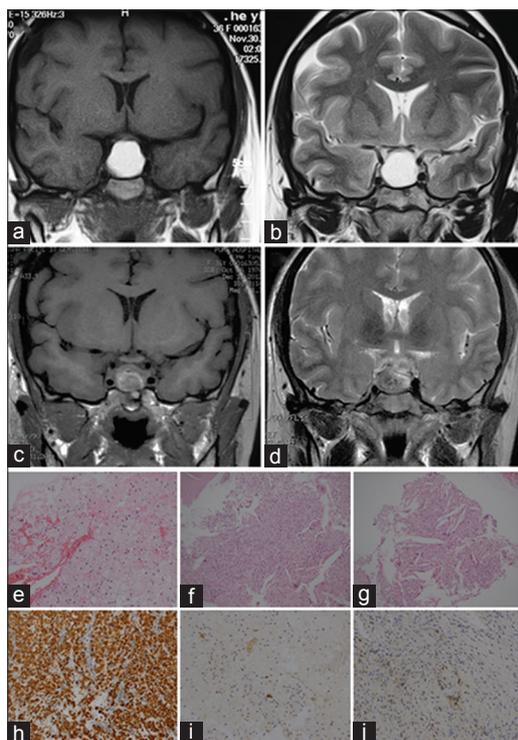


Figure 1: (a and b) Magnetic resonance imaging showing an intrasellar mass (12 mm × 18 mm × 15 mm) with well-defined borders, extending into suprasellar and compressing the optic chiasma. The lesion showed homogeneous hyperintense on T1-weighted images (a) and T2-weighted images (b). (c and d) Postoperative magnetic resonance imaging revealing no residual tumor in (c) coronal T1-weighted image and (d) coronal T2-weighted images. (e-j) Histological and immunohistochemical results of the resected tumor. Photomicrograph of surgical specimen revealing granulomatous tissue comprising (e) foamy macrophage (HE staining, original magnification ×200), (f) fibrocytes and multinucleated giant cells (HE staining, original magnification ×100), (g) cholesterol cleft (HE staining, original magnification ×100); immunohistochemical staining showing strong positive of CD68 (h), negative of S100 (i) and SMA (j) in the tissue.

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the lesion on T1-weighted images and 65% of them reveal iso- to hyper-intensity on T2-weighted images.^[3] However, it is difficult to differentiate xanthogranuloma from craniopharyngioma, Rathke's cleft cyst, and hemorrhagic pituitary adenoma only by MRI findings.^[4] Xanthogranulomas of the sellar region are rare but they should be considered in the differential diagnosis of the sellar lesions.

In summary, it is difficult to preoperatively diagnose xanthogranulomas of the sellar region because there is no specific clinical and radiological feature. Although the incidence of xanthogranuloma of the sellar region is very low, xanthogranuloma should be included in the differential diagnosis of lesion of the sellar region.

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Conflicts of interest

There are no conflicts of interest.

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