

## Letter to the editor

### Fracture of laryngoscope blade

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#### To the editor

We present a laryngoscope blade fracture which occurred during an endotracheal intubation.

A 55-year-old woman with opacity of the vitreous was scheduled for vitrectomy. Anesthesia was induced with i.v. 200 mg of thiamylal, and ventilation was assisted using nitrous oxide (66%) and isoflurane (2%) in oxygen. After i.v. 6 mg of vecuronium was administered, an attempt was made to intubate the trachea using a laryngoscope with a #3 blade. When the blade was inserted into the vallecula and the laryngoscope was pulled forward and upward for orotracheal intubation, the blade abruptly fractured where the hook-on base was attached to the web (Fig. 1). Fortunately, the teeth

and soft tissues of the oral and perioral area were not damaged by the blade fragment. The trachea was immediately intubated using another laryngoscope, and the surgery was performed uneventfully.

Since laryngoscope malfunction is a frequent problem [1], the user should keep at least two laryngoscopes on hand, each fitted with the type of blade the user anticipates will be best for the patient, and the light of each laryngoscope should be checked for adequate intensity. We had preoperatively confirmed that the size of the blade was suitable for the patient and that the light had adequate intensity; we had not noticed any looseness between the base and the web of the blade. Thus, this fracture appears to have been induced by the force of orotracheal intubation in the present patient.



**Fig. 1.** Laryngoscope blade fracture between hook-on base and web

The blade of a laryngoscope is composed of several parts: base, tongue, flange, web, tip, and socket [2]. The hook-on base and web are welded together; however, considerable force is exerted on the face when the laryngoscope is pulled forward and upward to the glottis for each orotracheal intubation. This blade had been in service for over 15 years; the long use might have induced metal fatigue.

Although there are some reports describing aspirated laryngoscope bulbs [3,4], to our knowledge, no other instrument hazards associated with the laryngoscope have been reported. Fracture between the base and the web of the blade appears to be a rare case of failure. Since it was probably due to metal fatigue of the blade, we should keep in mind that even metal components

applied to soft tissues are subject to mechanical wear and fatigue.

## References

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