St. Christopher's Hospital for Children
Philadelphia, Pa.

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Drug labels on anaesthesia carts

To the Editor:
In the January edition of the Journal, Drs. Boldt and Renwick[1] stated that they had identified a safety hazard associated with 1 millilitre glass vials produced by Sabex Inc. The problem which they have identified occurs not only with Sabex.

We agree that medication error is an important cause of patient morbidity, and that to eliminate medication error there can be no substitute for reading a label. It is, however, the responsibility of hospital pharmacies and departments of anaesthesia to take special precautions to assure that medications with similar labeling are not placed in anaesthetic carts. Institutions and governments now frequently choose to purchase pharmaceuticals from the manufacturer who can supply product at the best price. Anaesthetists and pharmacists must take a proactive role in assuring that ampoules of similar colour and labeling are not placed side by side. In our hospital, we have a cooperative arrangement between the Department of Anaesthesia and the Pharmacy, assuring that changes in product are not introduced to the operating room without prior consultation. We have agreed that we will not place ampoules of similar size and colour on our anaesthetic carts where possible; to that end, we have occasionally requested a change in supplier simply to modify the size and colour of an ampoule. We have also occasionally requested a change in product concentration (e.g., atropine 0.4 $mg \cdot ml^{-1}$ instead of atropine 0.6 $mg \cdot ml^{-1}$) specifically to obtain a different colour of ampoule. Where we previously had ampoules of atropine, adrenaline, and heparin all of the same size and colour, they are now very different from one another.

In discussing the problem of labeling of ampoules with manufacturers, we have found them sympathetic to our objective of reducing medication error, but reluctant to change their labeling to meet the needs of individual institutions. Our experience with Sabex Inc., however, has been positive and we concur with Mrs. Levesque's response.

Gerald V. Goresky
Department of Anaesthesia
Donna Pipa
Pharmacy Department
Alberta Children's Hospital
1820 Richmond Rd SW
Calgary, Alberta T2T 5C7

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Anaesthesia for cardiac transplant patients

To the Editor:
We read with interest the article of Cheng and Ong[1] concerning anaesthesia for non-cardiac surgery in heart-transplanted patients. We would like to address the issue of the reported lack of effect of anticholinesterases on heart rate. The authors observed that "Paralysis was easily reversed with neostigmine with or without atropine. No significant effect on heart rate was recorded," and later claim that " ... heart rate shows no response to ... anticholinesterases (neostigmine, edrophonium, pyridostigmine, physostigmine) ... " While this view seems to be generally accepted[2–4] we have demonstrated in cats that neostigmine can still evoke a marked, dose-dependent bradycardia when autonomic efferent activity to the heart is interrupted. The mechanism by which this occurs appears to involve direct activation by neostigmine of excitatory cholinergic receptors on cardiac ganglion cells, which results in release of acetylcholine from their terminals and subsequent activation of inhibitory cardiac receptors.[5] We have also demonstrated that clinically relevant doses of neostigmine produce an atropine-sensitive bradycardia in both recently and remotely transplanted patients.[6] We wish to draw attention to our observations that neostigmine can produce a clinically significant bradycardia in the heart transplant patient and we suggest that muscarinic antagonists be administered routinely with reversal agents to block cardiac and other muscarinic side effects of the anticholinesterases.

S.B. Backman MD PhD FRCPC
F.E. Ralley MB ChB
G.S. Fox MD FRCPC