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Editorial

Difficult airway is defined as the clinical situation in which a trained anesthesiologist experiences difficulty with mask ventilation, difficulty with tracheal intubation, or both [1]. There is very little data on failed intubation in newborns and infants [2]. Surgical cricothyroidotomy is not recommended in pediatric patients due to the small size of the cricothyroid membrane [3]. Although surgical cricothyroidotomy is an option, it is a difficult procedure to perform in young children, infants and newborns. Transtracheal or transcricothyroid needle approach may be the only option for young children, infants and newborns that cannot be intubated and ventilated [2].

Barotrauma due to increased intrathoracic pressure or depression of hemodynamic data may lead to a noisier clinical picture in pediatric patients [4]. Manual jet ventilation is recommended for adults; however, there is very limited information on application of percutaneous transtracheal jet ventilation in infants or newborns [5]. Ventrain is a device, which can be used manually and allows oxygen insufflation with small lumen ventilation. It transforms oxygen flow coming from a high-pressure source into a manageable flow [7]. Manujet III is a portable device, which can be easily adjusted for manual jet ventilation. It enables ventilation of patients through a low mechanical dead-space volume [7]. However, its use in pediatric patients has not been approved, yet. Another practical method is to achieve ventilation by getting an intravenous cannula through the cricothyroid membrane. However, this method may be risky at times.

The use of emergency percutaneous techniques in pediatric patients is a controversial issue. The technical issues including

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identification of cricothyroid membrane and placement of transtracheal ventilation needle catheter are the major challenges of these techniques.

In any event, ventilation of the newborn must be realized with an appropriate technique within the period till the achievement of emergency tracheostomy, provision of successful intubation, or wakening of the newborn. Every anesthesiologist should be wellinformed of and familiar with at least one technique for ensuring transtracheal oxygenation in emergencies. It is also important to have the required equipments in the working area ready to be used in emergencies.

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