

Author's Reply to the Letter to Editor "Difficult Airway Management: Correct Concepts and Algorithm are Important for Patient Safety"

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For the three cases listed in this article, difficult airway was anticipated preoperatively. We described how we intubated, but it did not mean what we did was the best choice.

For the first case of ankylosing spondylitis, comprehensive airway evaluation was performed the day before surgery including the possibility of mask ventilation. We all considered easy mask ventilation after discussion at morning round. There were no anomalies of his orofacial development, and the patient did not snore at night. In patients with easy mask ventilation, awake intubation is not always the first choice.

The second case was a pediatric patient diagnosed with congenital arthrogryposis multiplex. Congenital arthrogryposis multiplex is characterized by congenital, nonprogressive, and symmetrical joint contractures involving at least two different body areas. Patients with congenital arthrogryposis multiplex may have several surgeries for the correction of contracture and spine deformities. The two major challenges for anesthesiologists are as followings. First, the difficult airway is the first concern due to micrognathia, high arched palate, and cervical spine instability.^[1] Second, myopathy is one etiology of congenital arthrogryposis multiplex,

and the risk of malignant hyperthermia cannot be excluded.^[2] It is suggested avoiding the use of succinylcholine and volatile agents. This patient had a history of difficult airway at another hospital before coming to our hospital. Although we did not get detailed information about her last intubation, good mask ventilation and difficult laryngoscopy (Macintosh) were recorded on patient's note. Moreover, we had no reason to doubt about their technique and judgment. For patients with a history of difficult airway and a diagnosis at high risk of difficult airway, it is necessary to prepare for the worst. We did intubate successfully using McGrath video laryngoscope with 2 blades, and Cormack-Lehane classification was 2, and only posterior extremity of glottis was seen. It is true that this patient is not defined as a difficult airway based on the intubation at my hospital, we cannot underestimate the risk of difficult airway in patients with congenital arthrogryposis multiplex. Awake intubation is not always possible in pediatric patients. Moreover, inhalational induction without interrupting

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spontaneous breathing is not recommended in patients at high risk of malignant hyperthermia.

For the third case, it was a lucky case. We did underestimate the difficulty of intubation. Although we had GlideScope as our first choice with fiber-optic bronchoscopy as a backup, the saturation did dropped to 76%. However, the desaturation lasted <1 min. If saturation continued to drop and intubation was still not successful, we would not continue to try intubation, while maintaining oxygenation was the priority in that situation. Although there was no complication related to airway and desaturation, the best way for this patient is awake fiber-optic bronchoscopy.

Perhaps the worst nightmare for anesthesiologists is the unexpected difficult airway, without fully evaluation and preparation. Prepare for the worst scenario and hope for the best outcome.

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