

Intradiploic epidermoid cyst of the skull

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Received 31 Jul 2019

Accepted 17 Aug 2019

Summary

A 46 years old female, presented with a history of chronic headache, mainly on the left occipital region, which had increased in severity and frequency recently. Patient had no neurological deficits. Contrast enhanced computed tomography revealed large expansile non-enhancing intradiploic hypodense lesion within the squamous part of left side of occipital bone (Fig. a,b). Magnetic resonance image revealed non enhancing lesion with heterogeneous hyperintense matrix. Diffusion weighted imaging and apparent diffusion coefficient revealed intense diffusion restriction which confirms the nature of the tumor (Fig. c,d,e,f,g).

Epidermoid cysts are benign, slow-growing lesions and may often reach an enormous size without producing neurological symptoms. Less than 1% of cranial tumors are epidermoid tumours, of which 75% are intradural and 25% are intradiploic in location¹. Intraparenchymal extension of intradiploic epidermoids is known to occur. Both CT and MR imaging modalities enable the preoperative

diagnosis of these tumors with good accuracy. CT is superior for assessment of density of lesion, extent of involvement of the inner and outer tables and presence of calcification². MRI is superior to CT in demonstrating lesions that have associated parenchymal involvement and lesions that do not have associated bone destruction³.

References

1. Arana E, Latorre FF, Revert A, Menor F, Riesgo P, Liano F, et al. Intradiploic epidermoid cysts. *Neuroradiology* 1996;38:306-11.
2. Guiard JM, Kien P, Colombani S, Caillé JM. Intradiploicepidermoides cysts in adults. CT contribution to diagnosis in 6 new cases. *J Neuroradiol* 1986;13;22-31.
3. Olson J, Back D, Cranford S, Menezes A. Comparative evaluation of intra cranial epidermoid tumors with computed tomography and magnetic resonance imaging. *Neurosurgery* 1987;21:357- 60.

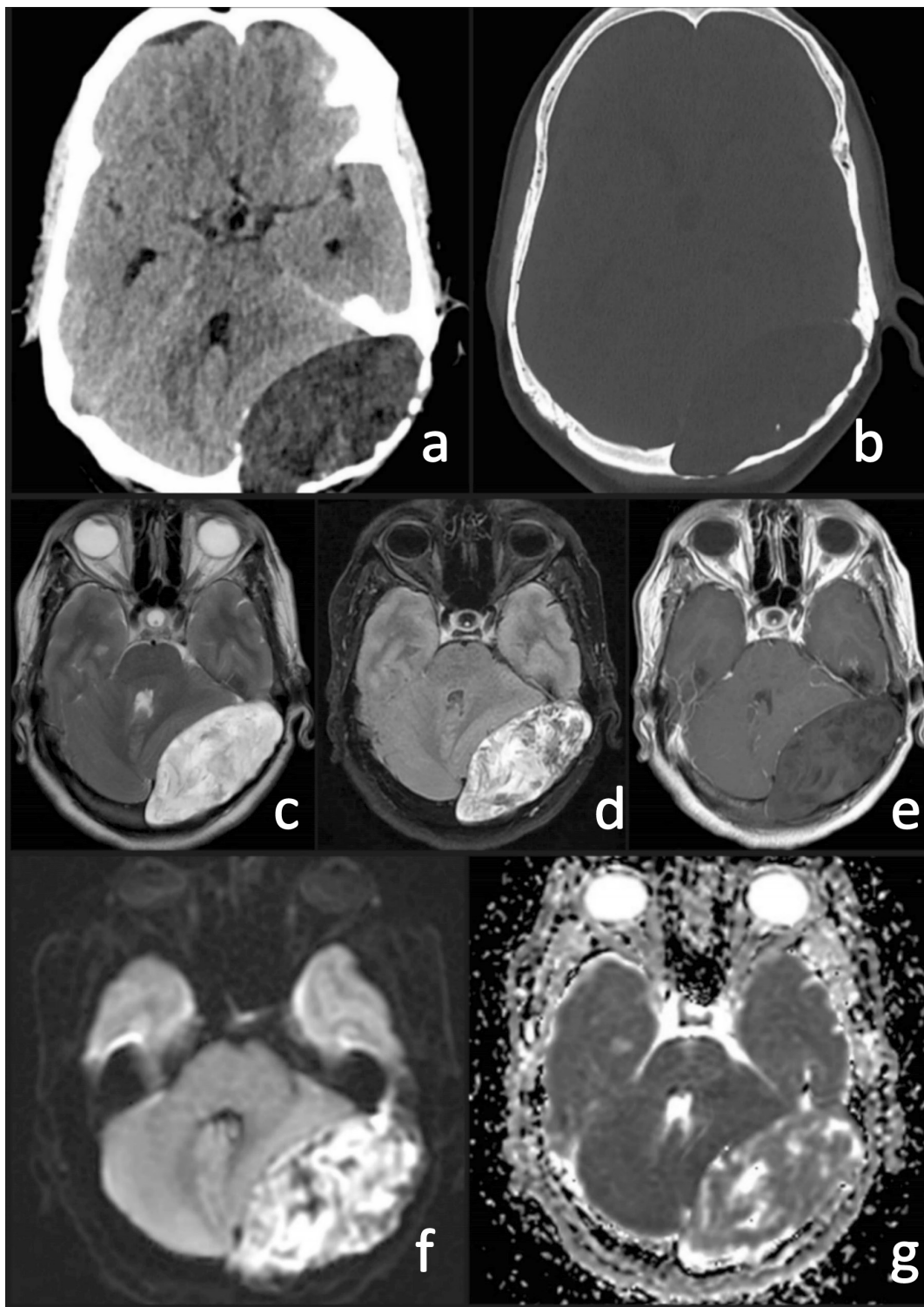


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Fig. a: Axial soft tissue window contrast enhanced CT showing large expansile non-enhancing hypodense lesion within the squamous part of left side occipital bone. The underlying left cerebellar hemisphere is compressed

Fig. b: Axial bone window CT showing thinning of inner and outer tables by the lesion and few intralesional calcific foci (white arrow).

Fig. c; d: Axial T2W and FLAIR MR imaging showing heterogeneous hyperintense matrix with no abnormal signal in adjacent parenchyma.

Fig. e: Axial post-contrast T1W MR imaging showing no enhancement of the lesion.

Fig. f; g: Axial DWI and ADC sequences showing intense restriction.