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Laryngoscope Handle Malfunction

To the Editor:—During a rapid-sequence intubation we encountered an unusual laryngoscope malfunction. The laryngoscope handle broke apart and the two "C" cell batteries fell out of their fuselage, one settling into the patient's oropharynx. Although laryngoscope blades commonly disconnect from handles, and there is even a case report of laryngoscope bulb aspiration,[1] we are not aware of a prior report of handle breakage.

The laryngoscope handle, the manufacturer of which is unknown to us, is comprised of two parts. The distal pivot fits snugly into the longer battery housing, and a soldered joint secures the assembly. This was the site of the disconnection just described (fig. 1). The distal pivot and soldered joint act as a fulcrum and bear maximal stress during laryngoscopy due to the torque exerted on the laryngoscope blade, which acts as a moment arm. An old, cracked, or improper solder would weaken the assembly sufficiently to cause the problem described here.

Currently available are a laryngoscope and computer program that can evaluate the torque applied during laryngoscopy using a series of transducers built into the handle.[2] The torque can be considered as a single-force vector applied by the anesthetist acting over a moment arm or laryngoscope blade, in this case. Basic physics dictates that $t = F \times R$, where torque (t) is equal to the product of the anesthetist's force (F) and its point of application on the blade, described as the distance R from the pivot. The force during routine intubation has been measured as roughly 10–30 newtons, approximately equivalent to 1–3 kilograms-force; but during difficult intubations this force can increase to as much as 100 newtons or approximately 10 kilograms-force!*

We recommend that the preliminary laryngoscope check include not only the light but also the integrity of the entire apparatus. A firm tug on the extended blade should serve this purpose. Finally, this malfunction reaffirms that a second laryngoscope should be immediately available during any rapid-sequence intubation.

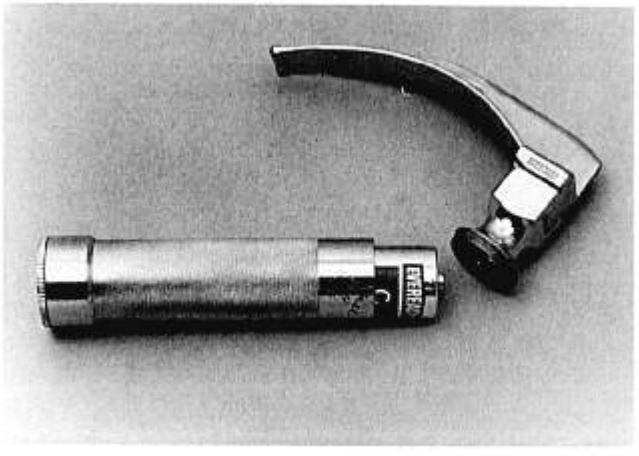

FIG. 1. Laryngoscope showing site of handle disengagement.

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* Chilcoat RT: personal communication.

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What Attributes Do We Want in Anesthesia Residents?

To the Editor:—The specialty of anesthesiology is attracting many highly qualified applicants. With many candidates to choose from, it makes sense to establish clear criteria for selection. Five academic anesthesia departments recently joined to survey their faculty to determine the top ten valued attributes of the "Ideal Beginning Anesthesia Resident."

The process attempted to achieve consensus by using a series of questionnaires. In this study, the first questionnaire simply asked faculty to suggest valued charac-

TABLE 1. Overall Rankings/Scores of Desired Attributes

Rank	Attribute	Average Score (SEM)
1	Good overall judgment	8.3 (0.44)
2	Handles stress appropriately	5.9 (0.23)
3	Dependable, conscientious	5.7 (0.46)
4	Respects and cares about people	5.6 (0.47)
5	Intellectually honest	4.0 (0.31)
6	Educationally self-motivated	3.9 (0.16)
7	Ethical	3.8 (0.34)
8	Flexible, adaptable	3.6 (0.37)
9	Good interpersonal skills	3.3 (0.38)
10	Quantified intelligence	3.1 (0.19)

teristics of beginning anesthesia residents. In a later questionnaire, participants were asked to rank order the pooled suggestions. After several rounds of ranking, the final top-ten attributes (determined by average rank score) from each department were combined and an overall average was calculated. Equal weight was assigned to each department.

Table 1 depicts the combined results. A Kappa statistic showed that a high degree of overall agreement existed between departments ($P < 0.001$). Interestingly, analysis of individual department's rankings (not shown) disclosed that all ranked "good judgement" (defined as two problem-solving skills—logic and common sense) as most important. The next three attributes in the combined list were in the top two to four in all departments, although individual rank order varied. After these, the last six varied in rank between departments.

Our intent was not to designate some attributes as unimportant because *all* were valued. However, we were surprised to find that the top ten characteristics were primarily noncognitive, personal attributes. Quantitative assessment of "intelligence" (grades, National Board Scores) was ranked below the others. It appears that these faculty are indicating that high academic rank, although the most readily quantified, is a necessary but not sufficient condition to begin training. However, much remains to be answered concerning the methods to select applicants with these basic underlying personality traits. Indeed, do these characteristics correlate with *final* resident or professional performance?

Realizing that much time and money are spent toward resident selection, this small study is offered to stimulate readers. What characteristics do we select now? Are they the same as those we really want to select? Will this ultimately affect what the specialty becomes?

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Use of Nondepolarizing Anesthetic Agents in Penetrating Ocular Injuries

To the Editor:—Dr. Bourke's letter[1] on the use of depolarizing agents in patients with open eye injury makes a number of assumptions with which we strongly disagree. While it is true that in the past "only a small percentage" of patients with penetrating eye injury recovered useful sight, this is no longer the case if aggressive treatment, including advanced vitreoretinal surgical techniques, is applied. The Alabama Eye Injury Registry, for instance, reports that of 278 patients with penetrating eye injuries treated in this manner, 54% regained a visual acuity of 20/100 or better by 6 months postoperatively. In addition, it is not always possible to assess accurately the prognosis of a penetrating eye injury prior to surgery. Even patients felt to have the poorest prognosis preoperatively may regain useful vision. For these reasons, we feel the primary goal of surgery in open eye injury should be to afford the patient the best chance for preservation of eyesight.

The depolarizing blocking agent effect of raising intraocular pressure has been well described in the litera-