Case Report

Primary ectopic frontotemporal extradural craniopharyngioma

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Abstract

We present a case of primary ectopic frontotemporal extradural craniopharyngioma. Primary ectopic craniopharyngiomas are very rare and have been reported involving the fourth ventricle, infrasellar region, lateral ventricle, temporal area, cerebellopontine angle, clivus, corpus callosum, and prepontine cistern. There was just 1 case of craniopharyngioma previously presented in the literature, with nearly same location as the presenting case.

Key Words: Ectopic craniopharyngioma, extradural tumor, extradural cystic lesion

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INTRODUCTION

Craniopharyngiomas are relatively benign neoplasms (WHO Grade I) and account for 2.5–4% of all intracranial tumors.[1] They typically arise in the sellar and suprasellar regions.[2] Primary ectopic craniopharyngiomas are very rare and have been reported involving the fourth ventricle, infrasellar region, lateral ventricle, temporal area, cerebellopontine angle, clivus, corpus callosum, and prepontine cistern.[3-10] We present a case of primary ectopic frontotemporal extradural craniopharyngioma that treated surgically.

CASE REPORT

The patient is a 17-year-old girl, with chief complaint of severe headache for 4 months. The headache was mostly sensed in the frontal region and vertex, and sometimes followed by the episodes of nausea and vomiting. Past medical history and drug history were not significant. Neurologic examination revealed no localized findings and neurological deficits.

The patient underwent brain magnetic resonance imaging (MRI). There was an extra axial heterogeneous mixed solid and cystic mass at the left frontal and temporal areas. Its measurement was 18 mm × 36 mm × 66 mm. High signal intensity in T1, and hyposignal to isosignal T2 was noted inside the lesion. There was no remarkable enhancement after the contrast administration [Figure 1].

She underwent surgery and total tumor resection was done via the left frontotemporal craniotomy. There were 2 extradural cystic lesions contain dark gray opaque fluid [Figure 2]. There was also a solid component into each cyst. Postoperative MRI revealed no signs of tumor residual.

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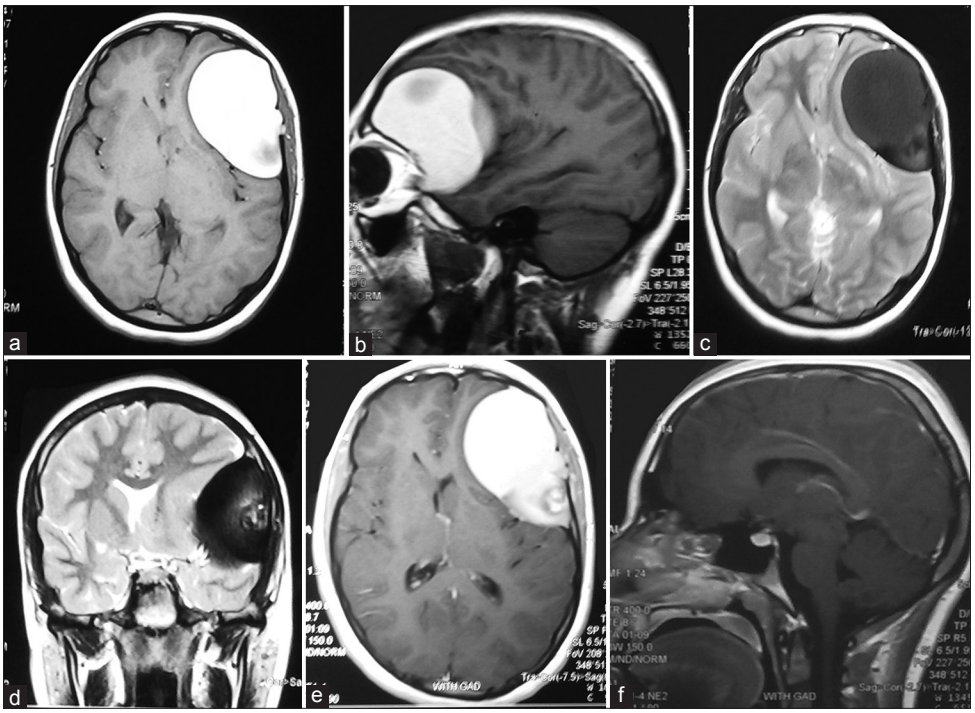

