Does Race Influence Pediatric Anesthetic Care?

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BACKGROUND

- Patient race influences medical care.1-4
- Racial patterns of perioperative medication administration in pediatric anesthesia have not been well studied.5-6
- We aimed to determine if racial differences exist with regard to medication administration during emergency appendectomy.

METHODS

- Retrospective cohort study at a single institution
- Laparoscopic appendectomies, 2010-2015
- Exposure: Race (black/white)
- Outcomes:
  - Categorical: administration of midazolam, ondansetron, lidocaine, ketorolac
  - Continuous: weight-based doses of fentanyl and morphine
- Covariates: age, gender, attending anesthesiologist

RESULTS

- 1680 patients (1329 white, 351 black) included in analysis
- Unadjusted analysis:
  - Black children are less likely to receive preoperative midazolam than white children
  - No significant racial differences in administration of intraoperative medications

Figure 1: Odds ratios for administration of midazolam, lidocaine, ketorolac, ondansetron for black as compared to white children (univariable analysis)

Figure 2: Mean difference in opioid doses (weight-based) between black and white children (univariable analysis)

Adjusting for age, gender, attending anesthesiologist:
- No evidence of racial differences in administration of any medications

Figure 3: Odds ratios for administration of midazolam, lidocaine, ketorolac, ondansetron for black as compared to white children (multivariable analysis)

Among attending anesthesiologists:
- Wide variation in administration of all drugs
- Wide variation in administration of midazolam by race (median OR: 0.64 for black vs. white children)

Table 1: Univariable analyses of administration of all drugs by covariates, p-values

CONCLUSIONS

- There was no statistically significant racial difference in preoperative or intraoperative medication administration after adjustment for covariates.
- We found wide variation in racial administration patterns for midazolam among anesthesiologists.
- We suggest similar analyses at individual centers and/or programs for anesthesiologists to self-monitor their practices.