in labour, it was subsequently calculated that less than half this amount of methoxyflurane was required for Caesarean section when using a 0.1% supplement.

Cousins and Mazze (1972) qualified the findings that there was no evidence of nephrotoxicity following the use of 0.35% methoxyflurane in labour by stating: "The agent appears not to be nephrotoxic under most conditions of low dosage administration". It would certainly appear prudent to avoid the use of this agent in patients who have grossly impaired renal function or who are receiving nephrotoxic agents, such as tetracycline. Wilson, Marshall and Hodgkinson (1972) noted that elevated levels of free fluoride ion and oxalic acid appeared in urine following the administration of small quantities of methoxyflurane at Caesarean section. No clinical evidence of renal dysfunction was noted; however, and no direct measurements of renal function appear to have been made. Work is at present in progress in Cardiff to determine whether there is any evidence of renal calculus formation as a result of the oxalic acid excretion which follows methoxyflurane analgesia.

Cases of renal dysfunction have been reported in the literature following the use either of 0.1% methoxyflurane as part of a balanced anaesthetic technique for Caesarean section or of 0.35% methoxyflurane for analgesia in labour. Since the nephrotoxicity following methoxyflurane is dose-related it would appear desirable to limit the quantity administered to a minimum. The use of a balanced anaesthetic technique with a 0.1% methoxyflurane supplement for a limited period appears to be the optimum method of administering the drug providing that it is also efficient in preventing awareness. It can indeed be argued that this is the only justifiable method of administering the agent and that the use of high concentrations in patients breathing spontaneously should be avoided. We agree both with Cousins and Mazze (1972) and Wilson, Marshall and Hodgkinson (1972) that the effect of these metabolites on the foetus should be assessed.

I. P. LATTO, Cardiff
A. C. WADSWORTH, Bristol

REFERENCES

PRE-STRETCHED CUFFS ON TRACHEOSTOMY TUBES

Sir,—We very much support the warning given in the November issue (Brit. J. Anaesth., (1972), 44, 1222) by J. G. Wandless and his colleagues, concerning the hazard encountered following the use of one of our tracheostomy tubes after they had pre-stretched the cuff. This most certainly is an inherent risk where carefully controlled and reproducible conditions of manufacture are not available.

Earlier experimental work by Grenvik, Safar and Caroll (personal communication), as well as those mentioned by your correspondent, preceded commercial assistance by several years, and much useful work was done. (See also Caroll, Hedden and Safar, 1967.)

The hazards involved were probably clearer to the experimenters than to those who subsequently used the technique, and great care in manufacture and subsequent testing is most important.

An important aspect relating to the problem of selective herniation of the cuff is in producing one with a constant wall thickness. This is of little significance in cuffs used in the normal manner before pre-stretching, but in the pre-stretched condition herniation is very likely where the wall is at its thinnest. Current advances in manufacturing techniques will overcome this problem but in view of the current vogue in do-it-yourself pre-stretching, the warning is timely.

D. R. LAWSON (Technical Manager)
Portex Ltd., Hythe, Kent.

REFERENCE

Sir,—Partial occlusion of the right main stem bronchus by a pre-stretched tracheostomy tube cuff was reported recently by Drs. Wandless, Emery, Evans and Foley (Brit. J. Anaesth., (1972), 44, 1222).

We wish to report another hazard which arose from the use of a similar tracheostomy tube (Portex with pre-stretched cuff).

A 50-year-old man had been on long-term ventilation in an intensive care unit following trauma causing a flail chest. After recovery, removal of the tracheostomy tube was planned. The cuff was deflated and the lumen occluded to evaluate his ability to mouth-breathe. This was impossible around the deflated cuff; and, therefore, the possibility of tracheomalacia was considered. The patient was scheduled for bronchoscopy and evaluation of the trachea below the tracheostomy site.

Upon arriving in the operating room and before the bronchoscopy was performed the tube was again occluded with the cuff deflated, the pilot balloon was noted to be deflated, airway obstruction again occurred. At this point the remaining air in the endotracheal tube cuff was aspirated with a syringe and the patient was able to breathe easily around the tube.

At bronchoscopy the trachea was normal and it was concluded that the patient's "difficulty in breathing around the tracheostomy tube" could have been prevented by prior aspiration of residual air in the tracheostomy tube cuff.

The use of pre-stretched cuffs appears to be increasing, and knowledge of this complication may prevent unnecessary bronchoscopy or prolonged tracheostomy.

PAUL E. BERKEBILE
R. BRIAN SMITH
Pittsburgh

SIMPLE AND RELIABLE METHOD OF INSERTING A NASOGASTRIC TUBE DURING ANAESTHESIA

Sir,—The notes by Matsuki and Zsigmond in your June number, and that by Wedley in the October issue, prompt me to suggest a method for inserting a nasogastric tube fairly easily by those of us who are not so musically inclined as to be equipped with guitar strings.

One slits a smooth unruled tracheal tube along the entire length of its lesser curvature, and lubricates the outside of the distal end well. It is then inserted through the nose into the oesophagus. The tube which one wishes to leave in place is then lubricated well and pushed through the slit tube. By holding the inner tube firmly, the outer tube can easily be withdrawn.

ROBERT W. VIRTUE
Denver

REFERENCES
Wedley, J. R. (1972). Simple and reliable method of inserting a nasogastric tube during anaesthesia. (Correspondence.) 44, 1117.

Printed in Great Britain by John Sherratt & Son Ltd. Park Road, Altrincham, Cheshire, WA14 5QQ