Plastic Laryngoscope Blades Don’t Make the Grade

*In a head-to-head comparison with stainless-steel blades, plastic came up short.*

Problems with sterilization and equipment loss have made single-use devices popular, including plastic laryngoscope blades. In a prospective randomized study from France, anesthesiologists used either a standard stainless-steel blade or a single-use plastic blade to perform laryngoscopy during rapid-sequence intubation in 284 patients undergoing emergency surgery. Patients were block-randomized weekly to the type of blade. All patients received thiopental (5 mg/kg) or etomidate (0.4 mg/kg) plus succinylcholine (1 mg/kg) prior to intubation.

First-attempt failure was significantly more common with the plastic blade than with the stainless-steel blade (17% vs. 3%). Intubation with the stainless-steel blade failed on the first attempt in four patients: Two were successfully intubated on the second attempt; the remaining two patients had difficult airway attributes and required alternative intubation techniques. Rescue intubation with a plastic laryngoscope blade was not attempted. All 25 patients who had unsuccessful intubation attempts with the plastic blade were successfully intubated using a stainless-steel blade. In these patients, laryngoscopic view was, on average, one grade better with the stainless-steel blade than with the plastic blade. Complications, including oxygen desaturation and upper airway trauma, were significantly less common with the stainless-steel blade than with the plastic blade (8% vs. 22%).

**Comment:** The plastic blades performed worse in every category assessed. The authors speculate that the plastic blades are too pliable, resulting in a worse laryngoscopic view and higher failure rate. In prior studies, plastic blades were found to be quite acceptable, but those studies did not assess use during rapid-sequence intubation, the mode of intubation used in the emergency department. This study’s findings strongly argue for disposing (permanently) of disposable blades in the ED and sticking with the standard stainless-steel models.

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