PHINEAS GAGE REVISITED: AN “INDIAN CROWBAR CASE”
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Abstract
We report on the management of an extremely rare perforating head injury in a 17 year old boy a la Phineas Gage. The range of complications that occurred with this unusual form of trauma, the stormy clinical course and the unique management concerns have been discussed.

Introduction:
Perforating head injuries- injuries having entry and exit sites- are extremely uncommon and are often associated with a fatal outcome. Most of the existing literature is on penetrating head injury and its management. Reports on perforating head injury are few, mainly from war time data. Most of these do not address the management of perforating head injuries in particular.

The present case highlights the successful management of a perforating head injury and proposes a paradigm for the management of such cases.

Case material:
History and examination:
A 17yr old male sustained unusual head injury from a high speed motor vehicle accident in February 2007. Upon arrival in the ER 4 hours post trauma, he was conscious and complaining of neck pain. On examination, GCS was E 3 V 5 M 6 (14/15). His pupils were bilaterally 3mm and reacting well to light. He had a right L MN type 12th nerve palsy. His motor power was grade 5/5 in all limbs. The rest of the neurological exam was unremarkable and he had no other systemic injuries.

Patient was taken for CT scan which revealed a tangential fracture of the clivus lateral to the ponto medullary neurovascular structures. Thereafter it fractured the medial right occipital condyle and projected the course of the optic nerves proceeding to cause a tangential fracture of the clivus lateral to the ponto medullary neurovascular structures.

Procedure: Tracheostomy + In line extirpation of the rod. Intervventional radiologist stand by. Debridement and suturing of entry and exit wounds.

Post procedure: E4VTM6

Day 0:
CT head with CVI and CT angiogram:

Safe corridor!!: Transfrontosphenoid caudal to the canicular course of the optic nerves proceeding to cause a tangential fracture of the clivus lateral to the ponto medullary neurovascular structures.

Procedure: Tracheostomy + In line extirpation of the rod. Intervential radiologist stand by. Debridement and suturing of entry and exit wounds.

Post procedure: E4VTM6

Day 3: GCS rapidly dropped to 8/15 along with CSF rhinorrhea

CT SCAN:

Procedure: Evacuation of frontal contusions + ACF base repair (Split calvarial graft + fascia lata and pedicled periancal graft).

Post procedure: CSF rhinorrhea stopped. GCS improved to E4VTM6.

Day 10: Decannulated and tracheostomy closed.

Day 15: Low grade fever, lumped into altered sensorium and had a sudden respiratory arrest.

Resuscitated - GCS : E4VTM6 but was quadriplegic.

Conclusions:
Considering the rare nature of these injuries and the lack of treatment guidelines, we propose the following paradigm:

1) Impaled cranial objects need to be left alone till arrival in the OR.
2) Require frequent neuro and angi imaging with involvement of interventional radiologist.
3) Early repair of the wide traumatic osseous and dural defects and surveillance for evolving hydrocephalus following CSF fistula repair.
4) Post-operative recovery may be prolonged by multiple infectious sequelae that require prompt management.

References:
8. “There are only 2 ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle” - Albert Einstein

Maneesh
Phineas Gage

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