Original article

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The varied semiology of seizures in the context of small anterior temporal encephaloceles

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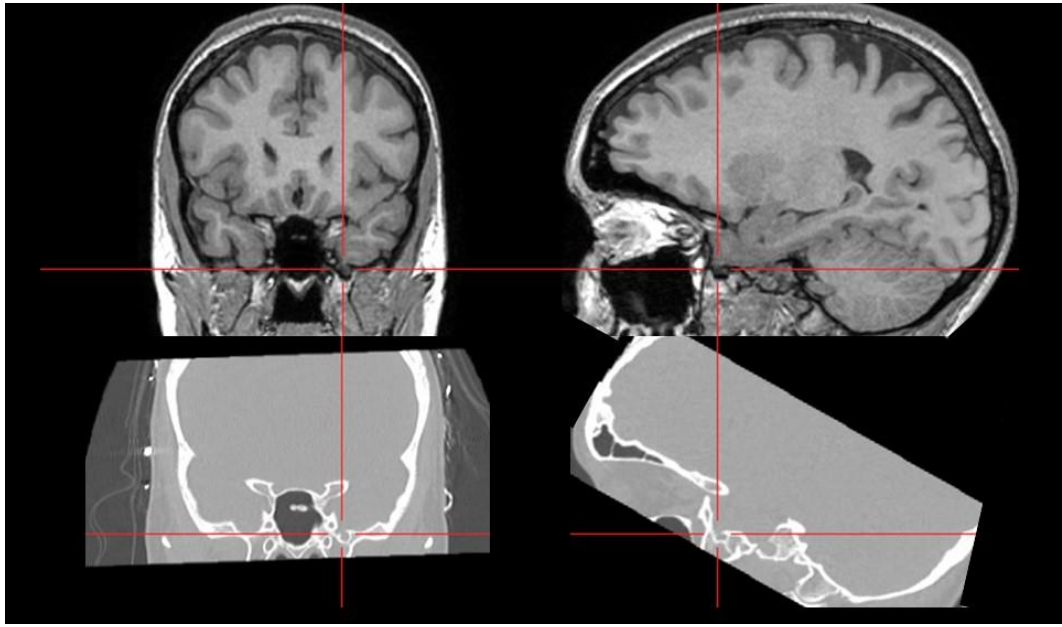
Epileptic Disorders

Temporal Encephalocele

- Small encephaloceles of the anterior temporal region are increasingly being associated with refractory focal epilepsy
- The anterior temporal lobe has extensive connections to the mesial temporal structures, insula-orbito-polar frontal and occipito-basal cortices
- Whilst a “temporal lobe” semiology (unawareness with automatisms) is commonly reported, seizures originating from an anterior temporal encephalocoele can rapidly propagate via these connections to distant cortical regions resulting in an extra-temporal semiology

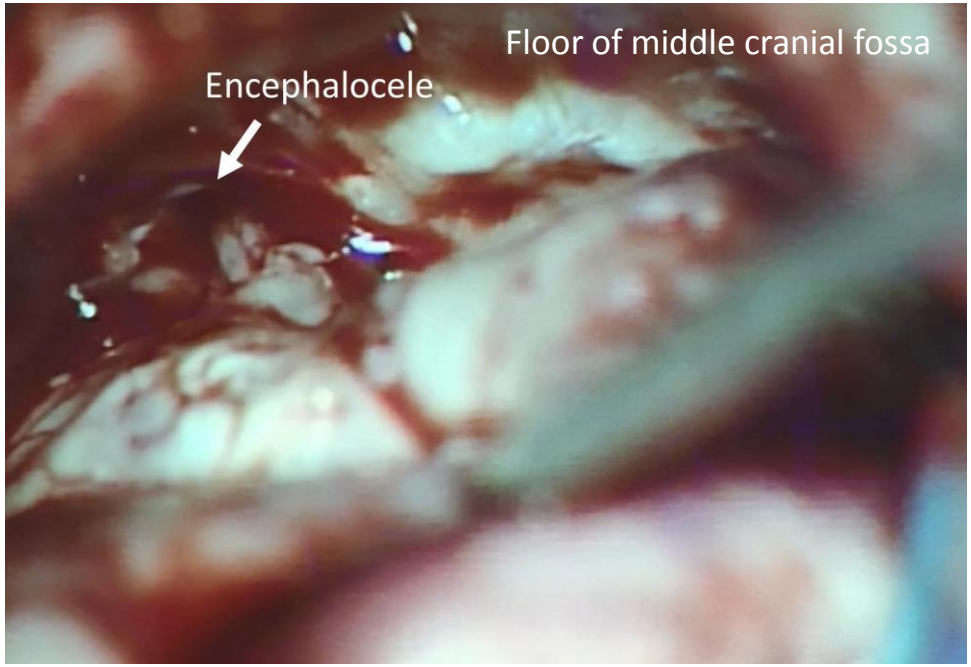


- Fig 1. Demonstrates a small encephalocele of the anterior temporal region. The T1 SPGR has been co-registered with high-resolution CT. The cross hairs demonstrates an easily overlooked finding.

Epileptic Disorders

Epilepsy Surgery

- In these cases, even seizures that appear extra-temporal can be proven to originate from the region of the encephalocele (using intracranial EEG).
- A “lesionectomy” can be performed involving resection of the tissue in and adjacent to the bony defect, with sparing of the mesial temporal structures
- There is increasing evidence that this more limited approach can achieve good seizure freedom outcomes and is becoming the standard of care in many centers.



- Fig 2. Demonstrates the bony outpouching of the middle cranial fossa after a “lesionectomy” has been performed