Letter: New forceps for videolaryngoscopic intubation

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A New Forceps for Video-Laryngoscopic Intubation.

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In an Editorial, Fitzgerald [1] clearly describes the potential and the challenges of video-laryngoscopic intubation.

It is also our experience that even with video-laryngoscopic intubation new technical problems arise and that some form of assistance may be needed[1].

Such a video-laryngoscopy (C-Mac, GlideScope) adjunct is a bougie in the tube but if this does not work one may have a problem placing the tube between the cords. In this case some form of instrument is required to manipulate the tube or bougie into the trachea.

The Magill forceps was not designed for video-laryngoscopy, and a modified Magill instrument [2] where the blades deviate unnecessarily to one side may actually be harmful during video-laryngoscopy. We have developed a forceps specifically designed for video-laryngoscopy using an optic system with a view on a screen. This forceps can still be used with traditional direct laryngoscopy. Here is a short description.

The forceps was tested on a manikin (Laerdal® Airway Management Trainer, EC 25000033, Laerdal Global Health) at our department. The operators were anaesthetic consultants and nurses, using both video- and traditional direct laryngoscopy.

A sketch of the new forceps positioned in the mouth is seen in Figure 1 a [3]. When the new device is introduced in the midline, parallel to the video-laryngoscope blade, its tip is readily seen on the video screen. When using it with direct laryngoscopy one should be aware that if the tip of the epiglottis is not visible, rather than using further manipulation it is advisable to convert to video-laryngoscopy at once.

The instrument is twice curved in the sagittal plane only (Figure 1b). The instrument, unlike the Magill forceps, has a locking mechanism (Figure 1b) that, together with the smooth grip of the forceps, ensures that the operator will not become tired in his/her fingers during prolonged manipulation. The length of the instrument for adults is 23 cm (9 inch). The grip of
the forceps, as mentioned above, is smooth and the jaw has a large surface area so as not to damage the cuff of the tube or bronchoscope surface (Figure 1b).

The forceps can be used to grip and manipulate bougies, tubes, transoesophageal echocardiography probes, gastric tubes or bronchoscopes. This can be done in two ways with the tip of the forceps facing upwards or downwards. First-time users seemed to find the technique easy to learn when practising on the intubation manikin during both direct laryngoscopy and video-laryngoscopy. Practising on an intubation manikin probably shortens the learning curve.

As yet the forceps has not been used on patients. The value of this instrument will be shown by its future clinical use.

The Szabo Forceps has been patented at the Swedish Patent Office[3] (SE 1200730-8; published under SE1200730 A1).

Conflict of interest

There was no conflict of interest.

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References

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Figure 1a.
Sketch of the Szabo Forceps in the manikin.

Figure 1b.
Szabo Forceps design.