Successful use of the airway management device

Editor—We refer to the correspondence by Stacey and colleagues regarding the modified airway management device (AMD). We would like to share our experience in using the recently introduced version of the AMD, which has design changes. Our results are very different from those reported by Stacey and colleagues.

In our recently concluded study, insertion of the AMD was easy and atraumatic. Successful insertion with adequate ventilation was possible in all 50 cases. The AMD was used throughout surgery in all patients. No patient required an alternative airway device. The airway was maintained without any manipulation during anaesthesia in 47 cases. In the other three patients, the airway became partially obstructed soon after the patients were put into the lithotomy position. The proximal cuff of the AMD was deflated and readjusted, before inflating the cuff again. This simple manipulation solved the problem and allowed us to continue to use the AMD throughout surgery in all patients.

As fibreoptic examination was not performed by Stacey and colleagues, their suggested cause of the airway obstruction was purely speculative. We feel that the main difference in our experience compared with that of Stacey and colleagues was probably the amount of air used to inflate the proximal cuff. The median volume of air used by Stacey and colleagues was only 28 ml compared with 50 ml in our study. While the volume we used was consistently within a range of 40–60 ml, in Stacey and colleagues’ study it was much more variable within a range of 4–80 ml. We believe that an inadequate volume in the proximal cuff may prevent the tongue being lifted up and cause airway obstruction. This is probably more pronounced in larger male patients, thus resulting in a much higher incidence of airway obstruction in their male population.

We believe that the modified AMD is a reliable, alternative airway device to the standard laryngeal mask airway (LMA).1

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Editor—We are pleased to note the successful use of the AMD by Chiu and Wang. The suggestion that the difference in the results of our studies was probably attributable to the amount of air inflated into the proximal cuff has to be accepted with caution for the following reasons:

(i) In our study, air was injected into the upper cuff to maintain a gas tight seal, as recommended by the manufacturers, rather than injecting a predetermined volume.

(ii) The patients in our study were breathing spontaneously, and thus, if the patients in the above study were on controlled ventilation, it may not be possible to compare the two studies.

(iii) The physical characteristics of the two study populations (height, weight) may not be comparable.

(iv) Earlier studies with the original AMD reported congestion of the tongue that could have been attributable to the high volumes of air used.

(v) We would like to know the cuff pressures with such high volumes as they may have an effect on mucosal perfusion.

We have also received a personal communication from a user of the AMD that the airway obstruction can be attributed to downward folding of the epiglottis over the laryngeal inlet, confirmed by fibreoptic examination. A recent study by Cook and Porter comparing the LMA and modified AMD had to be abandoned at an interim stage because of the high failure rate with the AMD. In view of these facts, we do not consider the modified AMD to be a reliable alternative to the LMA.

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3 Cook TM, Porter MV. Randomized comparison of the classic Laryngeal Mask Airway™ with the Airway Management Device™ during anaesthesia. Br J Anaesth 2003; 91: 672–7

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