The ProsealTM laryngeal mask airway and the transesophageal Doppler probe: the TED-PLMA Technique

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Received: 25 August 2011 / Accepted: 14 September 2011 / Published online: 12 October 2011
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To the Editor,

We read with great interest the article by Hwang *et al.*¹ about the use of the McIvor blade to improve insertion of the Proseal laryngeal mask airway (PLMA) in children. We suggest that complementary information on other devices used together with the PLMA may help readers in clinical practice. In our institution, we have extensive experience in the insertion of supraglottic airway devices in pediatric patients. It is well known that the PLMA has a higher oropharyngeal leak pressure compared with the ClassicTM laryngeal mask airway, and this relatively high PLMA leak pressure can be useful clinically. We completed a study using a PLMA and an esophageal Doppler probe concurrently in 102 pediatric patients aged four months to eight years. The children underwent genitourinary and abdominal surgery under general anesthesia with or without caudal or epidural block. The preliminary results of this study have since been published.² It is important to point out that the probe is placed immediately after PLMA insertion, and it is advanced under the dorsal cuff, not through the drainage gastric port.

The measured oropharyngeal leak pressures were 23 (7) cm H₂O with the PLMA cuff inflated to 60 cm H₂O. No gas leak was registered with adequate volume- or pressure-controlled ventilation (end-tidal CO₂ was 4.6–5.8 kPa in all children). Uda *et al.*³ reported a negative experience when they advanced a probe with the PLMA, but probe insertion was done through the drainage port, hence our technique is different and unique.

The concurrent use of both a PLMA and an esophageal Doppler probe has become routine in our pediatric clinical

practice, allowing us to ventilate and measure hemodynamic parameters without having to intubate the trachea. This technique is possible owing to the higher leak pressure of the PLMA. We decided to name our technique “TED-PLMA” (TransEsophageal Doppler Proseal Laryngeal Mask Airway).

Financial support received None.

Conflict of interest None declared.

References

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Reply,

We thank Dr. Galante for his interest in, and comments on, our article.¹ He suggests using a technique called “TED-PLMA” for transesophageal Doppler probe insertion when the ProSealTM laryngeal mask airway (PLMA) is used in pediatric anesthesia. With the TED-PLMA technique, the probe is placed under the dorsal cuff after PLMA insertion.

In an earlier report, however, Hemmerling² successfully inserted a similar probe through the PLMA drainage port in adults. Concerning the issue of using the transesophageal Doppler probe in children, we believe that the TED-PLMA

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technique has at least one definite advantage over the drainage port technique: TED-PLMA can be performed in most children while the small drainage port of pediatric PLMAs may not allow the passage of the probe. Nonetheless, it is important to ensure that mucosal injury does not develop during probe insertion between the posterior pharynx and the high pressure dorsal cuff. Also, the insertion of a Doppler probe is based on the premise that the PLMA is placed correctly without cuff folding or air leak. Therefore, the McIvor blade-guided insertion technique³ can be helpful for TED-PLMA in pediatric patients.

Competing interests None.

References

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