We report a case in which the distal 3 cm of an LMA-Fastrach laryngeal mask airway (LMA) endotracheal tube (ETT) was radiographically invisible. After the LMA intubation, left lung atelectasis developed. The radiopaque wire coil built into the ETT was mistakenly believed to mark the end of the ETT, so the radiograph made it appear that the end of the ETT was 2 cm above the main carina. In fact, this type of ETT extends 3 cm beyond the end of the wire coil, and the final 3 cm of the ETT can be difficult or impossible to see on a radiograph. Bronchoscopy revealed that the end of the ETT was in the bronchus intermedius. In this case, even in retrospect, the true end of the ETT could not be seen on the radiograph. Clinicians should be aware that the final 3 cm of the LMA-Fastrach ETT can be radiographically invisible. We believe the manufacturer should redesign this ETT to include better radiopaque markers all the way to the end of the ETT. Key words: Fastrach, laryngeal mask airway, LMA, tracheal intubation, radiograph. [Respir Care 2003;48(5):517–518. © 2003 Daedalus Enterprises]
by blindly passing an ETT through the LMA. On direct examination of the LMA-Fastrach ETT (Fig. 3), the problem became apparent. The wire coil, which gives the ETT flexibility while preventing collapse, ends 3 cm from the distal end of the ETT. The 3 cm tip is made of silicone rubber, and though it has radiopaque markers on both sides, all the way to the end of the tube, these are easily missed on chest radiograph. In other ETTs of the same basic design (eg, Rüsch) the wire extends much closer to the end of the ETT. This problem has been previously reported in the case of a patient intubated with a #7 Mallinckrodt ETT, so this may be a generic problem with several armored tubes.

Undoubtedly our patient’s small size increased the possibility of bronchus intermedius intubation. When the ETT was in good position, 2 cm above the main carina by direct observation, the radiograph showed the wire coil ending at about the clavicular level. Anesthesiologists, emergency department personnel, critical care physicians, and respiratory therapists should be aware of this potential complication; we believe the manufacturer should redesign this ETT to include a better radiopaque marker all the way to the end of the ETT.

REFERENCES