



Case Report

Chronic epidural hematoma with frontal skull-base destruction mimicking osteogenic tumor, associated with coagulopathy due to chronic hepatitis C

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ABSTRACT

Background: Intracranial epidural hematoma is generally evoked by acute coup-injury. Though rare, it has a chronic clinical course and can be a non-traumatic event.

Case Description: The patient was A thirty-five-year-old man with a complaint of one-year history of hand tremor. He was suspected diagnosis of osteogenic tumor with differential diagnosis of epidural tumor, or abscess in the right frontal skull base bone, associated with chronic type C hepatitis because of his plain CT and MRI.

Results: Results of examinations and surgery, the extradural mass was chronic epidural hematoma without skull fracture. We diagnosis he is the rare case of chronic epidural hematoma caused by coagulopathy due to chronic hepatitis C.

Conclusion: We reported a rare case of chronic epidural hematoma caused by coagulopathy due to chronic hepatitis C. The repeated spontaneous hemorrhage in the epidural space formed the capsule and destruction of skull base bone, just mimicking skull base tumor.

Keywords: Chronic hepatitis C, Coagulopathy, Intracranial chronic epidural hematoma, Skull-base tumor

INTRODUCTION

Intracranial epidural hematoma is generally evoked by acute coup-injury. Although rare, it has a chronic clinical course^[1-3] and can be a non-traumatic event. In this article, we report a patient with chronic epidural hematoma caused by coagulopathy due to chronic hepatitis C.

CASE PRESENTATION

A 35-year-old man visited our affiliated hospital with a complaint of 1-year history of hand tremor. He had the right exophthalmos and deviated eye position. Plain craniogram showed the destruction of the upper rim of the right orbit and the right sphenoid wing [Figure 1a]. Brain plain computerized tomography examined in outpatient clinic revealed the mixed density lesion with partial high density and the right frontal skull-base destruction [Figures 1b and c]. Brain plain magnetic resonance imaging disclosed well-demarcated tumor-like lesion with heterogeneous

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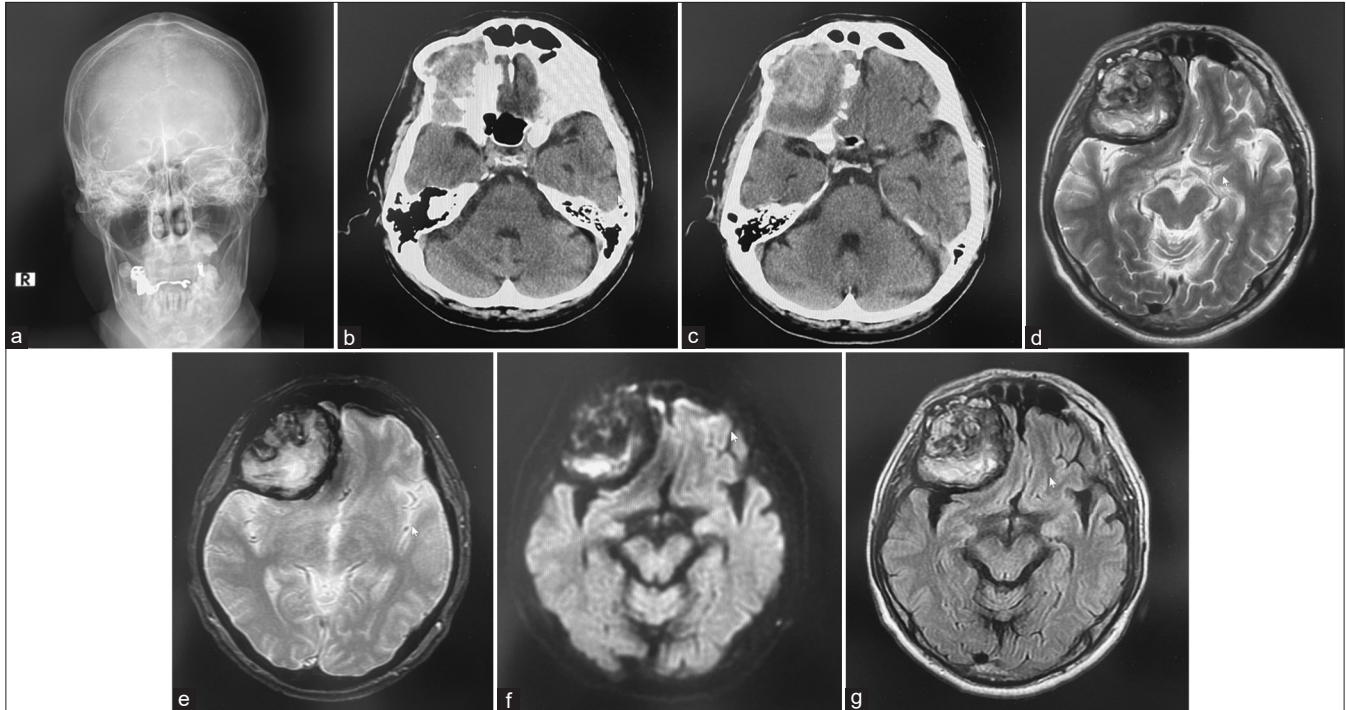


