Tonsillectomy in obese children: fools dare where angels fear to tread!

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Goals

1. Review the epidemiology of tonsillectomy and definition of childhood obesity
2. Recognize the perioperative problems of childhood obesity
3. Discuss the unique problems associated with obesity and tonsillectomy
4. Discuss post-tonsillectomy pain and why it's so hard to get it right.
5. Explore the dilemma of dosing of anesthetic drugs in the extremely obese child

Case description:

A 6yr old 36.6kg, 123.2cm tall, BMI 24.2Kg/m^2, boy was scheduled for elective adenotonsillectomy (T&A) at an outpatient surgical center. Indication for T&A was habitual snoring, excessive daytime sleepiness and occasional witnessed apnea. No formal sleep studies are available. No other significant history of note.
Following uneventful general anesthesia and T&A, patient was extubated awake and arrived somewhat sleepy in the PACU. Ten minutes after PACU admission, he started crying and holding his throat. He rated his throat pain as worse than 10 out of 10 and was inconsolable. Early PACU pain was eventually controlled with fentanyl and morphine boluses and patient remained in the PACU for another 90min. He was sleepy, but easily rousable.

Model Discussion points

1. What is obesity? How is overweight or obesity defined in children?
2. What is clinically severe obesity?
3. How should we classify this child based on his BMI?
4. As a pediatric anesthesia caregiver, what obesity-related physical examination should you carry out?
5. What is habitual snoring? Does this history concern you?
6. Describe your induction and airway maintenance plans
7. How does obesity affect tonsillectomy: pre-op, intra-op, post-op, long-term?
8. What is your analgesic plan?
9. Are obese patients more pain-sensitive? Are they more opioid sensitive?
10. Any ancillary medications?
11. What are the commonly available medication dosing metrics in children?
12. Does this child require post-op ICU admission?

Discussion

The current epidemic of childhood obesity makes it increasingly likely that children presenting for anesthesia and surgery are either overweight or obese. Of greater

concern is that of all the categories of overweight and obesity, extreme obesity has shown the greatest consistent increase in both children and adults (1). The perioperative complications of pediatric obesity are just being characterized (2,3). The acute problems associated with severe obesity in children have rarely been described. Several potential complications are associated with caring for severely obese children. It is also becoming increasingly apparent that the current practice of dosing medications on a mg/kg basis may not be ideal with the present day rapidly increasing prevalence of obesity. Dosing medications by weight in some children may lead to significant overdose.

Managing posttonsillectomy pain remains a major challenge for a variety of reasons. PTP may be early or late and when severe can lead to considerable morbidity and increase the overall cost associated with the procedure. The present case indicates some of the concerns associated with obesity in children with specific focus on a child undergoing T&A. We will cover tips and current literature on childhood obesity and post-tonsillectomy pain.

References:

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