Updated Difficult Airway Algorithm: Confusing and Contradictory

To the Editor:

We read with great interest and some concern the revised Practice Guidelines for Management of the Difficult Airway. The Difficult Airway Algorithm, presented in figure 1, has some confusing recommendations.

Before entering the flow chart in figure 1, the reader is asked to assess the difficulty of supraglottic airway (SGA) placement. Multiple factors are known to increase the probability of difficult mask ventilation and difficult laryngoscopy and/or intubation. However, similar evidence is absent for the assessment of difficult SGA placement. Excluding an inadequate mouth opening for insertion, difficulty with an SGA is usually unanticipated.

Next, in the “AWAKE INTUBATION” pathway, if awake intubation fails, the authors suggest inducing general anesthesia assuming that “mask ventilation will not be problematic.” It seems that if an awake intubation was attempted, difficult mask ventilation and/or laryngoscopy is anticipated, and induction of general anesthesia is not in the best interest of patient safety. This is supported by the 2005 closed claims analysis that found that two thirds of difficult airway claims were associated with an induction of anesthesia. Given recent discussion suggesting the decreased skill of providers with bronchoscopy in the presence of newer airway equipment (i.e., video laryngoscopes), perhaps part of this pathway should include consulting a colleague or considering an alternative awake airway approach including, as mentioned by the authors, invasive airway access.

Finally, if the “NONEMERGENCY PATHWAY” (“FACE MASK VENTILATION ADEQUATE”) shifts to the “EMERGENCY PATHWAY” (“BOTH FACE MASK AND SGA VENTILATION BECOME INADEQUATE”), the algorithm details to use “Emergency noninvasive airway ventilation.” Similarly, the use of “Emergency noninvasive airway ventilation” is also recommended when “SGA NOT ADEQUATE OR NOT FEASIBLE.” However, as defined in figure 1E, “Emergency noninvasive airway ventilation consists of an SGA”. If SGA ventilation was already proven to be inadequate, how does this recommendation improve the situation?

We recognize and appreciate the authors’ efforts to provide a clear algorithm for this complicated topic. However, we feel that the above issues may create confusion.

Sylvia H. Wilson, M.D.,* Latha Hebbat, M.D., F.R.C.A.
*Medical University of South Carolina, Charleston, South Carolina. wilsosh@musc.edu

References


(accepted for publication May 24, 2013.)
In Reply:
On behalf of the American Society of Anesthesiologists (ASA) Task Force Management of the Difficult Airway and the ASA Committee on Standards and Practice Parameters, we thank Drs. Levine, DeMaria, Wilson, and Hebbar for their thoughtful Letters to the Editor regarding the Practice Guidelines published in February 2013.1 Drs. Levine and DeMaria suggest that the Difficult Airway guidelines should specifically call for a consideration of the risk of gastric aspiration. Drs. Wilson and Hebbar provide several suggestions for modifying the Difficult Airway Algorithm.

These letters exemplify the importance of the practitioners’ role in ASA Practice Parameters. The Committee on Standards and Practice Parameters listens very carefully to the clinical concerns of ASA members and leaders. These concerns guide the Committee to the selection of new practice parameters. During the process of guideline development, practitioners play a critical role by reviewing drafts, responding to on-line surveys, and providing commentary at open forums, caucuses, and reference committee hearings. After guidelines have been approved by the House of Delegates, practitioners make continuing contributions by testing the guidelines in daily practice. This real-world testing guides the focus and timing of subsequent revisions … or the occasional “retirement” of parameters that no longer provide useful guidance.

Our ASA methodologists carefully record and categorize practitioner comments. This material is studied by the Committee on an annual basis. Commentary is always welcome, and can be sent to the Chair of the Committee on Standards and Practice Parameters, to Task Force Chairs or Members, or to our Methodology Team.

These letters also provide an opportunity to review the intent of practice parameters. The ASA regards practice parameters as basic—not exhaustive—recommendations that assist both the practitioner and patient in making beneficial decisions about health care. Practice parameters are not offered as standards or absolute requirements. The recommendations found in practice parameters can be adopted, modified, or rejected according to clinical needs and constraints.

Once again, we thank our four colleagues for their insights. And we look forward to additional commentary and suggestions from ASA members.


*Virginia Mason Medical Center, Seattle, Washington. anerac@vmmc.org

Reference


Hydroxyethyl Starch 130/0.4 and Postoperative Acute Kidney Injury

To the Editor:
Martin et al. described a meta-analysis of 17 randomized controlled trials evaluating renal function in 1,230 total surgical patients allocated to hydroxyethyl starch (HES) 130/0.4 or control fluid. At baseline, mean serum creatinine (SCr) was lower in HES 130/0.4 recipients than the control group, and after surgery, the most extreme mean SCr values were higher in the patients receiving HES 130/0.4. However, these differences were not statistically significant. Limited data on acute renal failure and renal replacement therapy available among the trials included in the meta-analysis also showed no significant differences. The investigators concluded that there was no evidence of adverse postoperative renal effects due to HES 130/0.4.

A major weakness of this meta-analysis was short follow-up. In six of the included trials, renal function was evaluated only for 24 h or less after surgery and in two more trials only up to 48 h. SCr is neither a specific nor a sensitive marker for renal tubular injury, and threshold SCr increase for diagnosis of incipient acute kidney injury (AKI) is not typically observed until 48 h or more after surgery.2 This temporal pattern is nicely demonstrated by the Crystalloid versus Hydroxyethyl Starch Trial of HES 130/0.4, which included 2,876 surgical patients comprising 43% of the overall trial population (fig. 1).3 HES 130/0.4 significantly increased SCr in that trial but the effect was not clearly evident until after 48 h, and the SCr peak was not reached until after 4 days. Thus, in eight trials of the meta-analysis, the SCr peak is likely to have been missed because of short follow-up. In the Crystalloid versus Hydroxyethyl Starch Trial, SCr increase was accompanied by increased recourse to renal replacement therapy in the HES 130/0.4 group with a relative risk of 1.21 and 95% CI of 1.00–1.45 (P = 0.04). These

Dr. Groeneveld has received research grant funding from B Braun, Melsungen, Germany, and lecture fees from B Braun and Baxter, Deerfield, Illinois. Drs. Navickis and Wilkes have received research grant funding from Baxter, CSL Behring, King of Prussia, Pennsylvania, and Grifols, Los Angeles, California.

Anesthesiology 2013; 119:724-41

733