

8. Srinivasa S, Kahokehr AA, Yu TC, Hill AG: Preoperative glucocorticoid use in major abdominal surgery: Systematic review and meta-analysis of randomized trials. *Ann Surg* 2011; 254:183–91
9. Dieleman JM, Nierich AP, Rosseel PM, van der Maaten JM, Hofland J, Diephuis JC, Schepp RM, Boer C, Moons KG, van Herwerden LA, Tijssen JG, Numan SC, Kalkman CJ, van Dijk D; Dexmedetomidine for Cardiac Surgery (DECS) Study Group: Intraoperative high-dose dexmedetomidine for cardiac surgery: A randomized controlled trial. *JAMA* 2012; 308:1761–7
10. Li J, Wei GH, Huang H, Lan YP, Liu B, Liu H, Zhang W, Zuo YX: Nerve injury-related autoimmunity activation leads to chronic inflammation and chronic neuropathic pain. *ANESTHESIOLOGY* 2013; 118:416–29

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## Is It Time to Ask Different Questions about Aspiration?

To the Editor:

I read with interest the report by Beach *et al.*<sup>1</sup> on the relationship between nil per os (NPO) time and major adverse events, with special attention to pulmonary aspiration. The authors conclude that NPO status is not an independent predictor of major complications.

As reported in other studies,<sup>2,3</sup> the incidence of pulmonary aspiration was found to be quite low, with only 10 cases out of over 139,000 pediatric sedations collected between 2007 and 2011. It is noteworthy that NPO definitions within the Pediatric Sedation Research Consortium database (solids, 8 h; nonclear fluids, 6 h; and clears, 2 h) are out of step with the most recent American Society of Anesthesiologists guidelines from 2011,<sup>4</sup> which recommend 6 h for formula/milk and “light” solids, 4 h for breast milk, and 2 h for clear liquids. Many Anesthesiology departments, including ours at Vanderbilt University, Nashville, Tennessee, have moved all solids to a fasting time of 6 h. By this measure, all of the 10 cases of aspiration would have been NPO appropriate with no episodes in those not NPO.

A look at Emergency Medicine literature<sup>5,6</sup> shows a low incidence of aspiration even in nonfasted patients, many of whom are likely to be in pain. The American College of Emergency Physicians published a clinical policy in 2014<sup>7</sup> recommending that procedural sedation in the Emergency Room not be delayed solely due to NPO time. Unfortunately, the data presented in the study by Beach *et al.* are not broken down into elective *versus* emergent procedures. Additionally, the type of provider (emergency physician *vs.* other) cannot be used as a surrogate marker as emergency physicians often provide elective sedation services outside of the Emergency Room.

So where does this leave us? We are not suggesting, based on current evidence, that we reduce the NPO times for elective general anesthesia cases with planned airway instrumentation. But perhaps we should rethink the questions that we need answered regarding NPO in pediatric sedation.

What about emergent procedures without planned airway instrumentation? Many in emergency medicine would counter this question has already been answered. Can we quantify the risk of aspiration with planned airway instrumentation *versus* unplanned *versus* none at all? Does ketamine or dexmedetomidine, which preserve respiratory drive and airway tone better than propofol, offer a safer alternative in the nonfasted patient? All of these questions will be difficult to answer given the very low incidence of aspiration but we should certainly try.

## Competing Interests

The author declares no competing interests.

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## References

1. Beach ML, Cohen DM, Gallagher SM, Cravero JP: Major adverse events and relationship to nil per os status in pediatric sedation/anesthesia outside the operating room: A report of the Pediatric Sedation Research Consortium. *ANESTHESIOLOGY* 2016; 124:80–8
2. Walker RW: Pulmonary aspiration in pediatric anesthetic practice in the UK: A prospective survey of specialist pediatric centers over a one-year period. *Paediatr Anaesth* 2013; 23:702–11
3. Kluger MT, Short TG: Aspiration during anaesthesia: A review of 133 cases from the Australian Anaesthetic Incident Monitoring Study (AIMS). *Anaesthesia* 1999; 54:19–26
4. American Society of Anesthesiologists Committee: Practice guidelines for preoperative fasting and the use of pharmacologic agents to reduce the risk of pulmonary aspiration: Application to healthy patients undergoing elective procedures: An updated report by the American Society of Anesthesiologists Committee on Standards and Practice Parameters. *ANESTHESIOLOGY* 2011; 114:495–511
5. Agrawal D, Manzi SF, Gupta R, Krauss B: Preprocedural fasting state and adverse events in children undergoing procedural sedation and analgesia in a pediatric emergency department. *Ann Emerg Med* 2003; 42:636–46
6. Roback MG, Bajaj L, Wathen JE, Bothner J: Preprocedural fasting and adverse events in procedural sedation and analgesia in a pediatric emergency department: Are they related? *Ann Emerg Med* 2004; 44:454–9
7. Godwin SA, Burton JH, Gerardo CJ, Hatten BW, Mace SE, Silvers SM, Fesmire FM; American College of Emergency Physicians: Clinical policy: Procedural sedation and analgesia in the emergency department. *Ann Emerg Med* 2014; 63:247–58.e18

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In Reply:

We appreciate the careful review of our article.<sup>1</sup> We agree with the authors that other studies also support the low incidence of aspiration in pediatric sedation. While the study by Walker<sup>2</sup> of 118,371 pediatric patients is also large, only information on the 24 cases of aspiration was collected. Our study collected data on all patients, allowing us to evaluate risk