LETTERS TO THE EDITOR

SIR:

It is my understanding that the new inhalation anaesthetic agent enflurane (Éthrane) is now being marketed in Canada.

Early evaluations carried out in the United States go back some seven to eight years with publications in 1968 and 1969. The agent has since been thoroughly investigated in that country and after some years was released commercially. Following this enflurane was introduced in other countries and had just been made available in Japan at the time of the World Congress of Societies of Anaesthesiology there in 1972. In November 1973 a European Symposium was held in Hamburg with numerous investigators reporting their findings. Hence supplies of the drug must have been available in the various countries for some time.

Despite all this and representations to the manufacturers, not one drop of the agent has been made available to Canadian investigators and clinicians prior to its commercial introduction. To the best of my knowledge this is the first time that Canadian anaesthetists have been treated in this highly undignified manner by a drug manufacturer of any country desirous to introduce his wares into Canada. Some fourteen months ago I was told by the manufacturers of this drug that they had regrettably "overlooked" Canada and that they would make an attempt, if possible, to remedy this oversight. As everyone knows, nothing has occurred along these lines.

We are now being asked to purchase this agent and send good Canadian dollars to the United States without having been accorded the courtesy to study the drug in this country. This is not only regrettable, it is shameful.

Canadian anaesthetists may wish to bear in mind these facts when considering the purchase of enflurane.

GORDON M. WYANT, M.D.,
Professor of Anaesthesia.

DEAR SIR:

The article by Desmond (C.A.S.J. 1974, 21: 294) on methoxyflurane nephrotoxicity exemplifies the extraordinary bias that has developed against this drug in recent years. Many papers have now been published in which conclusions have been drawn from inadequate scientific evidence.

In this regard the paper by Dr. Desmond is no exception. Unsubstantiated statements often expressed in emotional terms are interspersed with the most obvious errors, which culminates in Figure 3 the recommendations by the author for the use of methoxyflurane. In this figure the author has confused the vaporizer concentration with the minimum alveolar concentration (MAC) and then makes recommendations based on this error.

Methoxyflurane was never "advertised as a panacea because the surgeon could use epinephrine." It was rather the anaesthetist who regarded it as a panacea, because of its physiological stability during anaesthesia. Incomplete understand-

ing of the importance of fresh gas flows, concentration setting and patient uptake led to excessive volumes being vaporized, which unlike most other volatile agents did not result in changes in the usual parameters to warn the anaesthetist. In the light of current knowledge considerable over-dosages occurred resulting in sporadic cases of renal dysfunction.

Dr. Desmond commits this basic error when he claims that he used "ridiculously low doses of methoxyflurane" in this study. A search of the tables reveal that the fresh gas flow rate was 9L/min. At the setting of 1.6 per cent for three minutes and 0.16 per cent thereafter, a volume of approximately 6 ml was vaporized in the first hour and 4½ ml in subsequent hours. This is hardly a small dose of methoxyflurane to present to the patient. The blood gas concentration levels recorded do not correlate with these volumes vaporized even taking into account that the patients were breathing spontaneously with a minute volume of 3.5L/min. Alternatively if the blood concentrations are correct they represent a MAC value of less than 1/13. It is therefore not likely that methoxyflurane was contributing significantly to the anaesthetic and it is hard to understand how mastoidectomies and tympanoplastics could have been performed under these conditions.

The author does not present a summary of his results in a formal manner and if the reader attempts to analyze the tables presented many conclusions made by the author cannot be verified. For example, post-operative urine osmolality figures are tabled without a detailed analysis of the fluid balance during this period.

It is now well documented that methoxyflurane can produce nephrotoxicity when an absolute or relative overdose is administered. There are few drugs in medicine which when misused, do not produce adverse effects. The most important pharmacological property of methoxyflurane is its powerful analgesic action and it is the function of the anaesthetist to administer this drug in the lowest dose to provide this effect.

Methoxyflurane is not a panacea to cover every situation that is met by the anaesthetist. Now that understanding of the mode of action and metabolism of anaesthetic drugs including methoxyflurane is becoming clearer, it is most unfortunate that misleading papers continue to be published.

DR. DAVID KOMESAROFF, M.B., B.S., D.A. (MELB.), F.F.A.R.A.C.S.,
Research Fellow in Anaesthesia.

