it can be started with local anesthetic infiltration, allowing extra time to gain intravenous access and apply the necessary monitors. If mask anesthesia is used in the obstetric population, it is commonly taught to maintain cricoid pressure until the airway is secured to reduce the risk of regurgitation of gastric contents. Finally, when intravenous access was finally secured in this case, the use of succinylcholine would have assured the most rapid onset of intubating conditions.

David R. Gambling, M.B., F.R.C.P.C.
Associate Clinical Professor
Co-Director, Obstetric Anesthesia

Laurence S. Reisner, M.D.
Professor and Vice-Chair
Co-Director, Obstetric Anesthesia
University of California, San Diego Medical Center
200 West Arbor Drive
San Diego, California 92103-8770

Reference


(Accepted for publication September 10, 1997)

The safety record of the mask or open-drop method may be a result of the fact that vomiting is most likely to occur in light anesthesia during induction or emergence when warning signs of swallowing, breath holding, and salivation allow time for the patient to be turned onto her side. Vomiting does not occur during maintenance of deep inhalational anesthesia (Guedel stage III, plane i or ii). Pulmonary aspiration as an important cause of anesthesia-related maternal death was not emphasized until the 1940s and 1950s by Mendelson¹ and others, but the policy of ‘mandatory’ tracheal intubation, especially when it fails, may actually do harm.⁷

When general anesthesia is essential, there are advantages to mother and fetus in the use of tracheal intubation, neuromuscular blockade, and light anesthesia with controlled ventilation. On the other hand, aspiration is sufficiently rare during inhalational anesthesia via face mask that this may be a rational and defensible choice in difficult circumstances. We may do our patients a disservice if we are afraid to use an “obsolete technique” because of exaggeration about its dangers.

J. Roger Maltby, M.B., F.R.C.A., F.R.C.P.C.
Professor of Anaesthesia
Foothills Hospital and the University of Calgary
1403-29 Street NW
Calgary, Alberta T2N 2T9
Canada

References


Anesthesiology, V 88, No 1, Jan 1998
CORRESPONDENCE


(Accepted for publication September 10, 1997.

In Reply.—An oft-quoted restatement of Russell’s paradox states that “all generalizations are untrue—even this one!” The generalizations made by Drs. Gamblin and Reisner and Dr. Sitzman regarding the “unreasonableness” of inhalation induction of anesthesia for emergency cesarean section are equally invalid. Although we recognize that under almost all circumstances, rapid-sequence intravenous induction of anesthesia with endotracheal intubation is preferred for STAT cesarean section, real-life circumstances may counteract. As eloquently stated by Dr. Maltby, not every parturient (or even many parturients) anesthetized via mask before the clinical introduction of rapidly acting intravenous anesthetics and relaxants succumbed to acid aspiration. Even now, most parturients do not regurgitate when cricoid pressure is released after rapid sequence intubation. The use of cricoid pressure in an unparalyzed patient, as suggested by Drs. Gamblin and Reisner, is potentially detrimental. It may cause coughing or “bucking” during induction of anesthesia and may result in an esophageal tear if active vomiting occurs. Further, rapid sequence induction is not a panacea. There may be failed intubations (unintentional gastric inflation with positive pressure ventilation markedly increases the risk of regurgitation) and bulky intravenous lines (which occlude or infiltrate before the muscle relaxant has reached the circulation—especially when rocuronium follows thiopental too closely).

These correspondents also expressed concern regarding the delay in establishment of cardiovascular monitoring in our case. It is important to note that the pulse oximeter serves as an indicator of circulatory integrity (an electronic “finger on the pulse”), while the patient’s spontaneous ventilation serves as an indicator of cerebral perfusion. Anesthesia is often induced via mask in pediatric patients before any monitoring (except, perhaps, a pulse oximeter) or intravenous access is established.

Drs. Shankar and Cartman emphasize the importance of having intravenous access to allow for volume replacement should the need arise. The venodilation accompanying induction of general anesthesia typically makes it much easier to insert an intravenous catheter; in fact, this occurred in the present case. With regard to the medicolegal issues, the notion of a “standard of care” is relative: Appropriate management strategies for “routine” circumstances may not represent optimum management in an atypical case such as ours. In response to the dictums suggested by these authors, I must add one of my own: “It is best to give a healthy baby to a living mother.” Awake oral or nasal intubation is a viable option for cesarean section, provided time permits adequate preparation of the parturient. Topical anesthesia and vasoconstriction (if a nasal approach is planned) are critical to obtaining a successful outcome in an unsted patient. Administration of spinal anesthesia in the absence of intravascular access, although certainly well described in the 1920s and 1930s, results in an irreversible decrease in sympathetic tone, without offering the advantage of venodilation in the upper extremities and improved chances of obtaining venous access.

Anesthesiologists sometimes face difficult choices with unknown and unknowable risk-to-benefit ratios. Armed with clinical experience, scientific knowledge, technical skill, and bit of luck, we are able to provide a desirable outcome almost all the time. In cases like ours, informed flexibility may be more important than blind adherence to “dictums” and “standards.”

Jeffrey B. Gross, M.D.
Professor of Anesthesiology and Pharmacology
University of Connecticut School of Medicine
Farmington, Connecticut 06030-2015

Doctor Gross is a consultant for Abbott Laboratories.

(Accepted for publication September 10, 1997.)