

## CASE REPORT

# Tiger hide appearance: Impaction and prolapse of brain parenchyma through burr holes after evacuation of bilateral chronic subdural hematoma: A rare case report

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## ABSTRACT

Burr hole evacuation of chronic subdural hematoma (SDH) with or without drainage system is the most common surgical method among various techniques. There are various complications of burr hole drainage evacuation of chronic SDH, but there is no case report regarding impaction and prolapse of brain parenchyma through burr hole as a complication. Herewith, we are reporting a case of bilateral chronic SDH with prolapse of brain parenchyma through burr holes. Magnetic resonance imaging (MRI) of brain showed a characteristic look and we named it "Tiger hide appearance". We failed to find such characteristic appearance in MRI brain on reviewing the available literature.

**Key words:** Burr hole, chronic subdural hematoma, tiger hide appearance

## Introduction

Chronic subdural hematoma (SDH) is common in elderly, and is associated with substantial mortality and morbidity.<sup>[1,2]</sup> Surgical treatment is the mainstay of therapy. There are various surgical techniques for the treatment of chronic subdural hematoma such as trephination, twist drill craniostomy, burr hole drainage, and small craniectomy. Complication following burr hole drainage includes seizure, residual hematoma, re-accumulation or recurrence of hematoma, pneumocephalus, tension pneumocephalus, subdural empyema, and rarely intra cerebral hemorrhage.<sup>[3]</sup> We report a case of chronic SDH that presented with prolapse of brain parenchyma through burr holes made for evacuation of hematoma giving a characteristic "Tiger hide appearance" in magnetic resonance imaging (MRI) of brain and try to discuss the management of this complication.

## Case Report

A 76-year-old man presented with complaints of headache and right sided hemiparesis followed by altered sensorium for ten days. There was no history of head injury or use of anti-coagulant/analgesic. Patient had no history of diabetes or hypertension. Computed tomography (CT) of brain showed bilateral fronto-temporo-parietal chronic SDH more on the left side with midline shift toward the right side. A coagulation profile was done and was found to be normal. Bilateral frontal and posterior parietal burr holes were made and chronic SDH was evacuated; brain was reaching up to surface at that time. After thorough irrigation, the incision was closed. The patient regained consciousness. Two days later, patient developed cough and fever, and a chest X-ray revealed pneumonic patches in both lung fields. Treatment for pneumonitis was started, but the patient's fever persisted, and his level of consciousness dropped. Burr hole sites were found bulging [Figure 1]. MRI brain revealed bilateral residual subdural collection with impaction and herniation of brain parenchyma through the burr holes giving an appearance similar to a "tiger hide" [Figure 2]. On re-exploration, brain parenchyma was found herniating through the burr holes. Small craniectomy was done along all burr holes and fungating brain matter removed. There was infected fluid present in the trapped subdural spaces; the space was irrigated with normal saline. Postoperatively, patient was kept on broad spectrum antibiotics, antiepileptics, and intensive chest physiotherapy. Patient gradually improved, regained consciousness, and was discharged two weeks after second surgery on oral antibiotics for next six weeks. On last follow-up, patient is back to his normal routine life.

### Access this article online

#### Quick Response Code:



#### Website:

www.asianjns.org

#### DOI:

10.4103/1793-5482.145094

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## Discussion

For chronic SDH various surgical methods have been described and are often successful, but a lot of complications have been reported in literature like cerebral edema, tension pneumocephalus hematoma recurrence, seizure, failure of



Figure 1: Bulging burr hole site

brain to re-expand, epidural, subdural, and intracerebral hematoma,<sup>[1-3]</sup> but impaction and prolapse of brain parenchyma through burr holes made for chronic SDH evacuation or for any other indications is not seen or published previously as in our case. MRI brain of this rarest post operative complication of burr hole give a typical appearance and we name it “tiger hide appearance” [Figure 3].

