



# Difficult airways for advanced mask design

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We read the editorial by Shih-Yi Lee *et al.* on “Prospective view for mask design” with a great interest (1). In the article, the authors have proposed a new mask design for difficult mask ventilation (DMV). We would like to suggest them take the risk factors of difficult intubation (DI) into consideration into the design of novel masks, because both DMV and DI possibly cause difficult airways, though the risk factors between DMV and DI are different in some ways (2-5).

Both mask ventilation and trachea intubation are used to secure the airway of patients, and the DMV and DI risk their lives, especially in critical condition during resuscitation. DMV increases the risk of procedure-related eye and eyelid injury, nerve injury, gastric insufflation, aspiration, vomiting, and over-inflation; on the other hand, DI may cause dental injuries, esophageal trauma, laryngeal damage, and hoarseness, which physicians need to take care of when encountering DI (6).

Airway management maneuvers and techniques, face mask adjuncts, intubating laryngeal mask airway, nasal mask ventilation, and tracheostomy are current ways to resolve the problems caused by DMV (1,7). Advanced techniques such as fiberoptic intubation with/without positive pressure ventilation have been suggested for DI (8,9). A new mask should be designed to resolve the problems caused by DMV and DI that both results in difficult airways.

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