readings. For instance, as part of the instructions for use, the Foresight specifically instructs users of the CAS cerebral oximeter system to use a light block over the sensor, supposedly in order to prevent disturbance of the readings by the ambient light.

Actual clinical use and observation may yield different information from what has appeared from the observations described. Figure 1 shows left (channel 1) and right (channel 2) perioperative cerebral saturation tracings obtained in the same patient during cardiac surgery using both the Foresight and the Equanox 7600 monitoring system. It is apparent that with the Foresight system, a number of drop-outs occurred in the registration of the signals and that the individual values demonstrate a substantial oscillation. Figure 2 shows the tracings obtained in another cardiac surgical case where the left side was monitored using the Invos 5100 system and the right side using the Equanox 7600 system. An important oscillation of data is observed with the Invos system but not with the Equanox system.

These examples demonstrate that comparison of devices should not rely only on in vitro observations in specific experimental conditions. Instead, performance of the different monitoring systems should be evaluated in the clinical setting where they are intended to be used. Only in this situation, relevant conclusions on which monitor provides the most reliable information can be made.

**Conflict of interest**

None declared.

A. Moerman
S. De Hert*
Ghent, Belgium
*E-mail: stefan.dehert@ugent.be

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**Percutaneous tracheostomy: prospective practice**

Editor—I write in response to the letters of Cattano and colleagues and Dempsey and colleagues. First, I would like to congratulate both groups of authors on collecting useful data on a continuous series of percutaneous dilational tracheostomy (PDT). Dempsey and colleagues present very detailed data on the procedure and its surgical complications in the prior paper. Cattano reports a series of 610 percutaneous tracheostomies performed on an Italian ICU with the airway maintained in ‘most’ with ‘an LMA’ (sic). The aim of Cattano’s letter appears to be to describe their overall results, not particularly to focus on the method of airway maintenance during the procedure. No data are reported on airway complications: the implication being that there are few or perhaps none. Dempsey’s response focuses mainly on the use of the ‘LMA’ for airway management and offers the opinion that it does not necessarily achieve safety, proposing instead that ‘the definitive airway that is in situ’ (presumably this means a cuffed tracheal tube) is used. They support this by referring to their own paper describing a series of 576 attempts at percutaneous tracheostomy. The letter states that ‘we feel this opinion is borne out by the results presented within our paper’. Careful reading of Dempsey’s paper reveals that the mode of airway maintenance during the procedure is only briefly referred to in the Methods section. Complications of airway management are also not mentioned in the Results section, though desaturation (to 88%) is reported in 2.9% and the Discussion section describes cases where complications arose in which
bronchoscopic guidance of PDT was not possible because the tracheal tube was too small to enable ventilation with the bronchoscope in place. Dempsey's study, though of considerable value, is not one that focuses on airway management during PDT and it is probably not correct that it therefore be used to support one particular technique, and more particularly to criticize another.

I offer a middle ground. Both case series are of around 600 cases and as such an event with a zero occurrence (e.g. respiratory problems, loss of airway, death, etc.) in this cohort has a point estimate incidence of 0/600 and a 95% upper confidence limit of around 1 in 200. Numerical methods for maintaining the airway during PDT are used and several have been formally reported. Methods that involve tracheal intubation include no change in the tracheal tube position, partial extubation to prevent spearing the tracheal tube with the PDT needle, or extubation and reintubation with the tracheal tube cuff inflated outside the cords. Supraglottic airways described to maintain the airway include the LMA-classic™, Intubating LMA, ProSeal™ LMA, Laryngeal tube™ Cobra PLA™, and i-gel™. There are therefore numerous techniques, but almost all published studies are case reports or case series and there are few if any direct comparative trials.

I agree that audit data at a national level might provide useful information on this and other aspects of PDT. To date, this has not been suggested as an option for the 5th National Audit Project of the Royal College of Anaesthetists. Although it is not known how frequently each different technique of airway management is used in UK practice, I can report that no cases of major morbidity (death, brain damage, emergency surgical airway or prolongation of ICU stay) as a consequence of a problem with airway maintenance during PDT were reported to NAP4 (the 4th National Audit Project of the Royal College of Anaesthetists).

Perhaps, it is less important which technique is used but that the clinicians using the technique are expert in it and aware of its strengths and limitations. Although it may well be worthwhile to formally study this topic, either by audit or controlled trial, opinion-based comment does not take the science very far forward.

Conflict of interest

I have been paid by Intavent Orthofix and the LMA Company (manufacturers of laryngeal mask airways) for lecturing. My department has received numerous items of airway equipment for research free or at cost. I have never had and have no financial interest in these or any anaesthetic equipment companies. I am co-lead of NAP4.

T. M. Cook*
Bath, UK
*E-mail: timcook007@googlemail.com


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