

Modern Phineas Gage: A Man with a Knife in the Brain

Chon Sum Ong¹, Nur Amalina Binti Che Din², Celine Mien Er Fong², Amira Nabiha Binti Jamalludin³

Abstract

An accident with a tamping iron made Phineas Gage a historically famous brain-injury survivor. (1) Each year, approximately 1.6 million people sustain traumatic brain injury, leading to 52,000 deaths annually. (2) However, there is limited literature regarding traumatic brain penetration injury that could be found. A 42-year-old male with psychosis forcefully inserted a butter knife through nostril, traversed via sella turcica into posterior corpus callosum in a mental health facility. He was intubated in his local hospital and transferred over to a tertiary hospital for neurosurgical intervention. Radiological imaging showed impingement of knife against the posterior cerebral artery (PCA), multiple brain infarcts, intraventricular, and subarachnoid haemorrhage. The knife was removed after securing the PCA with the collaboration between neurosurgery and interventional radiology team. Sinus repair was immediately performed by the otorhinolaryngologists. External ventricular drain was inserted due to hydrocephalus secondary to brain haemorrhage. He eventually developed ventriculitis leading to sepsis and was treated with multiple antibiotics. The traumatic brain injury led to anterior hypopituitarism and diabetes insipidus which was treated using hormone therapy. He not only survived the fatal brain injury but also regained his Glasgow Coma Scale (GCS) score. This case demonstrates the potential of a multi-disciplinary and specialty approach to achieve outcomes a single specialty team could not. The outcome of a case which was deemed to be a non-survivable brain injury was made different due to the bold decision making, experience and innovative surgical strategy. Future research is needed to better understand and manage brain penetration injury.

Keywords: traumatic brain injury, brain haemorrhage, anterior hypopituitarism, diabetes insipidus

DOI: <http://dx.doi.org/10.31344/ijhhs.v5i0-2.345>

-
1. Department of Neurosurgery, Addenbrooke's Hospital
 2. Scunthorpe General Hospital, United Kingdom
 3. Nottingham University Hospital, United Kingdom
-