Open traumatic brain injury by nail gun resulting in a persistent vegetative state

Figure 1 Preoperative radiographic imaging

(A, B) Scout x-ray and (C-G) head CT without contrast. Metallic foreign bodies traverse the right frontal and temporal calvaria into the superior cerebellum, right frontal and temporal lobes, and bilateral thalami. Subarachnoid, intraventricular, and intraparenchymal hemorrhages are notable despite artifacts.

Intraoperative photographs of nails within (A) the right hemicalvarium and (B) the craniectomy flap.

A 64-year-old man presented to the trauma bay with metallic objects protruding from his right scalp following presumed assault. Clinical examination demonstrated an unresponsive, moderately hypertensive patient with reactive pupils, intact corneal and gag reflexes, and no movement to noxious stimuli (Glasgow Coma Scale¹ 3T). Neuroimaging demonstrated multiple linear metallic foreign bodies extending deep into the bilateral thalami and brain parenchyma (figure 1). The patient underwent a right decompressive hemicraniectomy and removal of seven 10-inch nails through the skull via the right frontal and temporal cortices (figure 2). The patient recovered and remains in a persistent vegetative state, likely from his diencephalic injury.²

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