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Cricoid pressure

I read with interest the review article Cricoid Pressure by Brimacombe and Berry¹ and I would like to make two points.

1. As regards regurgitation, it is important to realize that Oesophageal manometric measurements have shown that gastric reflux into the oesophagus occurs at a barrier pressure below 13 cm H₂O². The barrier pressure is defined as the difference between the lower oesophageal sphincter pressure and gastric pressure, hence, barrier pressure is the physiological barrier to reflux.³ Therefore, if a patient with a basal barrier pressure of 26 cmH₂O is given a drug that decreases the lower oesophageal pressure by 14 cmH₂O, the lower oesophageal sphincter will be rendered incompetent. However, considerable individual variations in resting sphincter tone have been reported.⁴ It is obviously an advantage to increase the lower oesophageal pressure and, thereby, the barrier pressure by drugs like metoclopramide, domperidone, ranitidine, flunitrazepam.⁵ Even antacids can increase lower oesophageal sphincter tones.
2. As regards gastric insufflation, the authors refer to our article in *Anesthesiology*,⁷ but do not mention a very important finding in that paper. We studied 59 patients, from two weeks to eight years of age, who received routine general anaesthesia. In study #1 (without paralysis), the proximal airway pressure was slowly increased by gradually closing the pop-off valve on the anesthesia machine until gas was heard entering the stomach (pop-off point), or until the peak inspired pressure (PIP) reached 40 cmH₂O. The same patients were then studied when paralyzed. The important finding was that in the paralyzed state, there was a considerably lower pop-off point than in the non-paralyzed state for any given patient. Cricoid pressure would seem even more important in paralyzed patients than previously realized.

I compliment the authors on the interesting review of cricoid pressure, however, I prefer to refer to cricoid pressure by the inventor, namely, Sellick manoeuvre.⁸

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REPLY

We thank Professor Brock-Utne for his interest in our review of cricoid pressure. We agree that the use of drugs to increase barrier pressure may play a role in protecting the patient from regurgitation and they should continue to be given. However, as we pointed out in the review, the impact of these drugs on patient outcome and the extent to which they are responsible for the reduction in maternal death from acid aspiration is unknown. We also agree that the risk of gastric insufflation may be higher in paralysed than nonparalysed patients and mention in the review that this important factor has not been adequately studied. Regarding use of the term "Sellick's manoeuvre," or "cricoid pressure," we actually prefer the latter since it better describes what occurs. In addition, some historical purists might insist on the term "Monro's" or "Hunter's" manoeuvre.

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