compensated neurotic taking a small dose of amphetamine to a highly distressed human being making excessive demands on an already busy service.

In my view there is a strong case to be made for excluding patients who have been on amphetamines for several years from the current witch hunt, although I agree that no neurotics should be started on the drug at this point in time.—I am, etc.,

COLIN BERRY

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SIR,—Sir George Godber is reported as saying (17 July, p. 176) that "there was almost nothing that amphetamines could do which was not done better by other drugs," but he does not spell out what are the exceptions that he has in mind.

Before anti-amphetamine enthusiasm reaches the climax of a total ban, may I mention one type of case in which dexamphetamine sulphate is, so far as I am aware, superior to any other drug? It is nocturnal enuresis in those patients whose sleep is exceptionally deep. Admittedly such cases are not very common. As a general practitioner I see about two a year; but some of these are adults on whom other treatments—tricyclic antidepressants, for example—have been tried and failed.

Dexamphetamine may be presumed to be effective in such cases not only because it lightens sleep, but also because of its action in facilitating conditioning and habit formation.¹ The dose has to be exact, just below that dose which will prevent sleep. But once the dose is found by experiment, the response is usually gratifyingly rapid. It would be a great pity if, because of widespread abuse of this drug, we were to be left without any effective treatment for a very distressing condition.—I am, etc.,

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¹ Eysenck, H. J., *The Dynamics of Anxiety and Hysteria*. London, Routledge and Kegan Paul, 1957.

Halothane Hepatitis

SIR,—The article by Professor William W. Mushin and his colleagues (3 July, p. 18) illustrates one of the problems inherent in attempting to keep comprehensive anaesthetic records.

By the time a problem needs investigation, it is too late to obtain all the relevant information from the best of such records. To give but two examples—it appears to be impossible to be sure that the breathing apparatus used to administer the halothane was free from infection, and the method of preparation and degree of purity of the halothane is not stated.—I am, etc.,

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SIR,—Postal problems have prevented me from commenting earlier on the article "Halothane Hepatitis—A Preventable Disease?" (20 February, p. 448).

The narrow concentration of interest in halothane as the main cause of postoperative

jaundice is blinding doctors to the wider problem of liver function changes and even jaundice which occurs in patients who have never had halothane. In the Liverpool area the reporting of cases of postoperative jaundice was certainly biased in favour of patients who had received halothane, but 4 out of 11 patients were known to have had a non-halothane anaesthetic.

Anaesthetists are aware of the fact that anaesthesia disturbs liver function, sometimes fatally. They are also aware that almost every drug used has at some time been accused of causing jaundice. However, anaesthesia does not involve only the administration of drugs, but it also causes alterations in physiology. Some of these physiological changes are known to disturb liver function or blood flow,^{1,2} and some of these factors must operate in the patient who does not have halothane and becomes jaundiced. Why should they not also operate in the patient who is given halothane?

Let us be sure of the extent to which halothane, and halothane alone in anaesthetic doses in man, causes liver damage before condemning a most useful drug.—I am, etc.,

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- ¹ Johnstone, M., *British Journal of Anaesthesia*, 1964, 36, 718.
- ² Little, D. M., and Wetstone, H. J., *Anesthesiology*, 1964, 25, 815.
- ³ Galindo, A., *Canadian Anaesthetists Society Journal*, 1965, 12, 262 and 337.

SIR,—I can assure Dr. R. Williams (10 July, p. 110) that the immunosuppressive effect of anaesthetic agents is neither a clinical impression nor a figment of the imagination. It is an established fact¹ which he must accept whether or not it disheartens him. He will be glad to know that steps have been taken to see what can be done about it. An electron microscopic study has shown that halothane has no adverse hepatic effects in species not susceptible to viral hepatitis.² The electron microscopic and other features of allergic liver necrosis have been described.³ It is interesting to note that mitochondrial swelling is one of them, as in viral hepatitis.⁴

Hepatologists eminent or otherwise are adept at selecting references to suit their purpose. They regard the report from Denver⁵ as the first to draw attention to the occurrence of liver necrosis in one patient after halothane anaesthesia. They ignore a subsequent publication from the same source⁶ describing similar hepatic necroses after other forms of anaesthesia.

As a physician, Dr. Williams may be forgiven for his unfamiliarity with the problems of anaesthetic practice. The publication of his advice to anaesthetists is difficult to understand. It is a pity he was unable to suggest a non-immunosuppressive anaesthetic technique for patients who require multiple anaesthetics and who show signs of viral infection after the first.—I am, etc.,

M. W. JOHNSTONE

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The Royal Infirmary,
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- ¹ Bruce, D. L., and Wingard, D. W., *Anesthesiology*, 1971, 34, 271.
- ² Scholler, K. L., *Acta Anaesthesiologica Scandinavica*, 1968, Supplementum 32.

- ³ Sabesin, G. M., *The American Journal of Pathology*, 1953, 42, 743.
- ⁴ Sherlock, S., *Gut*, 1971, 12, 324.
- ⁵ Virtue, R. W., and Payne, K. W., *Anesthesiology*, 1958, 19, 562.
- ⁶ Gingerich, T. F., and Virtue, R. W., *Surgery*, 1965, 57, 241.

Penicillin Prophylaxis

SIR,—In "Therapeutic Conferences" on upper respiratory tract infections (10 July, p. 101) your experts recommend that all upper respiratory infections should be treated conservatively except in "special risk" cases. By their own admission it is impossible to distinguish between viral and bacterial tonsillitis and it is impractical to swab all cases.

There are various reasons for the reduction in the number of cases of rheumatic fever and nephritis, and one of these must be a result of the treatment of tonsillitis with penicillin. It has been my own practice to treat all cases of tonsillitis with penicillin, realizing that many of these are viral (I obviously select an alternative antibiotic for those who are allergic to penicillin). I swab all cases that I do not treat.

I would agree that too many antibiotics are too freely prescribed, but surely this is the one condition that should not be treated conservatively if we do not want an increase in the number of "at risk" cases?—I am, etc.,

GEOFFREY GOVER

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SIR,—I feel that one point from your Therapeutic Conference (10 July, p. 101) requires further clarification.

It is stated that patients who have had rheumatic fever should have treatment with penicillin to cover such operations as dental extractions. If these patients are already taking chemoprophylaxis with penicillin, it is obviously the last antibiotic one would choose to cover the operation as resident mouth flora would already be resistant to penicillin.—I am, etc.,

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SIR,—I was dismayed to read in "Therapeutic Conferences" (10 July, p. 101) that penicillin prophylaxis for those patients susceptible to subacute bacterial endocarditis should be administered two hours prior to any proposed dental extractions and also that the intramuscular route was anything less than mandatory.

Subacute bacterial endocarditis is still a serious illness carrying a high mortality (up to 50% in the first 12 months after the first infection). For antibiotic cover penicillin is the drug of choice, for patients who are not allergic to it, and who are not receiving long-term penicillin prophylaxis. It is bactericidal and the oral strains of *Strep. viridans* are very rarely penicillin-resistant. Absorption of penicillin from the gastrointestinal tract is unreliable both in the height and the timing of the peak blood levels of the drug. Intramuscular injection results in predictable blood levels with a peak occurring 20-30 minutes after the injection. To administer penicillin two hours before an extraction means that the bacteraemia following the extraction does not co-