Management of Postoperative Craniotomy Pain in Pediatric Patients: A Prospective Cohort Study

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Purpose:
- A prospective observational clinical trial in 75 pediatric post-operative craniectomy, craniotomy, craniofacial patients to assess:
  - incidence of pain
  - methods of pain assessment
  - prescribed analgesics for post-operative pain
  - patient/parent satisfaction
  - incidence of opioid-induced side effects

Methods:
- The Children’s Hospital of Philadelphia IRB approved, parental consent and assent
- Surgery for tumor, epilepsy, Chiari, vascular malformations, or craniofacial reconstruction; convenience sample
- Non-standardized intraoperative and postoperative pain management
- Medications administered by RN as needed
- PCA in one patient
- Daily evaluation of pain and side effects by RN
- FLACC, Wong Baker FACES, or 0-10 scale
- Overall parental satisfaction
- NRS Picker satisfaction tool
- Overall patient satisfaction in adolescents
- Modified QoR-40
- Modality, frequency and type of analgesic
- Incidence of opioid-induced side effects

Results:
- At The Children’s Hospital of Philadelphia
  - pain was effectively managed with intermittent intra-venous opioid administration (fentanyl or morphine POD 0 – 2, oxycodone/tylenol POD 1-5)
  - parent satisfaction with pain management was high
  - emesis was more common on POD 0 (49%) and POD 1 (47%)
  - this sample is part of a larger (n=200) multi-institutional study (CHOP, JHU, CHB) comparing treatment modalities (PCA, NCA)

Conclusions:
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Reference: