

# Anterior Encephaloceles: Experiences from a Combined Craniofacial and Neurosurgical Mission Trip to Davao City, Philippines

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## Introduction

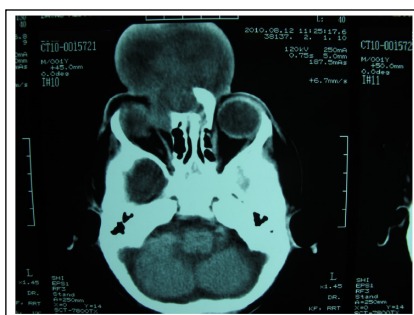
Anterior encephaloceles are rare congenital malformations involving herniation of the brain and meninges beyond the cranium. For unknown reasons, anterior encephaloceles are more common in Southeast Asia. Due to their anatomic location, they are accompanied with both physical and psychological disfiguring effects. Access to treatment for these lesions are often unavailable in these countries and support from outside international groups is required for definitive care.

## Methods

During 2010 and 2011, a group consisting of neurosurgeons, craniofacial surgeons, otolaryngologists, plastic surgeons and critical care nurses visited the Philippine province of Davao City for a combined 4 week surgical mission trip. A simultaneous intracranial and extracranial approach was used consisting of a bicoronal frontal-orbital craniotomy and reconstruction of the anterior nasal bones and cosmetic deformity correction.

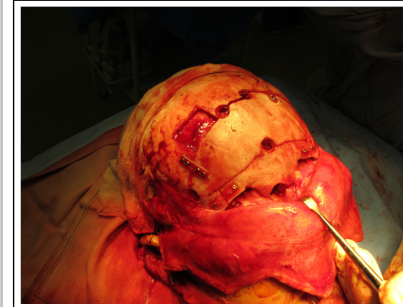
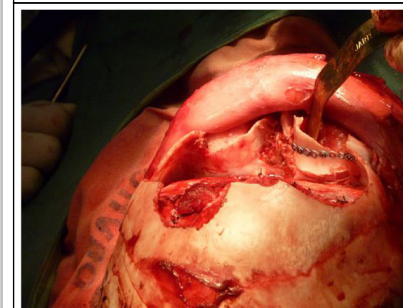
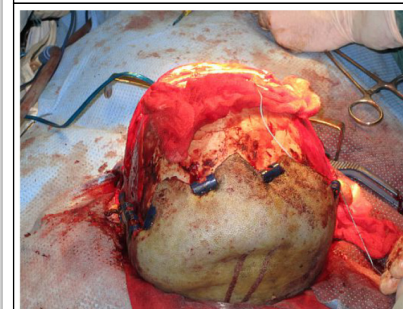
## Results

- 24 encephaloceles
- 10 males / 14 females
- Frontoethmoidal: 8
- Nasofrontal: 10
- Fronto-orbital: 6
- Largest defect (sac size): 30x15cm
- Bicoronal crani: 22
- Pericranial graft: 22
- Split graft: 20
- Absorbable plating: 12
- One mortality (respiratory distress)
- No neuro deficits, hydrocephalus, infection, cerebrospinal leak were reported in up to one year f/u



## Conclusions

- Combined intracranial-extracranial approach for encephaloceles is safe and effective
- A challenge is faced when performing this surgery in a third-world country with limited resources
- With appropriate organization, operative planning, post-operative and follow-up care shows this to be a safe and worthwhile mission for our international community



## Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the pathophysiology of an anterior encephalocele 2) Define the classification of an anterior encephalocele 3) Discuss the treatment options and 4) Describe the importance of a surgical mission trip

## References

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