the end of bupivacaine infusion, (range 17 to 58 $ng \cdot mL^{-1}$), while no 3'-OH-Bup was detected in Group S. The mean ± SD liver concentration of 3'-OH-Bup in Group M was 0.65 ± 0.14 $\mu g \cdot g^{-1}$ (wet weight). In four rats of Group S, this value was 0.31 ± 0.30 $\mu g \cdot g^{-1}$ (wet weight). In two rats of Group S, 3'-OH-Bup was not detected.

From these results, it is suggested that $MgSO_4$ might activate bupivacaine hydroxylation by cytochrome P450 (CYP) in rat liver. It is known that some oxidations catalyzed by some CYPs are sensitive to magnesium. For instance, magnesium was shown to stimulate amitriptyline, carbamazepine or diazepam metabolism catalyzed by recombinant CYP3A4 and human liver microsomes.[3,4] However, it had a strong inhibition effect on midazolam metabolism,[5] indicating that the effect of magnesium on metabolism of CYP substrates is different. Taken together with the fact that CYP3A is the most abundant human CYP and that the major metabolites of bupivacaine are catalyzed by CYP3A, the administration of $MgSO_4$ to obstetric patients could alter bupivacaine pharmacokinetics, resulting in a more rapid elimination of bupivacaine.

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Videolaryngoscopy in the management of the difficult airway

To the Editor:
We read with great interest the article by Dr. Cooper[1] wherein video laryngoscopy with the Glidescope® was utilized in a patient categorized as difficult to intubate.

It is remarkable that anesthesiologists have been the last bastion, of those who regularly perform endoscopy, to resist the advantages of the enlarged image offered on a video monitor.[2] However, the increasing prevalence of video in demonstrations at various meetings demonstrates its gradual acceptance.

We have been working with video intubation using the colour video Macintosh laryngoscope (Karl Storz Endoscopy Inc., Culver City, CA, USA) since 1998. Our experience, in collaboration with several other North American institutions, has convinced us that the benefits of an enlarged image, and the opportunity to have coordinated assistance when required are substantial.[3–5]

In addition we, like Dr. Cooper, suggest that the use of a video display should be standard when teaching intubation techniques.

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To the Editor:

We read with interest Dr. Richard Cooper's excellent recent report on using the GlideScope® in the management of a patient with a difficult airway.[1] In addition to Dr. Cooper's series of 80 cases using the Glidescope®, we have used the Glidescope® in over 170 of our own cases in the five months we had the unit, including ten cases of awake intubation and several "airway rescues" where we were called in for assistance. One of the rescue cases was a failed direct laryngoscopy, failed fibreoptic intubation attempted following the induction of general anesthesia.

Referring to patients known to be difficult to intubate by conventional means, Dr. Cooper writes that use of the Glidescope® "challenges the prevailing wisdom that such patients must be managed by awake fibreoptic intubation". We wholeheartedly agree. Like Dr. Cooper, our experience with the unit has been highly favourable, and we fully expect that the Glidescope® will ultimately have a profound impact on clinical airway management.

One point that was not emphasized in Dr. Cooper's report bears mentioning. We found that the principal limitation in using the Glidescope® was not in getting a good view of the glottis, but rather in manipulating the endotracheal tube (ETT) through the vocal cords. We also found that successful ETT placement was usually best achieved using a stylette formed in the shape of a "hockey stick" (with a 90° bend) to help ensure that the ETT could be directed sufficiently anteriorly to enter the glottis.

Finally, Dr Cooper writes "This case is the first publication describing the use of the GlideScope® videolaryngoscope". Unfortunately, while this was true at the time the article was in review, a prior report of 15 cases slipped into publication.[2]

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2 *Agro F, Barzoi G, Montecchia F.* Tracheal intubation using a Macintosh laryngoscope or a GlideScope in 15 patients with cervical spine immobilization (Letter). Br J Anaesth 2003; 90: 705–6.

Reply:

I agree with Drs. Kaplan and Berci regarding the value of a video display while performing laryngoscopy. As they stated, this is particularly useful when teaching or supervising the procedure. I have also had the opportunity of using the Storz Video Macintosh Laryngoscope. With this device, the technique and laryngeal view are very similar to that seen by direct laryngoscopy, making it ideal for teaching purposes.

I am pleased that the experience of Dr. Doyle and colleagues has been similar to our own. The GlideScope® is proving effective in routine and difficult airways. At the time this intubation occurred (May 2002), my personal experience was limited to approximately 80 cases. We have now collected data on over 700 consecutive uses of this videolaryngoscope (manuscript in preparation) in a wide range of clinical settings. It is interesting to observe that many users have rapidly acquired the necessary confidence to choose this as a first-line management tool. Compared with conventional (i.e., direct) laryngoscopy, it appears that little force is required to obtain a good laryngeal view on the monitor. This may be less stimulating than direct laryngoscopy in the awake patient.

Dr. Doyle correctly points out that a good laryngeal view does not necessarily result in an easy, or indeed successful intubation. Several of the unsuccessful intubations in our series, occurred despite a Cormack-Lehane grade I or II view. Since this is not line-of-sight laryngoscopy, the use of a stylet is strongly advised to deliver the endotracheal tube (ETT) to the glottis. Unlike Doyle and colleagues, I configure the stylet to the same shape of the GlideScope® blade (approximately a 60° bend). In our series, most failures resulted from difficulty inserting the blade into the patient's mouth or the inability to deliver the ETT to a visualized glottis.

As stated by Dr. Doyle, Agrò and colleagues' interesting article[1] had not been submitted at the time my report[2] was accepted for publication. These authors have demonstrated the utility of the GlideScope® to improve laryngeal exposure and facilitate tracheal intubation in patients with simulated cervical immobilization.

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