The effects of perioperative beta-blockade: results of the metoprolol after vascular surgery (MaVS) study, a randomized controlled trial. Am Heart J 2006; 152: 983–90.


Reply:

We thank Drs. Lange, Roewer and Kehl for expressing interest in our recent paper, using our findings that beta blockers were unequally distributed between groups in our recent meta-analysis1 to highlight their recent investigations which suggest a negative interaction between beta blockers and ischemic preconditioning in vivo.2 Their findings are both interesting and intriguing, and come at a time when the efficacy of perioperative beta blockade has become increasingly controversial. The evidence cited refers to beta blockade in non-cardiac investigations, an important distinction since our report was limited to cardiac surgery. Coronary artery surgery has definitive periods of ischemia and reperfusion, a situation which is infrequent and unpredictable in non-cardiac surgery. Secondly, we emphasize, that unlike beta blockade, there is no clinical evidence of an ischemic preconditioning like the effect of inhaled anesthetics in non-cardiac surgery.

Interestingly, there is clinical evidence that contradicts Dr. Lange et al.’s supposition, information which we were originally unable to report due to space constraints. Seventy-nine percent of the patients in the DeHert et al. studies (cited in our meta-analysis) were concomitantly using beta blockers, equally distributed between iv and inhaled anesthesia. (odds ratio 0.98; 95% confidence interval 59–1.64 P = 0.95). In these predominately beta blocked patients less troponin was released postoperatively in patients who received anesthesia with sevoflurane (weighted mean difference -2.95; 95% confidence intervals -3.3, -2.6 P = < 0.000001). These results suggest that ischemic-like preconditioning occurs in the presence of clinically beta-blocked patients.

This new controversy highlights the immediate need for safety and efficacy studies on combination therapies and drug interactions in both cardiac and non-cardiac surgery. However, on the available evidence it is premature to conclude that anesthetic preconditioning and beta blockers are incompatible.

W. Scott Beattie MD PhD FRCPC
Chun Hua Yu MD
University Health Network, University of Toronto, Toronto, Canada
E-mail: scott.beattie@uhn.on.ca

References

Use of the “Aretube” to facilitate ventilation during percutaneous tracheostomy

To the Editor:

During percutaneous tracheostomy, the endotracheal tube is usually withdrawn to a sub-glottic position, or replaced by a laryngeal mask airway.1 This procedure has disadvantages and risks including:2 air leaks with hypercarbia, hypoxia, bronchial inhalation, and accidental extubation.3,4 A new airway device, the “Aretube” (Figure) has been developed recently to address some of these difficulties. The Aretube provides ventilatory assistance through intubation limited to one part of the larynx. The Aretube has a proximal orifice, and a distal orifice with two cuffs, the first of which has a 20-mL capacity, situated 1 cm from the distal end. The second cuff has a 100-mL capacity and is situated approximately 1 cm proximal to the first. For correct positioning, the first cuff is placed in a supraglottic position immediately above the vocal cords, while the second cuff (once inflated) is sited in the oropharynx, thus fixing the device while applying gentle pressure on the first cuff. When inflated, the first cuff exerts pressure around the glottis, ensuring a good seal.

The Aretube combines two types of tubes, an 8-mm internal diameter (ID) endotracheal tube and a disposable 4-mm ID laryngeal tube. The device is applied with the patient anesthetized and paralyzed. An airway exchange catheter is first advanced through the lumen of the existing tracheal tube, which is then removed. This tube exchange must be done with due consideration for the possibility of difficult reintubation. The patient’s trachea is reintubated over the