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CORRESPONDENCE

Correspondents are asked to be brief

Halothane Hepatitis

SIR,—I was distressed to find Dr. P. Sharpstone and others (20 February, p. 448) accepting as a fact that halothane can, of itself, cause jaundice. Many conditions and external agents *may* produce jaundice but, to date, there is no good evidence that halothane does. There are many references in the literature which show that jaundice is no more likely to follow the administration of halothane than the administration of any other anaesthetic.[1-3] The National Halothane Study[1] also shows that halothane has a 25% lower mortality than other techniques. It would be very unfortunate if the reading of articles such as the one by Dr. Sharpstone and others were to frighten anaesthetists away from using halothane in patients in whom it might well be the safest drug to employ.

They suggest that this "hepatitis" can be prevented; but how, and at what cost to the patient? Is it suggested that halothane should never be used for emergency cases? Such emergency patients are often the ones who benefit most from halothane. They speak of the "consistency of the clinical features" of their hepatitis, but what are these clinical features which are so consistently related to halothane? Can they really be distinguished from those of infective hepatitis? They talk about the recurrence of hepatitis after re-exposure, but how would they explain the experience of the Burn Unit at Brooke General Hospital where 408 patients received 1,770 halothane anaesthetics. The conclusion is drawn that "repeated administrations of halothane in a six week period involve no additional risk to the patient."[4]

The fact that one patient who was given an anaesthetic other than halothane for two operations a year after an attack of hepatitis does not prove he would have had hepatitis if he had received halothane again. I have twice anaesthetized patients, three times each, with halothane within three months. Each became jaundiced following the *second* halothane anaesthetic. Each survived a *third* halothane anaesthetic without any change in colour.

"Provocation of hepatitis by deliberate challenge of previously affected individuals" is quoted as proof that halothane causes hepatitis, but it is the uniqueness of these individuals which makes them worthy of comment. The medical records of the two quoted individuals should be examined most closely before they are used to substantiate the idea that halothane is liable to cause jaundice in a patient who has previously had a halothane anaesthetic.

It is stated concerning the 11 patients who are supposed to have suffered from drug induced hepatitis that "none had been exposed to a case of jaundice or to a known hepatotoxic agent during the previous year." This is a bold statement. Are the authors sure that none of these patients ever came near a person harbouring the virus of infective hepatitis or took a drug which could cause jaundice during this time? Are they certain that none of the equipment used in the anaesthetic was contaminated with the virus of infective hepatitis?

What is particularly distressing is that senior doctors should use the phrase "halothane hepatitis" as if it were a proved entity. There is a strange fascination for human beings in the throwing of mud. If enough is thrown, some will stick. Let us not unnecessarily abuse an extremely useful and safe drug.—I am, etc.,

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1 Subcommittee on the National Halothane Study of the Committee on Anesthesia, National Academy of Sciences—National Research Council, *Journal of the American Medical Association*, 1966, **197**, 775.
2 Mushin, W. W., Rosen, M., Bowen, D. J., Campbell, H., *British Medical Journal*, 1964, **2**, 329.
3 DeBacker, L. J., Longnecker, D. S., *Journal of the American Medical Association*, 1966, **195**, 157.
4 Gronert, G. A., Schaner, P. J., Gunther, R. C., *Journal of the American Medical Association*, 1968, **205**, 878.

SIR,—In their effort to ascribe hepatoselective antigenicity to halothane Dr. P. Sharpstone and his colleagues (20 February, p. 448) appear to have overlooked the fact that virtually every anaesthetic drug in general use is immunosuppressive to some extent. The more frequently the drug is administered the more likely are the consequences of immunosuppression in some patients.

The worst outbreak of anaesthetic-related hepatitis was precipitated by barbiturate anaesthesia.[1] Out of 329 patients anaesthetized with a barbiturate in a psychiatric clinic over a period of 9 months, 41 developed viral hepatitis after anaesthesia. Fifteen of the patients died from liver necrosis, an exceptionally high mortality rate probably related to the immunosuppressive effect of barbiturates.[2]

The immunosuppressive effect of ether and chloroform was observed many years ago.[3,4] More recently nitrous oxide and halo-