Probably because of post operative chest infection, patient had violent cough due to which the brain came to the surface, the brain parenchyma got impacted into the burr holes trapping the subdural fluid collection in between. The fluid got infected due to chest infection and poor general condition. This type of complication may occur when we see a compromised host like in diabetes mellitus or urinary tract infection via hematogenous dissemination.<sup>[4]</sup>

## Conclusion

This is very unusual complication following burr hole evacuation of chronic subdural hematoma seen by us. There are various complications of burr hole made for any neurosurgical procedure, but one should keep in their mind that there may

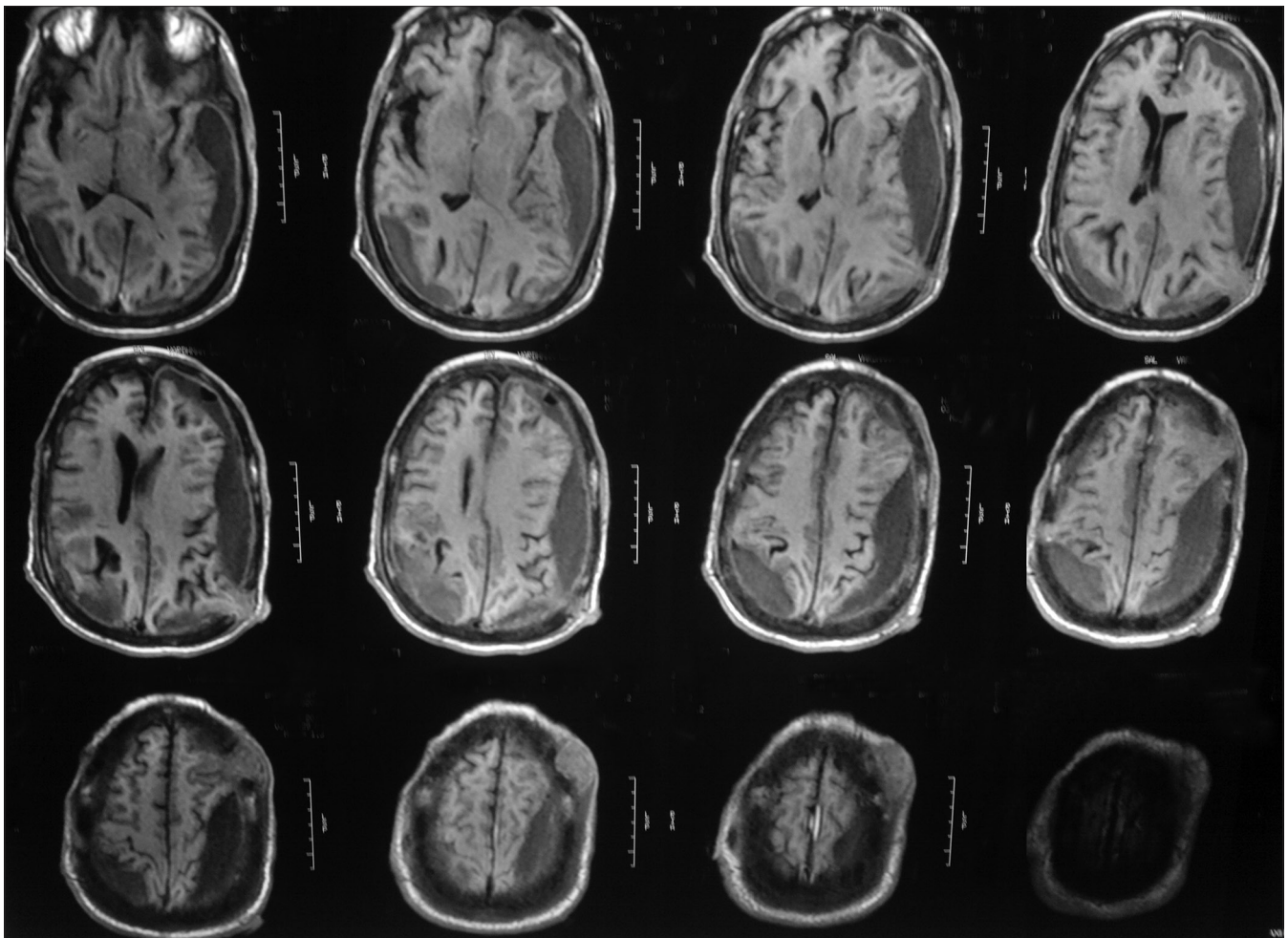


Figure 2: MRI Brain showing impaction and prolapse of brain parenchyma through burr hole site giving tiger hide appearance



**Figure 3:** Similar appearance of tiger hide

be brain parenchyma directly beneath the scalp prolapsing through burr hole whenever scalp bulging is seen over burr hole site and should be very careful to tackle this type of unusual complication as we did in our case.

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**How to cite this article:** Jaiswal M, Gandhi A, Purohit D, Mittal RS. Tiger hide appearance: Impaction and prolapse of brain parenchyma through burr holes after evacuation of bilateral chronic subdural hematoma: A rare case report. *Asian J Neurosurg* 2016;11:321.

**Source of Support:** Nil, **Conflict of Interest:** None declared.