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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.

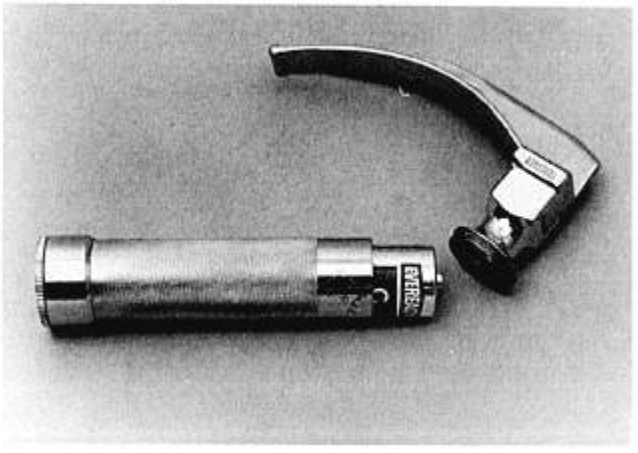

FIG. 1. Laryngoscope showing site of handle disengagement.

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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-