

“The Pediatric Anesthesiologists role in Perioperative Management of the Morbidly Obese Pediatric Patient.”

Moderators

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Objectives

1. Discussion: As the role of anesthesiologists in perioperative medicine expands, how does that translate to our preoperative and perioperative involvement of the growing obese pediatric population?
2. How should the sensitive issue of weight be discussed with patient and family, including the increased risks involved? Is it appropriate to delay elective surgery while implementing a weight loss program?
3. To understand the physiologic and pathophysiologic implications of the obese pediatric patient undergoing anesthesia.
4. Discussion of regional anesthesia and opioid sparing techniques for pain management in the obese pediatric population.

Institution: Medical University of South Carolina

Case History:

A 137 kg 12 year old female is scheduled for open-reduction internal fixation of distal femur fracture. The patient sustained the injury during a fall at a school field day. The patient's past medical history includes mild asthma and type 2 diabetes. The patient's mother inquires during the preoperative assessment about the risks involved with anesthesia.

How do we define the overweight or obese pediatric patient? How does this differ from the adult population? What criteria are used? What is the prevalence of obesity in pediatrics? What are some etiologies and risk factors of pediatric obesity?

What comorbidities are associated with or exacerbated by childhood obesity? What organ systems may be affected?

Respiratory:

Cardiac:

Endocrine:

Gastrointestinal:

Neurological/Psychological:

Orthopedic:

How do you respond to the mother's inquiry regarding risks of anesthesia? Do you broaden your response of the risks due to the patient's severe obesity? Are obese pediatric patients at an increased risk for adverse perioperative events? If so, what are they? Do you specifically mention the child's obesity as being a cause for some of the risks involved? Should the benefits of weight loss in the future be addressed?

What type of induction would you plan on for this patient? Inhalational vs. Intravenous? Would you administer a premedication? RSI vs Standard Induction? In what order would you place your following concerns? Risk of reactive airway due to history of asthma, risk of aspiration, risk of difficult ventilation/intubation.

How does obesity affect the pharmacokinetics of the common anesthetic drugs we employ? Would you use opioids in this patient? How would you dose them? What risks would concern you regarding opioids in this patient population?

What other modalities or techniques can be employed for pain relief both intraoperative and postoperatively? Would you employ regional anesthesia? Would you place the nerve block prior to or following induction? Would you perform a single shot nerve block or place a catheter?

If this same patient presented for a different surgery, but one that were elective, would your perioperative management or anesthetic plan change? Is there any benefit for these patients to achieve weight loss before proceeding to surgery? As our specialty focuses on increasing our role in perioperative care, should we become engaged and advocate for weight loss conditioning or programs for our pediatric patients?

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