Pain Management in Pediatric Postsurgical Patients at Mulago Hospital

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Introduction:

• In low and middle-income countries (LMICs), the burden of surgical disease exceeds that of HIV/AIDS, tuberculosis, and malaria combined.

• Acute pain after surgery is nearly universal, and has a profound impact on patient well-being.

• The consequences of poorly-controlled pain include increased risk of:
  - Deep vein thrombosis and pulmonary embolism
  - Myocardial infarction
  - Pneumonia
  - Delayed wound healing
  - Increased length of stay in hospital

• Underassessment and undertreatment of pain are common in LMICs. 5.5 billion people (83% of the world’s population) live in countries with low to nonexistent access to opioids. 15% of the world’s population consumes 94% of the world’s opioids.

• Pain in children is often disproportionately neglected due to misconceptions about nociception in childhood, lack of effective communication, and fear of addiction.

Objective:

• Mulago Hospital is a national referral center in Kampala, Uganda, with an active pediatric surgical service. There is currently no documentation of the status of pain management on the pediatric surgical ward.

• The goal of this project is to assess feasibility of characterizing the current state of pain management

Observations:

• Literature review and anecdotal reports/interviews identified substantial barriers to adequate pain control, including: medication availability, overburdened nursing staff, inadequate knowledge of drug dosing and frequency, inadequate pain assessment, and, fear of addiction.

• Many LMICs have restrictive laws against the use of opioids based on fear of misuse and addiction.

• Many LMICs have restrictive laws against the use of opioids based on fear of misuse and addiction. Ugandan hospitals, in contrast, typically have reliable access to oral morphine as a result of strong advocacy in the field of palliative care.

• Documentation of intraoperative anesthetic and analgesic medication administration is excellent. Medications and dosages are recorded on a paper record, allowing for the possibility of retrospective data collection.

• The Department of Surgery at Yale University has developed a database collecting pediatric surgical data at Mulago Hospital, into which anesthetic data can be integrated.

• Potential limitations include:
  - Limited use of objective pain scales (FLACC, FPIPS, NRS). Pain scores not recorded in chart.
  - Inconsistent documentation of postoperative analgesic medication administration
  - Low fidelity between analgescics prescribed and those documented as given by nursing staff.
  - It is unclear whether this represents lack of documentation, lack of documentation, or both.
  - Parents are frequently responsible for administering self-purchased analgesia medications, complicating documentation practices.
  - Inherent risk of unintended consequences when encouraging pain control in a setting with limited monitoring capabilities.

Global Consumption of Morphine Equivalents

Opioid Consumption Maps: Morphine Equivalence (ME), mg/kg/day, 2014

References:


Development of Anesthesia and Analgesia Database:

Future Directions:

• Obtain IRB approval to pilot Anesthesia and Analgesia Data Collection Form

• Explore qualitative aspects of pain management, including parental and nursing surveys regarding perceptions of pain

• QI initiatives addressing standardization of medication dosages, recognition of opioid overdose, standardized pain assessment scales

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