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Introduction: Obesity has become pandemic in the pediatric population in the United States. As weight increases, so do the risks of perioperative complications. Given these concerns, there is hesitancy to perform surgical procedures in the outpatient setting in patients whose weight exceeds the 95th percentile for age. Despite this, cost constraints mandate the increased use of outpatient facilities. In pediatric patients with moderate obesity (weight at the 95th-99th percentile), there are limited outcomes data.

Methods: Screening questionnaires were prospectively performed and analyzed in pediatric patients with moderate obesity from our outpatient facility that is 17 miles away from our main hospital campus. During the preoperative phone call by the ambulatory center nurse, a screening questionnaire with five questions regarding OSA, co-morbidities, BMI, and distance from the facility was filled out. The questionnaire was reviewed also by an anesthesiologist to ensure the child was appropriate for outpatient facility.

Results: To date, 34 patients fit the study criteria with weight \geq 95th percentile for age. The average percentile for BMI was 95.%. Ten of the patients answered three or more questions affirmatively regarding OSA. Average PACU time was 31 ± 10 minutes. Average PACU time for all other cases of normal weight children was 35 minutes. Ten patients required a PACU time of ≥ 35 minutes. Airway management included tracheal intubation (22), LMA (6), and mask (6). Fifteen patients received adjunctive agents such as ketorolac or acetaminophen. Opioid administration included morphine (24), fentanyl (intranasal or intravenous) (15) and hydromorphone (1). Morphine dosing was 0.08 ± 0.03 mg/kg and fentanyl dosing was 1.2 ± 0.26 μ g/kg (actual body weight). One patient received a peripheral nerve block as part of the anesthetic regimen. None of the patients required hospital admission or a PACU stay longer than 71 minutes.

Conclusion: In summary, there was no difference in the average PACU time in patients with moderate obesity. However, 10 of 34 patients required a PACU stay greater than the average time of normal weight children (35 minutes). Mean opioid dosing for morphine (0.08 mg/kg) and fentanyl (1.2 μ g/kg) were somewhat decreased if calculated for actual body weight, but appropriate when based on ideal body weight. Short general anesthesia cases can be performed on moderately obese children and adolescents at an ambulatory surgery center. However, appropriate considerations for anesthetic care should include use of short acting agents with attention to opioid dosing and use of adjunctive agents (ketorolac and acetaminophen) for analgesia. Regional/local anesthesia should be considered whenever possible.

References

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