DEAR SIR:

In reference to the paper METHOXYFLURANE NEPHROTOXICITY, Vol 21, pp. 294-307, Dr. Desmond makes some statements with which I would take issue. These occur at the end of the discussion, page 305, and in the Summary, to wit, "... and we recommend that the drug should be abandoned." "Methoxyflurane used as an anaesthetic even in low doses can cause renal dysfunction. We suggest that the drug be abandoned." These are repeated in the French résumé.

It is deplorable to this correspondent that a personal opinion should appear in print to the effect that a widely used anaesthetic agent should be abandoned. I

need not remind the Editorial Board how such quotations might be used in medical legal actions.

I have no doubt that most drugs used in anaesthesia, and medicine in general, can cause dysfunction of various organs including brain, heart, liver and kidneys.

The Summary may well be misleading as to the low dosage in that much higher exposure than indicated by the description or Tables may have occurred. One of the main routes of elimination of Methoxyflurane is by expiration through the lungs. It is submitted that the sudden change from three minutes of controlled high ventilation (of 1.6 per cent MOF) to spontaneous respirations (which at the end of more than two hours still showed hypoventilation to be present) would have had the effect of maintaining a pulmonary reservoir of higher exposure to MOF than indicated by the 0.16 per cent inspired vapor. With Editorial deletion of the author's personal opinion this paper might have been acceptable with the title changed to "A METHOD OF DETERMINING THE NEPHROTOXICITY OF AN INHALATION AGENT - METHOXYFLURANE."

My "personal" opinion of the anaesthetic management of the cases in this paper is that the methods used are not recommended in the administration of methoxyflurane for clinical practice.

NORMAN R.J. McMILLEN, M.D.,
Vancouver, B.C.

DEAR SIR:

With reference to the article "Cataract extractions without tracheal intubation," by A.E. Delilkan and S. Chandran, it reminds one that there is nothing new under the sun and the original keeps recurring. In the late 1930s and early 40s Dr. E.H. Watts of this department used exactly the technique described in the article, replacing this with the Leech gasway, which obviates the need of supporting the chin and provides an airway as efficient and almost as safe as an endotracheal tube, without the problems mentioned in the article by Delilkan.

The Leech Gasway.

The Leech gasway was used with satisfaction for many years until it became no longer available, and is now historical. It is regrettable that some manufacturer has not continued to provide this, as it would save a lot of embarrassment in those cases where endotracheal intubation is either undesirable or impossible, yet the anaesthetist must be removed from the manual control of the airway.

A picture of the Leech gasway is enclosed, and it might stimulate some manufacturer to again provide it for us. One should mention that this gasway was developed by the late Dr. B.C. Leech of Regina, Sask., one of the pioneers of Canadian anaesthesia.

E.A. GAIN, M.D.

Chairman, Department of Anaesthesia.

OBITUARY

DR GEORGE HERBERT WILLIAM LUCAS, PH.D.

Le 25 juin dernier, décédait le Dr G.H.W. Lucas, à l'âge de 79 ans.

Né à Parkhill, Ontario, en 1894, il obtenait en 1923 un doctorat en chimie-physique de l'Université de Toronto après de brillantes études.

Il fit carrière dans le département de pharmacologie de l'Université de Toronto dont il fit partie de 1926 à 1965, à titre d'Assistant-Professeur, puis de Professeur (1945-1965). En 1965, il fut nommé Professeur Emérite.

Nous lui devons la découverte du Cyclopropane (1928) qui fut pendant des années l'un des anesthésiques les plus utilisés.

Il mit en marche ou contribua de façon active à de nombreux projets de recherches surtout dans le domaine de la toxicologie et ses études sur l'alcool et la conduite automobile ont fait œuvre de pionnier dans le domaine.

De nombreuses générations d'étudiants se rappelleront ses enseignements en pharmacologie et en toxicologie, branche où son statut d'expert était bien reconnu tant par les cours de justice qui recouraient fréquemment à son témoignage, que par le milieu des sports la détection des drogues administrées aux chevaux de courses.

Actif au niveau de nombreuses associations professionnelles ou sportives, il fut, tour à tour, Président de plusieurs d'entre elles.

Excellent conférencier, il était fréquemment mis à contribution.

Lui survivent, son épouse, un fils, une fille et quatre petits-enfants.