

Bioethical Implications of Hemicraniectomy Following Ischemic Stroke: "Is it a no-brainer?"

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Facts of the Case

- 51-year-old Caucasian man
- Aortic valve replacement and ascending aortic aneurysm repair
- Past medical history:
 - CAD
 - DM II
 - HTN
 - HLD
 - Morbid obesity
- Post-op: Unresponsive, dysconjugate gaze



Elevated ICP

- Extensive left-sided MCA infarction
- Repeat CT: midline shift
- How to proceed?
 - Medical management
 - Hemicraniectomy
 - Palliative



Reconciling Competing Values

HCPOA	→ Dispositive
Family wishes	→ Surgery
Religious Guidance	→ Permissive
Casuistry	→ Medical Management/Palliative
Economic considerations	→ Palliative
Likely outcome, or quality of life	→ Palliative
Autonomy, justice, beneficence, nonmaleficence	→ Conflicting



Outcomes Following Hemicraniectomy

- European RCTs: DESTINY, HAMLET, DECIMAL
- Probability of survival increased from 28% to 80%
- Survival with significant assistance (mRS =4) increased tenfold
- Survival with very severe disability (mRS=5) unchanged
- Surviving patient survey: most accepted condition

Argawalla P.K., et.al.(2014) Neurosurgery 74:5151-5162



Case Outcome

- Hemicraniectomy on POD2
- Expressive aphasia
- Peg tube
- Tracheostomy
- Ambulatory with a walker
- Speech and physical therapy





Concluding Thoughts

- Multi-modal analysis: medical, bioethical, legal
- Different valuation systems lead to different outcomes
- Attempt to balance competing interests


