Chest Roentgenogram Demonstrates Cephalad Movement of the Carina during Laparoscopic Cholecystectomy

To the Editor—A recent report described, without any radiologic examination, cephalad movement of the carina during laparoscopic cholecystectomy. We present a case in which carinal movement is confirmed by chest roentgenogram.

A 42-yr-old woman with cholecystolithiasis was scheduled for laparoscopic cholecystectomy. After induction of anesthesia, the trachea was intubated, and the position of the orotracheal tube (ID 8.0 mm) resulted in the depth marking on the side of the tube lying at the 22-cm mark at the front teeth. Anesthesia was maintained with 40% O₂/N₂O and sevoflurane (0.5–2.0%). Controlled ventilation, using tidal volume of 550 ml, respiratory rate of 10 breaths/min, and inspiratory-expiratory ratio of 1:2, was not changed before and after abdominal insufflation with carbon dioxide. Carbon dioxide insufflation pressure was maintained around 12 mmHg. Chest roentgenograms were obtained just before and after carbon dioxide insufflation into the peritoneal cavity. The distance between the carina and the tip of the tube as measured during bronchoscopic examination was 15 mm before insufflation (fig. 1A) and 8 mm after carbon dioxide insufflation (fig. 1B). Head position was constant throughout the procedure, and all examinations were performed with the lungs at end-expiration.

This case illustrates that the position of the endotracheal tube may

Fig. 1. Chest roentgenograms were obtained just before (A) and after (B) carbon dioxide insufflation into peritoneal cavity. Black arrow = the carina; white arrow = the tip of the endotracheal tube.
change following peritoneal insufflation during laparoscopy and suggests the need for reassessment of tracheal tube position during abdominal laparoscopic surgery.

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Use of the Laryngeal Mask Airway in Very Small Neonates

To the Editor—Paterson et al. have drawn attention to the potential of the #1 laryngeal mask airway (LMA) for neonatal resuscitation. The authors correctly point out that the #1 is recommended for infants weighing less than 6.5 kg and hint that there is some uncertainty about the lower weight limit for use, an important consideration because low-weight infants commonly require resuscitation. The smallest neonate in their series weighed 2.235 kg, and the authors state that they were unaware of any reports of its use in smaller infants. Although experience of LMA insertion in neonates weighing less than 2.5 kg is limited, I am aware of some recent data that may be of interest.

First, Albersen et al. have reported the successful use of the #1 LMA in six awake premature infants with a weight range of 1.287–2.290 kg to provide brief access to the trachea for administration of surfactant. This group also reported a failed insertion in a 980-g infant. Second, as part of an ongoing trial comparing the LMA with the facemask for neonatal resuscitation, we have used the LMA in seven infants weighing less than 2.5 kg, including three weighing less than 1.5 kg (1.44, 1.2, and 1.08 kg). In all infants, the LMA was easily inserted within 20 s by an individual experienced in the use of the LMA, and normal heart rate and respiration were restored rapidly.

This suggests that #1 LMA can be inserted in infants weighing less than 2.5 kg and that the lower weight limit is approximately 1 kg. Further studies are required to determine success rates in this low-weight group compared with other techniques. In principle, there is no reason why a smaller LMA (#0.5) could not be manufactured if there was a clinical need.

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