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EDITORIALS

Videolaryngoscopy as a new standard of care

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For almost 60 yr, direct laryngoscopy was the sole method used by anaesthesiologists to insert a tracheal tube into the trachea. The search for a bigger and better angle of view during difficult intubations led to the development of devices using video assistance. The first generation of videolaryngoscopes was developed based on the technology used in rigid fibreoptic laryngoscopes.[1] The need of long training periods and the high incidence of complications did not make the first generation of videolaryngoscopes popular.[2] In 2001, a new type of videolaryngoscopes arrived in the shape of the glidescope® (Verathon Company, USA). The glidescope® used a high-resolution digital camera placed at the tip of an improved Macintosh laryngoscope blade, attached to a high-definition screen. The device also featured the advantage of an anti-fogging system.[3] The glidescope® is able to help anaesthesiologists to obtain improved Cormack and Lehane views in comparison with standard direct laryngoscopy.[4] Other types of videolaryngoscopes were then developed; all have been shown to improve the view of the vocal cords.[5]

How often is videolaryngoscopy used in daily anaesthetic practice?

How many intubations are done in daily practice using a videolaryngoscope is not known. Current international guidelines advocate their use only when mask ventilation is adequate and an unsuccessful attempt to intubate with direct laryngoscope has occurred.[6] One could assume that the percentage of use of videolaryngoscopes could be as high as the incidence of difficult intubations in the non-emergency situations, which has been described to be 5.8% (95% confidence interval, 4.5–7.5%).[7] In addition, recent studies propose the videolaryngoscope as a first-choice intubation device in the obese patients;[8] as first-time use with expected difficult intubation is not unanimously proposed.[9 10]

The question is the following: why are videolarygnoscopes not used for all tracheal intubations?

There is no doubt that videolaryngoscopes make intubation easier; in addition, some offer the possibility to record the intubation procedure. Such a video could be stored in the patient file as a 'digital airway footprint'. When it comes to general anaesthesia with tracheal intubation, the most challenging aspect for the anaesthesiologist is the insertion of a tracheal tube. No other anaesthetic gesture is this important: failure to succeed can ultimately lead to a life-or-death situation. In the effort to increase patient safety, should we not try everything to lower the incidence of such a situation? What is limiting us?

It is only a cost issue.

If a videolarygnoscope is available in every operating theatre, and cost issues are not a worry, there is no doubt that anaesthesiologists will use it. We have observed in our respective emergency rooms and intensive care units, where physicians' intubation skills are maybe less refined, that all intubations are performed using videolaryngoscopes.[11] Should we in anaesthesia not follow?

And what about the real cost issue? Costs of videolarygnoscopes have decreased significantly over recent years; most

