

## *Letters to the editor*

### **Tube obstruction of CobraPLA in a patient with fixed flexed neck**

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*To the editor:* We read with interest the report by Kuroiwa and Hoka [1] regarding the kink of the CobraPLA (Engineered Medical Systems, Indianapolis, IN, USA) breathing tube during extreme neck flexion due to rheumatoid arthritis. This case deserves further comment, for four reasons.

First, it is quite unusual that "excessive secretion and hemorrhage" during an elective fiberoptic intubation for a difficult airway leads to respiratory insufficiency so acute and severe that airway rescue is necessary. The number of attempts for elective intubation should be limited in order not to transform an elective airway into an emergent one. If possible, the procedure should be rescheduled and a new plan implemented when unexpected difficulties in securing the airway are encountered.

Second, we are surprised that when inspiratory resistance was encountered following placement of the CobraPLA simpler and quicker methods (passing a suction catheter or fiberoptic assessment) were not used for diagnosis.

Third, we are encouraged by the fact that the CobraPLA proved to be successful in managing the airway, especially in light of the inability to secure the airway with a Pro-Seal laryngeal mask airway (LMA-LMA, North America, San Diego, CA, USA), and it shows that a back up plan for management of the difficult airway must contain more than a single airway rescue maneuver.

Fourth, clinicians should realize that not all supraglottic airways are successful 100% of the time, and it is advisable to have experience with at least one other device. Kuroiwa and Hoka [1] are to be congratulated for managing this life-threatening situation successfully.

We [2] and others [3] have had similar success with the CobraPLA in managing difficult airways. Khan et al. [3] de-

scribed their success with the CobraPLA after failure to secure an airway using a standard LMA in two patients with face and neck contractures due to burns. In one of their patients an attempt was made to pass an endotracheal tube (ETT) blindly through the CobraPLA, but resistance to passage was felt at a depth of 4 to 5 cm. It is possible that the breathing tube was at least partially kinked in that case, even though ventilation was easily accomplished.

Kuroiwa and Hoka [1] state that a breathing tube made of polyvinyl chloride can kink if bent far enough, with the logical solution to this problem being a spiral breathing tube, and we agree. This phenomenon has certainly been observed with ETTs [4] and can be a concern even with the silicone tube of a nondisposable LMA [5]. Fortunately, as one of us (D.D.A.) is the inventor of the CobraPLA, we can report that a spiral version of the disposable CobraPLA will be released by year end. In addition, the distal part of the breathing tube on the standard CobraPLA will shortly change to be C-shaped in order to allow greater degrees of bending without kinking. Regardless, we advise that with extremes of head and neck flexion, no matter what product is used, special attention should be taken to monitor airway pressures and tactile resistance to airflow by hand-ventilating the patient (at least initially) to ensure a totally patent breathing tube.

### **References**

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Conflict of interest: Dr. Alfery is the inventor of the CobraPLA and receives royalties on sales.

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