Unveiling the Enigma: A Case Report of Syndrome of the Trephined Manifesting as Profound Somnolence

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Background

- SoT is a rare neurological condition following craniectomy.
- It involves reversible symptoms like headaches, cognitive impairment, and neurological signs.
- Often missed in clinical practice due to infrequency and varied symptoms.
- Its pathophysiology disrupts cerebral blood flow and brain tissue.
- A unique case highlights the challenges in diagnosis, emphasizing the importance of considering SoT in post-craniectomy neurological symptoms.
- The report provides clinical details, diagnosis, imaging, and treatment outcomes.
- Our patient's abnormal symptomology presenting with solely as somnolence serves as an example to maintain the differential for all patients experiencing neurologic symptoms status post craniectomy.

Case Presentation

- 61-year-old male was transferred from a long-term acute care (LTAC) facility due to severe somnolence s/p syncopal episode while on a leading to a fall and head injury requiring right hemicraniectomy and decompression.
- While at the LTAC facility, the patient's family noticed a worsening struggle to stay awake despite the use of stimulant medications.
- The patient was transferred to our care facility at this time.
- Computed tomography (CT) and magnetic resonance imaging (MRI) scans showed signs of decreased intracranial pressure and a subtle mass effect on the right frontal lobe, along with a 6 mm midline shift to the left.
- The possibility of Syndrome of the Trephined (also called sinking skin flap syndrome) was considered, leading to a decision for a right cranioplasty using the patient's own bone flap.
- The surgery successfully reduced excessive somnolence initially, and the patient's condition improved. However, his post-operative course was later complicated by ileus, pneumonia, and sepsis, necessitating a return to the ICU for further care and treatment.

Images

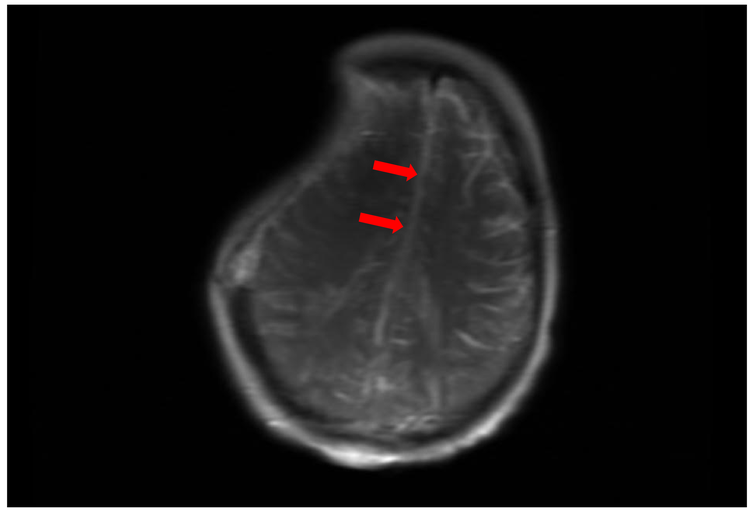

Figure 1. Magnetic Resonance Imaging (MRI) of the patient's cranium exhibits evident concavity resulting from a prior craniotomy. In this image is the paradoxical 6mm leftward midline shift, indicated by the red arrows.

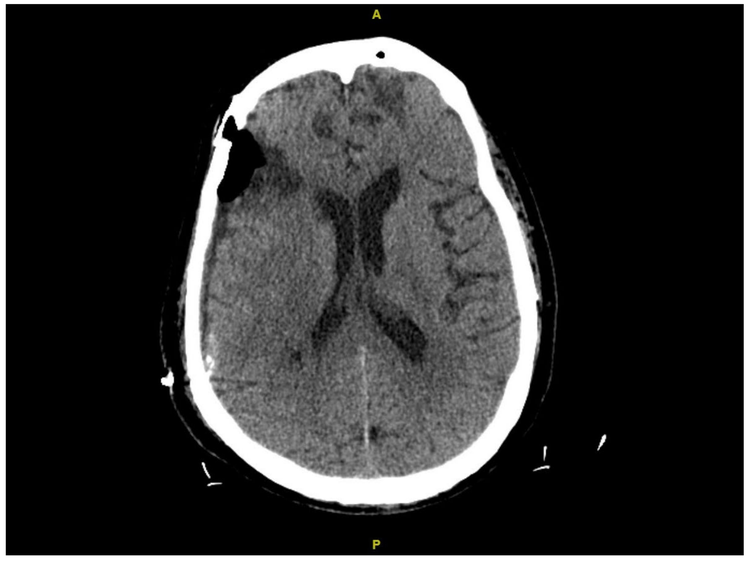

Figure 2. Post cranioplasty, this CT scan showcases the successful replacement of the native bone flap, resulting in a notable enhancement of the midline shift.

Discussion

- The syndrome of trephined (SoT) is a rare neurological condition resulting from decompressive craniectomy.
- This case report presents an unusual SoT case with profound somnolence as the primary symptom.
- The diverse clinical spectrum of SoT emphasizes the need for increased awareness among healthcare providers.
- Classic SoT symptoms include headaches, mood disturbances, dizziness, and pain at the cranial defect site, but they weren't observed in this case.
- The presentation suggests that SoT can manifest differently from the typical symptoms.
- The pathophysiology of SoT involves alterations in intracranial fluid dynamics, blood flow, cerebrospinal fluid circulation, and metabolism.
- The timing of cranioplasty in SoT management is debatable, but early cranioplasty in this case led to prompt symptom resolution.
- Despite its rarity, SoT should be considered as a diagnosis in patients with neurological deficits post-decompressive craniectomy, even with atypical symptoms.
- Increased awareness and further research are essential for understanding SoT and guiding optimal management strategies.

References

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