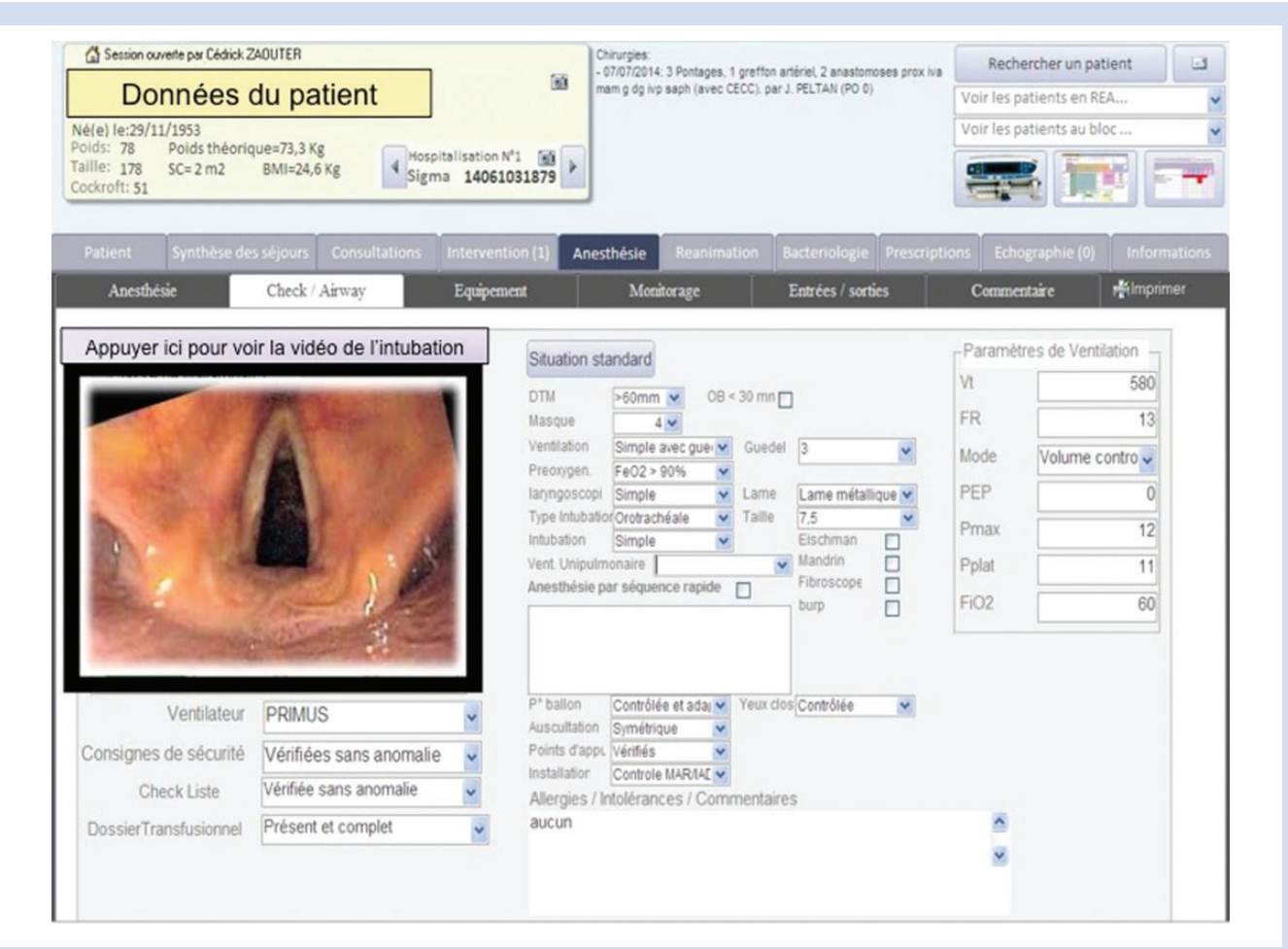

Fig 1 View of the anaesthesia information management system of our institution with a videolaryngoscopy video record saved into the system. Please note specifically the overhead, 'Appuyez ici pour voir la vidéo de l'intubation' which allows the visualization of the intubation.

do not cost more than a syringe infusion pump. Buying them for each operating theatre will not represent an insurmountable investment. Disposable blades do cost in the range of US$~10 and will certainly become cheaper if they are used in every patient: a price of US$ 5 is certainly achievable; which brings them into the range of the cost of a tracheal tube.

And once we intubate everyone using a videolaryngoscope, should this digital airway print not be stored and thus become available for viewing before subsequent tracheal intubations?

Is it not time to integrate airway videos in the electronic charting?

Unexpected difficult airway is still associated with significant morbidity and even mortality.[12] In addition, reporting a difficult airway is always a subjective issue, making it difficult to follow-up and prepare for a subsequent intubation, especially when a patient is then treated in another hospital and by another anaesthesiologist.[13] In some institutions, after operation, information is communicated to patients concerning their difficult airway management, either verbally or in written form. Half of these patients informed verbally forget their notification.[14] Barron and colleagues[15] published recommendations concerning the management of patients with unpredicted difficult airway. These recommendations suggest that every patient with difficult airway should receive a document from the anaesthesia team addressed to subsequent colleagues. The document should describe thoroughly the 'difficulties' encountered. In contrast, a survey regarding Barron and colleagues' paper indicates that the implementation of this document is insufficient.[16] More recently, other authors from New Zealand suggest the creation of a national registry of difficult airway/intubation that could be accessed easily.[17]

Anaesthesia information management system to document airway assessment

We propose to integrate videos obtained during videolaryngoscopy in the patients' file (Fig. 1). Health information technology and anaesthesia information management systems can easily be stored and make available patients' imaging.[18]

In conclusion, anaesthesiologists have always been pioneers in terms of patients' safety. Why not be pioneers again?

(i) Videolarygnoscopes should replace direct laryngoscopes as smart phones have replaced standard cell

phones; they should be used for all intubations and the intubation should be recorded and added to the AIMS.

(ii) Visualization of videos of previous patient's tracheal intubation should then become as standard as regarding a patient's laboratory results.

It is time to make anaesthesia even safer.

Declaration of interest

None declared.

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Preventing spinal hypotension during Caesarean delivery: what is the latest?

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Spinal hypotension is common in women who receive spinal anaesthesia for Caesarean delivery, with an incidence of up to 71%.[1] Spinal hypotension can occur precipitously and, if severe, can result in important perinatal adverse outcomes, such as maternal nausea and vomiting, fetal acidosis and may be an important contributory factor for maternal death related to regional anaesthesia.[2 3] Mothers with pre-delivery hypovolaemia may be at risk of cardiovascular collapse because the sympathetic blockade may severely decrease venous return. As a consequence, prevention of spinal hypotension has been a key research area within the field of obstetric anaesthesia.

To prevent spinal hypotension, a number of approaches have been investigated, notably fluid loading, vasopressors,