Figure 1: (a) Plain craniogram showed the destruction of the upper rim of the right orbit and the right sphenoid wing. (b and c) Brain plain CT examined in outpatient clinic revealed the mixed density lesion with partial high density and the right frontal skull-base destruction. (d) Brain plain magnetic resonance imaging (MRI) disclosed well-demarcated tumor-like lesion with heterogeneous mixed intensity in T2-weighted image, (e) Brain plain MRI disclosed well demarcated tumor-like lesion with heterogeneous mixed intensity in peripheral low intensity in T2 star image. (f) Brain plain MRI disclosed well-demarcated tumor-like lesion with heterogeneous mixed intensity partially high intensity in diffusion-weighted image. (g) Brain plain MRI disclosed well-demarcated tumor-like lesion with heterogeneous mixed intensity heterogeneous mixed intensity in fluid-attenuated inversion recovery image.

mixed intensity in T2-weighted image, peripheral low intensity in T2 star image, partially high intensity in diffusion-weighted image, and heterogeneous mixed intensity in fluid-attenuated inversion recovery image [Figures 1d-g].

Hematological examination on admission showed the elevation of serum aspartate aminotransferase 99 IU/L (normal range: 13–33), gamma-glutamyl transpeptidase 360 IU/L (10–47), total bilirubin 3.2 mg/dL (0.2–1.2), direct bilirubin 0.9 mg/dL (0.0–0.6), alanine aminotransferase 25 IU/L (6–30), lowered platelet 77,000/ μ L (150,000–330,000), elongated prothrombin time (PT) 12.8 s (69.0%), and PT-international ratio 1.30 (0.85–1.15) with activated partial thrombin time 33.7 s. Type C hepatitis virus core protein was 8783.0 fmol/L (<3.0). Serum carcinoembryonic antigen and α -fetoprotein were elevated to 5.9 ng/mL (<5.0) and 20.5 ng/mL (<10.0), respectively.

He was hospitalized under suspected diagnosis of osteogenic tumor with differential diagnosis of epidural tumor, or abscess in the right frontal skull-base bone, associated with chronic type C hepatitis.

The right frontotemporal craniotomy revealed tumor capsule in the epidural space. After cut-opening the tumor capsule,

soy pulp-like material was noted and removed extensively. No skull fracture was noted. Bacterial culture was negative, and pathological diagnosis was obsolete hematoma with cholesterol crystals, hemosiderin deposits, granulation tissue, and vascular endothelial proliferation. Neither tumorous tissues nor inflammatory cells were noted. Thus, the extradural mass was diagnosed as chronic epidural hematoma without skull fracture, maybe caused by repeated spontaneous hemorrhage in the epidural space due to coagulopathy induced by chronic hepatitis C. The repeated spontaneous hemorrhage in the epidural space formed the capsule and destruction of skull-base bone, just mimicking skull-base tumor.

DISCUSSION

Chronic epidural hematomas, which are a rare clinical entity as intracranial hematoma, usually occur spontaneously without head trauma. In a literature reviewed of 77 cases of spontaneous epidural hematoma,^[5] sickle cell disease was the most common cause (32.5%), followed by sinusitis (22.1%) and cancer metastasis (19.5%). Coagulopathy was reported in four cases (5.2%), which is relatively rare. Zheng and Chao

reported spontaneous epidural hematoma in a patient with chronic kidney disease on intermittent hemodialysis due to the coagulation abnormalities.^[10] Hepatitis C also has coagulopathy in its clinical course and is known to cause spontaneous bleedings. Khan *et al.* reported a patient with chronic epidural hematoma caused by deranged coagulation and liver dysfunction due to drug-induced hepatitis.^[4]

The cause of the chronic accumulation of blood clots in the epidural space is not understood in patients who suffered from coagulopathy. It is known that epidural hematoma can occur even with minor trauma.^[6] Although no obvious severe head injury was observed in present case, we speculated that there was a minor head injury that we did not notice, which provided epidural space and led to a gradual accumulation of blood clots due to coagulopathy.

Chronic epidural hematoma usually is encapsulated, as shown the previous reports,^[1-3,8] although Pozzati *et al.*^[7] and Sparacio *et al.*^[9] reported no capsulation. In our case, apparent capsule of chronic epidural hematoma was noted. The repeated spontaneous hemorrhage in the epidural space formed the capsule and destruction of skull-base bone.

Noticeable in the present case is that chronic epidural hematoma destroyed the surrounding skull-base bone and radiologically mimicked osteoclastic tumor. Thus, epidural lesion destroying the skull base includes chronic epidural hematoma as differential diagnosis.

CONCLUSION

We reported a rare case of chronic epidural hematoma caused by coagulopathy due to chronic hepatitis C. The repeated spontaneous hemorrhage in the epidural space formed the capsule and destruction of skull-base bone, just mimicking skull-base tumor.

Declaration of patient consent

Patient's consent not required as patient's identity is not disclosed or compromised.

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Nil.

Conflicts of interest

There are no conflicts of Interest.

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