Assessing Adequacy of Pediatric Resident Teaching for Acute Pediatric Pain Management

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BACKGROUND

• Untreated pediatric pain has been recognized as a significant cause of morbidity.
• The purpose of our study is to assess how comfortable pediatric residents are with acute and post-operative pain management in the pediatric population. Our aim is to create an educational curriculum to bridge any gaps in knowledge elucidated by the results and to develop a pain protocol that can serve as a tool for residents when managing acute and post-operative pediatric pain.

METHODS

• A survey was sent out to 207 institutions with questions regarding pediatric residents' frequency of utilizing different approaches to pain management.

DISCUSSION

• Preliminary results suggest that residents could benefit from an educational curriculum that highlights the different classes of pain medications and ways in which they can be combined as well as the types and uses of different regional blocks. Additionally, while pain protocols have become more common, they are not ubiquitous, only 26.8% of those surveyed report having a pain protocol. 78% of residents who have a pain protocol, utilize it; therefore, this protocol is a valuable resource in the management of pediatric pain.

RESULTS

	Always	Sometimes	Rarely	Never
How often do you add an additional class of pain medication when a patient is on PCA?	12.20%	41.46%	31.71%	14.63%
How often do you prescribe two different classes of pain medication for a patient?	28.05%	64.63%	4.88%	2.44%
How often do you put a patient on a standing order of an NSAID for pain control?	24.39%	62.20%	9.76%	3.66%
How often do you utilize or consider blocks for acute pain management?	2.44%	8.54%	41.46%	47.56%
If your hospital does have a pain protocol, how often do you use it?	4.88%	17.07%	3.66%	2.44%

CONCLUSION

• As the resources and tools available to us continue to expand, resident education is vital to the continued improvement in the efficacy of pediatric pain management.

REFERENCES

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• Merkel, Voepel-Lewis, Shayevitz, & Malviya (1997). The FLACC: A behavioral scale for scoring postoperative pain in young children. Pediatric Nursing, 23(3) 293-297.
• Wong DL, Baker C. Pain in children: Comparison of assessment scales, *Pediatric Nursing , 1988, vol. 14 (pg. 9-17)*

Mild Pain (1-3)

❒ Ibuprofen PO 5mg/kg q6hrs (do not exceed 400mg/dose or 1200mg/day)
OR
❒ Ketorolac IV 0.5mg/kg q6hrs (for children >2yr, max 72hrs)

❒ Acetaminophen PO 10mg/kg q6hrs (do not exceed 60mg/kg/day <2yrs or 90mg/kg/day >2yrs)
offset times of ibuprofen/ketorolac and acetaminophen administration so that patient receives medication q3hrs

❒ Morphine IV 0.025mg/kg q3hrs PRN

Moderate Pain (4-7)

❒ Ibuprofen PO 10mg/kg q6hrs (do not exceed 600mg/dose or 1200mg/day)
OR
❒ Ketorolac IV 0.5mg/kg q6hrs (for children >2yr, max 72hrs)

❒ Acetaminophen PO 15mg/kg q6hrs (do no exceed 60mg/kg/day <2yrs or 90mg/kg/day >2yrs)
offset times of ibuprofen/ketorolac and acetaminophen administration so that patient receives medication q3hrs

❒ Morphine IV 0.05mg/kg q3hrs PRN
OR
❒ Dilaudid IV 0.01mg/kg q3hrs PRN

❒ Diazepam 0.05mg/kg q8hrs PRN (*for abdominal surgery*)

Severe Pain (8-10)

❒ Ibuprofen PO 10mg/kg q6hrs (do not exceed 400mg/dose or 1200mg/day)
OR
❒ Ketorolac IV 0.5mg/kg q6hrs (for children >2yr, max 72hrs)

❒ Acetaminophen PO 15mg/kg q6hrs (do no exceed 60mg/kg/day <2yrs or 90mg/kg/day >2yrs)
offset times of ibuprofen/ketorolac and acetaminophen administration so that patient receives medication q3hrs

❒ Diazepam IV 0.05mg/kg q8hrs PRN (*for abdominal surgery*)

❒ Morphine IV PCA: 0.015mg/kg/hr basal, no bolus for <8yo
0.015mg/kg/dose Q10min bolus (max 0.1mg/kg/hr), no basal for >8yo

Please call Anesthesia for any further questions

OPIOD REVERSAL
Naloxone 0.005mg/kg IV or 0.01mg/kg SC q2min titrate to effect (during code Naloxone IV 0.01mg/kg)

	Scoring		
Categories	0	1	2
Face	No particular expression or smile.	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to; distractable	Difficult to console or comfort