

Use of a new curved forceps for McGrath MAC™ video laryngoscope to remove a foreign body causing airway obstruction

Sir,

In the field of pre-hospital and emergency care, removal of a foreign body causing airway obstruction is one of the most urgent and demanding clinical scenarios in airway management. However, conventional Magill forceps have a straight shape, which precludes the effective use with video laryngoscopes, which have a different curvature from the Macintosh blade. We recently designed curved forceps (Suzy forceps, YDM Corporation, Tokyo, Japan [Figure 1]) for foreign body removal, which fit the curved blade of the McGrath MAC™ video laryngoscope (Aircraft Medical, Edinburgh, UK). Here, we describe its successful use in an asphyxiated patient.

An 82-year-old male choked while eating chicken and lost consciousness. He was brought to our emergency department by ambulance. He had inspiratory stridor, and SpO₂ breathing from a reservoir mask with 10 L/min oxygen flow was 79%. His Glasgow Coma Scale was E4 V1 M4. Shortly after arrival, his heart rate dropped to 49 bpm. Mask ventilation was not effective, as a consequence of the obstructing food and his edentulous state. Laryngoscopy with the McGrath MAC™ video laryngoscope revealed a foreign body partially lodged in front of the laryngeal inlet. We used the Suzy curved forceps to successfully remove the object, a small block of chicken meat, after which a Cormack and Lehane Grade 1



Figure 1: Magill and Suzy forceps. Conventional Magill forceps (near side) and Suzy forceps (far side). Note that the middle to distal portion of the Suzy forceps is curved to fit anatomically designed curved blade of McGrath MAC™ video laryngoscopes

view was achieved. Tracheal intubation was performed under vision, using the image displayed on the built-in monitor of the McGrath MAC™. Some chicken meat particles were suctioned through the tracheal tube, and ventilation was performed effectively. The SpO₂ rapidly returned to 99%. The patient recovered consciousness after 1 h and became rousable on vocal stimulus. The tracheal tube was removed and he recovered uneventfully within a day.

Video laryngoscopes are now widely used in daily anesthesia practice and have been shown to provide better laryngeal views and more reliable intubation conditions than direct laryngoscopy.^[1,2] They can also readily facilitate tracheal intubation when difficulty is experienced with the conventional Macintosh laryngoscope.^[3] However, until now, they have not been a good tool for foreign body removal as there were no suitable forceps, which fitted the curved blade. The new video laryngoscopes does provide “around the corner” view, conventional straight forceps can not be reached around the corner in difficult laryngoscopy case. As a result, video laryngoscopes could not completely replace the role of the conventional Macintosh laryngoscope.

The Suzy curved forceps can also be used to guide nasogastric tubes into the oesophagus and to direct nasotracheal tubes between the vocal cords in combination with the McGrath MAC™ laryngoscope. We believe these curved forceps will become a necessary tool to facilitate the effective use of video laryngoscopes in the full range of airway management scenarios. However, more studies and reports are required.

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