LETTERS TO THE EDITOR

SIR:

I wish to draw to your attention a hazard associated with the Rusch metal spiral reinforced cuffed latex tube, with which occasional users of these tubes may not be familiar, and I will describe a simple method of overcoming this hazard.

Inspection of these tubes (see Plate I) reveals that the tube feeding air to the cuff penetrates the wall of the tube *proximal* to the first reinforcing spiral. In order to prevent a kinking of the non-armoured proximal portion of the tube, it is advisable to ensure that the distal end of the endotracheal connector is at least flush with the first reinforcing spiral.^{1,2} However, with this particular design of tube, this manoeuvre completely occludes the air feed tube to the cuff between the endotracheal connector and the first spiral. It is then impossible to inflate the cuff of the tube. Temporary traction on the connector usually enables one to inflate the cuff. However, on attempted deflation one cannot be certain whether cuff deflation is complete.

The hazard described above can be overcome completely by the use of a plastic connector with a V shaped "notch" (insert) cut in the side and positioned so that the notch protects the air feed tube from compression.

In my opinion, the design of this tube is hazardous, and an alternate design should be preferred. Although this hazard has previously been described,³ it has not received wide recognition. Furthermore, although the above report was published two years ago, Rusch are currently marketing the tube with exactly the

same hazard today, although I am informed by their representative that they are planning a design change in the future. I think that this example demonstrates the need for stricter design standards for anaesthesia equipment.

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2. MIRAKHUS, R.K. Airway obstruction with cuffed armoured tracheal tubes. Canadian Anaesthesia Society Journal 21, No. 2 (March, 1974).
3. HEDDEN, M. *et al.* A complication of metal spiral-imbedded latex endotracheal tubes. Anaesthesia Analgesia 51, No. 6 (1972).

DEAR DR. GORDON:

The information about the introduction of Anaesthetic Technicians in the Province of Quebec recently supplied by Dr. McCaughey is of great interest. However, I would like to comment on the statement that inhalation therapists are more suitable candidates than nurses because their previous training has been more appropriate.

It is certainly likely that the former have a more comprehensive knowledge of cardiopulmonary function and mechanical equipment than nurses that have not been trained for duty in intensive care units. However, whether this difference matters when one considers the work these persons are being called on to do in the operating room is extremely doubtful. Gravenstein has indeed outlined the tasks associated with anaesthesia, but Boba has considered a matter of equal importance – the decision making process during anaesthesia. If one considers the character and number of facts upon which the anaesthetic technician will be called upon to base his decision making, it becomes clear that the theoretical knowledge necessary is small, though the responsibility for making the decision is great. A major need for them is the ability to maintain constant vigilance over long periods of time and a psychological make-up that can tolerate periods of physical inactivity – decisions to do nothing rather than do something. Whatever the source of such personnel I do not believe a strong case can be made on the basis of their original training for inhalation therapists as opposed to nurses.

Another aspect of this whole problem is the personal development of anaesthetic technicians. Many of the persons suitable for acceptance as anaesthetic technicians will have the capability and drive to extend their responsibilities beyond those of their role as a technician. Unless this inevitable occurrence is anticipated and preparations made for it, anaesthesia will become an area of conflict for material and social advancement. Nursing already has a massive career structure of a hierarchical nature. A period of work in a department of anaesthesia could be interesting and useful stepping stone in such a career. The same cannot be said of inhalation therapy. Perhaps in reality this does not matter, but if indeed there really is a need for a new category of personnel in the practise of anaesthesia in Canada, then

perhaps rather than utilizing inhalation therapists or nurses further serious thought should be given to recruiting other individuals for whom some anaesthesia expertise could be a recognised part of a potential career reaching a doctoral level and beyond it.

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