

## RECURRENT SEIZURES DUE TO MIGRATING, METALLIC FOREIGN BODY IN THE BRAIN-A CASE REPORT

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### ABSTRACT

A 50 year old retired soldier presented to the emergency department following a generalized seizure. He had sustained a brain injury in artillery shelling 11years prior resulting in right hemiparesis. He underwent wound debridement from the military hospital and was informed that the retained foreign bodies could not be removed of the deep-seated nature .He had complete resolution of his hemiparesis but had recurrent seizures needing hospitalisation 5 times during the last 11years.He had fair control of seizures with sodium valproate. On the day of admission he reported that he had passed a rectangular 8millimetres by 5 millimetres dark coloured metal piece through the left sided craniotomy wound which he failed to produce. Vital signs were normal and physical examination showed that the patient was fully conscious and alert but he had residual right hemiparesis. Routine laboratory investigations were normal.

**KEYWORDS:** A 50 year old retired soldier presented to the emergency.

### INTRODUCTION

Plain radiograph skull anteroposterior and lateral views showed a round to oval hyperdense opacity in the left temporooccipital region, another similar density in the scalp in midline location adjacent to the coronal fissure and two other small opacities in the scalp in a paramedian location in the frontal region (figure.1.A, B). Computed tomography (CT) brain axial, coronal and sagittal cuts showed a wedge shaped hypo density in the left occipitotemporal area indicative of gliotic changes secondary to chronic infarct and a hyperdense lesion with density of 3000HU with streak artefacts suggestive of metallic foreign body in the left occipital region within the left occipital horn (figure.2. A, B, C).A bony defect was noted in the squamous part of left temporal bone (figure.2. D).A 3D reconstruction CT image confirmed the foreign bodies (figure.2.E,F). Electroencephalogram was normal. He was diagnosed to have recurrent seizures due to retained, mobile, metallic foreign body in the brain.

### CASE REPORT

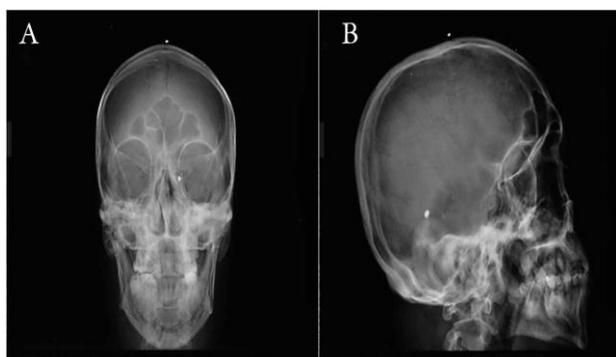
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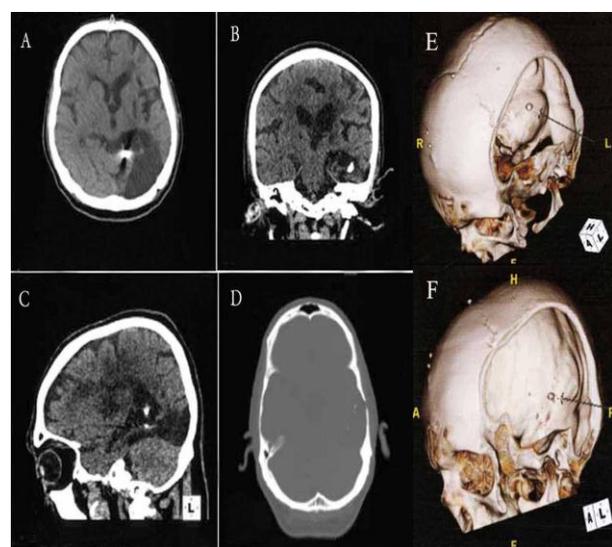
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have recurrent seizures due to retained, mobile, metallic foreign body in the brain.

In conclusion penetrating cranial injuries due to artillery shelling are rare and in many cases retained foreign bodies could not be removed because of the deep-seated nature.<sup>[1]</sup> A retained mobile foreign body as a cause of refractory seizures is extremely uncommon. Mobility of the retained metallic foreign body results from effects of gravity, brain pulsations, and the sink function of the cerebral ventricles and the specific gravity of the bullet compared with brain tissue.<sup>[1,2]</sup> Patients with focal neurologic signs or large lesions have increased risk of epilepsy, and the site of the lesion is more important than size in determining occurrence. The patient and kin are to be counselled regarding the possibility of recurrence of the seizure and the need for adherence to medication and the regular follow-up.



**Figure 1:** Panel A, B. Plain radiograph skull anteroposterior and lateral views showing a round to oval hyperdense opacity in the left temporooccipital region with another similar density in the scalp in midline location adjacent to the coronal fissure with two other small opacities in a paramedian location in the frontal region of the scalp.



**Figure 2:** Panel A, B, C. Noncontrast computed tomography (CT) brain axial, coronal and sagittal views demonstrating a wedge shaped hypo density in the left occipitotemporal region with features of

volume loss indicative of gliotic changes secondary to chronic infarct. A hyperdense lesion with density of 3000HU with streak artefacts suggestive of a metallic foreign body was noted in the left occipital region within the occipital horn. Panel. D. showing a bony defect in the squamous part of left temporal bone. Panels. E, F. 3D reconstruction CT image of the skull confirming a foreign body in the left occipital lobe and another three in the subcutaneous plane in the frontal region, one adjacent to the coronal suture and another two in the forehead region.

#### AUTHOR CONTRIBUTION

Author RC was responsible was the primary clinician involved in patient care. Both the authors Raced AK was responsible for taking the consent, editing and formatting the images drafting the caption and literature review.

**Consent:** All authors declare that “written informed consent” was obtained from the patient for publishing their images.

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**Competing interests:** All the authors declare that there are no competing interests.

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