

Generally, difficult pediatric airway (DPA) is easy to foresee by following predictors of difficult intubation such as mandibular hypoplasia, limited mouth opening, facial asymmetry, presence of abnormalities in the ear, history of stridor or obstructive sleep apnoea.^[2,3] In this scenario, the design of a preliminary plan of approach is the key to ensure proper oxygenation and maintain a continuing clear airway during the entire procedure. It should include the type of anaesthetic induction and its maintenance, the way of keeping ventilation and the devices used.^[4] Unlike adults, there is no clear consensus about it.^[2,4]

The flexible fiberoptic intubation remains the gold standard for handling DPA. It is particularly indicated in pediatric patients with deformities in head and neck or limitation of mouth opening or cervical mobility. The nasal route presents an increased risk of bleeding due to the small size of the nostrils of the child and the presence of hypertrophied adenoids and a vascularized and friable mucosa. Moreover, pediatric scopes are relatively more difficult to navigate than larger adult scopes, particularly if the glottis is very anterior. The laryngeal mask airway (LMA) is an excellent aid in fiberoptic intubation as it provides a direct conduit between the mouth and larynx and a continuous and optimal ventilation. It prevents obstruction of the upper airway that frequently appears in the sedated or anesthetized children. Thus, no device is perfect in all circumstances. A particular feature of intubation may be advantageous in certain situations but in other ones involves limitations.^[5] Therefore it is essential to have different alternatives. Although DPA options have been limited when compared to those for adults, in the last decade the emergence of optic and videolaryngoscopy have provided new options for paediatric patients. These devices can be classified into three types: Videolaryngoscopies with standard Macintosh blades, DCI Storz (Karl Storz, Tuttlingen, Germany); optical and videolaryngoscopies with angulated blades, the Truview PCD (Truphatek, Netanya, Israel) and GlideScope (Verathon, Bothell, WA, USA); and optical laryngoscopies with a guiding channel as the Airtraq optical laryngoscope (Prodol Meditec, Vizcaya, Spain). The management of these devices and their specific advantages and limitations are contained in a recently published review.^[6] Indirect laryngoscopy allows an excellent view of the glottis but often this advantage is accompanied by a difficulty or inability to lead and insert the endotracheal tube (ETT) between the vocal cords.^[6]

New airway devices in paediatric anaesthesia

Sir,

We read with interest the article of Ramesh *et al.*^[1] concerning the news in Pediatric Airway Management. Our congratulations for the same. We would like to add some comments.

To overcome this difficulty, Truview and GlideScope need the use of a pre-curved stylet ETT to match the blade's curvature. The Airtraq despite having, unlike other devices, a guiding channel for directing ETT, sometimes also has this limitation. The successful intubation requires optimal positioning of the glottis in the center of the viewfinder. Otherwise there is a subsequent posterior displacement of the tip of the ETT or bumping left laryngeal structures, unable to progress through the glottis. It should be stressed that this problem is especially common in paediatric patients, with increased incidence in the presence of micrognathia, short neck or limitation of head and neck mobility.^[7] To overcome this problem and obtain the maximum performance of the device, it is essential to know specific measures of use.^[7]

The latest algorithms suggested DPA introduce the possibility of using optical and videolaryngoscopies being matched to the center depending on the device and experience available.^[2] Indeed, an algorithm should be made for DPA depending on the resources available in each institution.

Moreover, within the new supraglottic devices with gastric access, the LMA Supreme should be included. It can be a useful alternative to the LMA ProSeal.^[8]

The above devices are pediatric versions of those designed for adult airway. Presently there are no adequate pediatric clinical trials that yield evidence about the superiority of one device over another, making it impossible to indicate the preferential use of a particular device. Thus, it is recommended that each institution select one or two of these alternatives. In our institution we use the optical laryngoscopies Airtraq and Truview in predicted difficult airway, and usually we choose inhalational induction maintaining spontaneous ventilation.

To optimize the use of these devices, it is necessary to recall specific maneuvers as exposed and maintain regular training and regular use to ensure the success of its use in a scenario of difficult airway.

Manuel Á. Gómez-Ríos, David Gómez-Ríos

Department of Anaesthesiology and Perioperative Medicine,
Complejo Hospitalario Universitario de A Coruña, Galicia, Spain

Address for correspondence:

Dr. Manuel A. Gómez-Ríos,
Xubias de arriba, 84, 15006 Spain.
E-mail: magoris@hotmail.com

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