Figure 1: Magnetic resonance imaging studies showing an extra axial heterogeneous mixed solid and cystic mass at the left frontal and temporal areas. (a) Axial T1-weighted magnetic resonance imaging and (b) sagittal T1-weighted magnetic resonance imaging exhibiting a high signal intensity extra axial mass. (c) Axial T2-weighted magnetic resonance imaging and (d) coronal T2-weighted magnetic resonance imaging showing a hyposignal to isosignal mass. (e) Axial T1-weighted magnetic resonance imaging with gadolinium showing no remarkable enhancement after contrast administration. (f) In sagittal T1-weighted magnetic resonance imaging with gadolinium sellar and suprasellar region appear normal

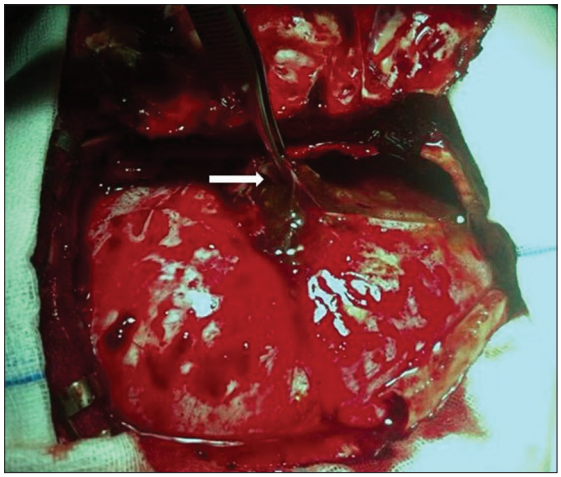

Figure 2: After removal of the bony flap, we saw extradural cystic lesions contain dark gray opaque fluid

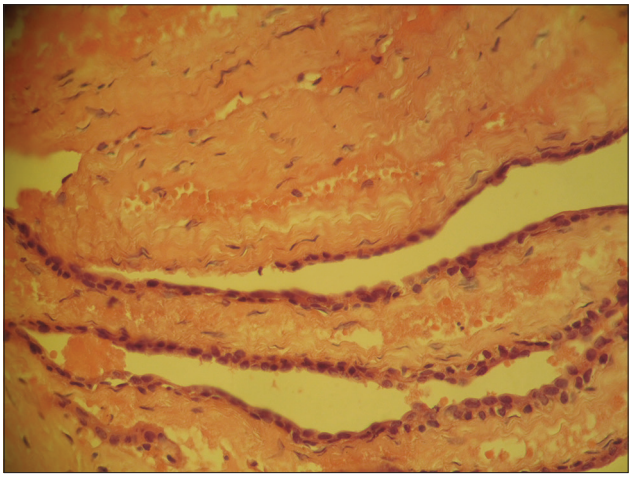

Figure 3: Pathological light microscopy analysis of the lesions shows cystic areas covered by squamous and basaloid epithelium that contain homogenous eosinophilic contents. In some parts of cyst walls, there were infiltration of inflammatory cells, cholesterol cleft formation and calcification (H and E, ×200)

The pathological light microscopy analysis of lesions revealed, cystic areas covered by squamous and basaloid epithelium that contain homogenous eosinophilic contents. In some parts of cyst walls, there were infiltration of inflammatory cells, cholesterol cleft formation, and calcification [Figure 3]. These findings were correlating with an ectopic craniopharyngioma.

DISCUSSION

Ectopic presentation of craniopharyngioma is rare. In most cases, ectopic seeding occurs secondary and after the removal of primary suprasellar tumors by direct mechanical implantation of the tumor cells,

or via meningeal seeding.[6] There was just 1 case of primary craniopharyngioma previously presented in the literature nearly at the same location, as the case we presented above. Ectopic migration of cell remnants of the obliterated craniopharyngeal canal might be the cause.

CONCLUSION

We presented a case of primary ectopic frontotemporal extradural craniopharyngioma. As the treatment of choice for these mass lesions, aggressive surgical resection of the lesion was done. We plan to follow this case with serial brain MRI. Craniopharyngioma should be mentioned as a differental diagnosis for intracranial extradural mass lesions.

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Conflicts of interest
There are no conflicts of interest.

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