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“Keep out of trouble” airway algorithm

To the Editor:

In his editorial, “Predicting the difficult laryngoscopic intubation: are we on the right track”¹ Dr. Murphy asks a relevant question and I agree with his answer. In truth, every intubation is potentially difficult, suggesting that the current mystique surrounding the difficult airway is both exaggerated and beside the point. Early in my career, I noticed that critical incident reports about difficult airways usually involve “losing the airway” (this is not surprising: a “lost” airway is rapidly lethal so those patients may not reach our care). Therefore, not losing the existing airway should be the first goal of management. All of the techniques of intubation are much easier with stable gas exchange and a bit of time.

With this in mind, many years ago I developed an algorithm for teaching medical students how to quickly assess the airway for potential complications in order to avoid making a bad situation worse (Figure). This includes the “dimensions” suggested by Dr. Murphy plus a few more. Its strengths are: relative simplicity; a preventative point of view; and quick identification of situations where speed matters. In the last circumstance, admittedly uncommon, everyone has to develop his or her own best intubation technique (I favour one involving the lighted stylet), and usually the option of surgical airway exists. If a surgical airway is not possible, then early identification is even more crucial.

Although this approach has not been compared in a randomized double-blind study with consensus approaches (they also have not been validated) due to the low incidence of events as noted by Dr. Murphy, I can only say that it has been uniformly successful in my practice.

FIGURE K.O.O.T. (keep out of trouble) airway algorithm. An aide in choosing a safe technique of airway management. SA = surgical airway; FOL = fibreoptic laryngoscopy; LA = local anesthetic; LMA = laryngeal mask airway.

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Reply:

We must thank Drs. Matic, Arndt, and Lee for their insightful comments. It is heartening to hear anesthesiologists echoing what we have been teaching residents and other practitioners in airway courses and workshops for more than a decade.

Additionally, these same sentiments and concepts form the foundation of our objectives in educating anesthesia practitioners to alternative ways of thinking and acting to address just the kind of "critical airways" that Matic and Arndt described. The use of simple but practical strategies to rapidly predict and identify difficulty in all of its dimensions (bag mask ventilation, supraglottic devices, tracheal intubation and a surgical airway) in an emergency, is fundamental to our overall teaching goal.

With the on-going emphasis in airway management research and education, we are confident that patient outcome will improve.

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Bilateral foot drop: looking for the needle in the wrong haystack?

To the Editor:

We read with interest the description of a case of bilateral foot drop following spinal anesthesia.¹ We have described the etiology of such postoperative deficits (preoperative injury, co-existing neuropathy, surgical trauma, tourniquets, positioning and anesthetic techniques).² The case mentioned requires further clarification.

1. Documentation of neurovascular deficits in any limb with fractures is considered part of basic trauma (orthopedic) examination. Further, trauma to the lumbosacral spine may also result in bilateral foot drop.

2. Did the patient have other co-existing disease with subclinical neuropathy (e.g., diabetes)? Pre-existing neuropathies have been identified as risk factors in nerve palsies.³

3. Does the plural "tibial pins" suggest that these were inserted on both sides?

4. Was the femur alone operated? How were the leg fractures managed? If they were also operated upon, the foot drop could be related to the surgery.⁴

5. What was the position of the patient during surgery? Femoral traction on a hip table (supine) may stretch the sciatic nerve. In the lateral position the sciatic nerve of the dependent side may be compressed.⁵

The authors erroneously identify paralysis of foot flexors as the cause of foot drop. Neurological examination is more important to rule out neurological deficits following the trauma rather than preceding the anesthetic (as they recommend). Prior to searching for iatrogenic causes, if they had documented the presence or absence of bilateral foot drop (at admission or after the traction pin application), they may not be faulted for looking for the metaphoric needle in the wrong anesthetic haystack!

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Reply:

This is in response to the letter from Dr. Naveen Eipe and Dr. Nihar Ranjan, regarding the above mentioned article in the May 2005 issue of the Canadian Journal of Anesthesia. I thank Dr. Naveen for his comments, and would like to clarify the points raised by him.

There was no documentation of preoperative neurological deficit in the basic trauma examination. It is