Reply from the authors

Editor—We thank Drs Birts and Combeer for their constructive comments on the use of and consent for general anaesthesia for Caesarean delivery in patients with pre-eclampsia in our study.\(^1\) In particular, they are concerned about a transient but severe hypertension along with cerebral haemorrhage and cardiac failure after tracheal intubation,\(^2\) and risk of airway complications. We understand, in most Western countries, neuraxial anaesthesia is the standard for elective Caesarean delivery and has become a preferred technique to provide labour analgesia or anaesthesia for Caesarean delivery even among women with severe pre-eclampsia.\(^3\) However, there are many differences in ethical and cultural values in different countries. We had 2257 cases of Caesarean delivery during the last 5 yr (2006–10). There were 814 (36.1\%) elective sections, of which 718 (88.2\%) had general and 96 (11.8\%) had spinal or epidural anaesthesia. On the other hand, we had 1443 (63.9\%) emergency Caesarean deliveries, 1371 (95.0\%) of which were done under general anaesthesia and only 72 (5.0\%) under spinal or epidural anaesthesia. For East Asians, airway problems (e.g. difficult intubation or ventilation) are not a major problem and thus major issue in determining the anaesthetic technique for Caesarean delivery. Moreover, we feel that the incidence of aspiration pneumonia during general anaesthesia for Caesarean delivery is lower compared with Western countries. In fact, neuraxial anaesthesia is not considered safer than general anaesthesia for elective Caesarean delivery in our country. There is no set standard of care for elective Caesarean delivery, although general anaesthesia using volatile anaesthetic in 50\% N\(_2\)O is still the most popular anaesthetic technique in most institutions. Nevertheless, the potential risks and benefits of general, spinal, or epidural anaesthesia were explained to patients, who accepted the anaesthetist’s inclination towards general anaesthesia and gave their written informed consent to participate in our study. As far as exaggerated pressor response to laryngoscopy and tracheal intubation is concerned, we feel that general anaesthesia with the aid of ultra-short-acting remifentanil described in our article\(^1\) would be acceptable, if not ideal, for gestational hypertensive women. To date, we have not encountered any disastrous consequences due to pressor response and airway problems during Caesarean delivery. While there is a preference for regional anaesthesia for Caesarean delivery in current anaesthetic practice in Western countries, we believe that whether the regional anaesthesia has advantages for both the mother and baby over general anaesthesia has yet to be determined in East Asia.

Conflict of interest

None declared.

K. Y. Yoo*

B. Y. Park

J. U. Lee

Gwangju, Republic of Korea

*E-mail: kyyoo@jnu.ac.kr

Tracheal intubation with the direct and indirect laryngoscopes in patients with cervical spine immobilization

Editor—In a randomized, controlled clinical study in patients with cervical spine immobilization, McElwain and Laffey\(^1\) demonstrated that intubation performance of the Airtraq laryngoscope produced a reduction in the Intubation Difficulty Scale (IDS) score, improvement in the Cormack and Lehane glottic view, and decrease in the need for optimization manoeuvres, compared with both the Macintosh and C-MAC laryngoscopes. In addition to the limitations described in the discussion, there are additional issues affecting the conclusions of this study.

First, a significantly better laryngeal view was obtained with the Airtraq laryngoscope compared with the Macintosh and C-MAC laryngoscopes. However, the authors did not provide the blade sizes of the Macintosh and C-MAC laryngoscopes used in this study. We would like to know whether a single size blade was used for all patients in the Macintosh or C-MAC group. The C-MAC laryngoscope has two Macintosh blades (sizes 3 and 4) available for the adult patients. The shapes, lengths, and angulations of the two blades are somewhat different.\(^2\) Because of the lower angulation of the size 3 blade, it is preferred for daily practice. The size 4 blade is more curved, resulting in a higher angulation with a wider view of the glottis, which may be advantageous if
unexpected difficult intubation arises.\textsuperscript{3} In addition, the effectiveness of Macintosh direct laryngoscope is also dependent on the use of a blade of appropriate length.\textsuperscript{4} Thus, our concern is that in this study, lack of optimizing the blades may have underestimated the performance of the Macintosh and C-MAC laryngoscopes in patients with cervical spine immobilization.

Secondly, the IDS score was used as a primary endpoint to compare the intubation performance of the three laryngoscopes. As the authors have pointed out,\textsuperscript{1} the IDS score was initially devised and validated for tracheal intubation with direct laryngoscopy. The processes of visualization of the larynx and of tracheal intubation are completely different with direct and indirect laryngoscopy.\textsuperscript{5} As yet, there is no evidence to support that IDS score is discriminatory in assessing intubation difficulties when direct and indirect laryngoscopes are compared.\textsuperscript{6} In this study, the higher IDS scores in the Macintosh and C-MAC groups are mainly due to the poorer laryngeal view grades and greater number of optimization manoeuvres. In clinical practice, an optimization manoeuvre, such as external laryngeal manipulation and backward, upward, rightward pressure, is an inherent part of direct laryngoscopy and an instinctive reflex response to a poor laryngeal view by a direct laryngoscope.\textsuperscript{6} For an experienced anaesthetist, it may be difficult to obtain a good laryngeal view during direct laryngoscopy, but it is usually easy to insert the tracheal tube when this laryngeal view is possible.\textsuperscript{7} In contrast, successful intubation with an indirect laryngoscope may be determined not by the grade of laryngeal view, but the alignment of the device and subsequent trajectory of the tracheal tube into the glottis.\textsuperscript{8} Thus, we suggest that when comparing intubation performance of indirect and direct laryngoscopes, more suitable endpoints would be success rates of intubation, intubation time, complexity of manoeuvres (according to specifically designed scores), and complications of intubation.\textsuperscript{9} Other than the degree of difficulty of use of the devices, the results obtained in this study were not different among the three devices. Accordingly, conclusion of this study that intubation performance of the Airtraq laryngoscope is better than those of the C-MAC and Macintosh laryngoscopes in patients with cervical spine immobilization should be reconsidered.

Conflict of interest
None declared.

F. S. Xue\textsuperscript{*}
X. Liao
Q. Wang
Y. J. Yuan

\textit{Beijing, People's Republic of China}

\textsuperscript{*}E-mail: fruitxue@yahoo.com.cn

\begin{itemize}
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\end{itemize}

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\textbf{Reply from the authors}

Editor—We thank Dr Xue and colleagues for their interest in our study.\textsuperscript{1} They raise two interesting points. The first relates to the blade sizes used with the Macintosh and C-MAC laryngoscopes. We used a size 3 or 4 blade with the Macintosh laryngoscope as appropriate based on the size of the patient. Both sizes were immediately available and the user could switch the blade size if they deemed that this would be advantageous. With regard to both the C-MAC and Airtraq laryngoscopes, we used a single size, namely a size 3 C-MAC blade and the Regular (size 3) Airtraq. We acknowledge the authors’ point regarding the potential utility of the size 4 C-MAC blade, but had no experience of using it, and did not have this device available to us. However, any disadvantage of using a single size blade for the C-MAC also applied to the Airtraq device, suggesting that the lack of different blade sizes does not account for the differences in device performance seen in the study.

The second point relates to the issue of the intubation difficulty scale (IDS) score\textsuperscript{2} as the primary endpoint in our study. As we did acknowledge in our study, this score has not been formally validated for use with indirect laryngoscopes.\textsuperscript{1} However, a number of points allow for confidence with regard to the use of the IDS in this study. First, the IDS has been widely used for this purpose by multiple investigators, and the data regarding the IDS have been reasonably consistent with those from other measures of intubation...