diazepoxide is also reported to have caused non-urticarial reactions.⁸

In most cases the abnormalities resolved after the offending agent was discontinued. However, rechallenge in some instances with the aetiological agent at a later date was rapidly followed by reappearance of the allergic reactions noted earlier.

This brief review clearly establishes the fact that, although hypersensitivity reactions to diazepam and other benzodiazepines are rare, they are far from being undocumented.

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When is an immigrant not an immigrant?

SIR,—The interesting article by Dr K M Goel and his colleagues from Glasgow (12 March, p 676) contains a common but misleading misuse of the word "immigrant." Of the "immigrant" 56 children they describe, 30 were born in the United Kingdom (which incidentally is 54%, not 72% as stated). According to the *Shorter Oxford English Dictionary* an immigrant is "a person who migrates into a country as a settler." The parents of these children were presumably truly immigrants (as I would be if I went to live in Scotland), but the majority of the children were not. To go on calling these child citizens of the United Kingdom immigrants is not only socially unfortunate: it also conceals the fact that their medical problems may differ from those of children who have actually migrated from overseas, and did so differ in this valuable article.

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Psoralens

SIR,—In view of recent publicity which has been given to the oral use of 8-methoxypsoralen we think it is desirable that clinicians should be aware of the fact that no product licence has been granted for oral presentations either of this substance or of 2, 4, 8-trimethylpsoralen. In consequence the position is that under the Medicines Act such products cannot be legally imported into the United Kingdom except by way of special importation by or to the order of a practitioner for administration to a

particular patient of his, or in accordance with a clinical trial certificate.

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SIR,—Following the recent publicity on the treatment of psoriasis with ultraviolet light (A) and 8-methoxypsoralen many patients will be demanding this form of therapy. It is probable that local appeals will provide funds for the purchase of the equipment and it is possible that this may be given by non-dermatologists. Although the treatment appears to be effective in many cases, the long-term effects in psoriasis are not known. All who use this, the so-called PUVA method, are asked to keep careful records of the patient response to measured exposure of the light and amount of drug given and to report any side effects encountered to the Committee on Safety of Medicines even though it might not be possible to show with certainty that these effects are produced by the psoralens.

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Amoxil and Talpen

SIR,—Dr A N P Speight (12 March, p 710), writing in support of Dr I W B Grant (12 February, p 442) states that it was impertinent of me in my reply (p 442) to question Dr Grant regarding his personal experience of amoxycillin and talampicillin. On the contrary, I would have thought it highly pertinent to inquire whether the writer has had any personal experience of the antibiotics about which he is writing. Dr Speight, however, has no such inhibitions and infers that he does not wish to be confused by the facts and states quite unashamedly that these are "minor points compared with the major issue, which is the economic one." He then, sir, takes up three-quarters of a column of your journal to discuss pricing, patents, and marketing, and includes for good measure reference to the advertising of cigarettes and detergents. He finishes with a final prod at the *British National Formulary* and an exhortation to the *Drugs and Therapeutics Bulletin* to do something about it all. I view with some suspicion the true motives of those who dwell unduly on commercial considerations, important as they are, under the cloak of academic discussion.

In contrast, Dr Grant's second letter (12 March, p 710) is worthy of serious comment as he draws attention to the comparative incidence of severe diarrhoea between ampicillin and talampicillin.¹ The figures, however, that he has extracted from table 7 of my paper completely misrepresent the data, and the fallacy of the conclusion drawn from these figures would be seized upon by even an inexperienced statistician. Dr Grant's elementary error is an example of one of the classic pitfalls that all statistical students are taught to avoid in the earliest days of their training.

The true picture is that five (1.3%) of 394 patients on talampicillin suffered from severe diarrhoea compared with eight (2.0%) of 405 patients on ampicillin. Hence Dr Grant's

conclusion that "severe diarrhoea is, if anything, more liable to occur with talampicillin than with ampicillin" is completely false. He also overlooks the other major reference² to a trial involving some 607 patients in which none suffered severe diarrhoea on talampicillin whereas three suffered from this symptom on ampicillin.

I feel that the public "nit-picking" of tables from papers must be extremely boring to your readers and rarely leads to any definitive conclusion. I would have hoped that Dr Grant would have kept his options open on amoxycillin and talampicillin, for I have no doubt that in the future he could well be applauding the virtues of these newer products.

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¹ Knudsen, E T, and Harding, J W, *British Journal of Clinical Practice*, 1975, **29**, 255.

² Jaffe, G, Murphy, E J, and Robinson, O P W, *Practitioner*, 1976, **216**, 455.

"Geriatricide"

SIR,—I stand delightfully corrected by Professor J C Brocklehurst (19 March, p 775) and plead guilty to an etymological offence in coining the word "geriatricide" (26 February, p 555). While my meaning, of course, was clear, I would hope, at least for the present, not to see my geriatrician colleagues under threat.

I am chiefly ashamed, however, of having mixed Greek and Latin. I have received the suggestion that "senecicide" would be more correct, but I doubt my ability to rise to such pedantic heights, let alone to pronounce it in the course of an oration.

Perhaps I should have persisted in language mixing and spoken of "geronticide," but then I might have been accused of sex discrimination in ignoring the female of our species. I accept checkmate.

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Effect of intravenous disopyramide on premature beats

SIR,—Disopyramide is an effective anti-arrhythmic agent which has been available for some years as an oral preparation.

We recently administered disopyramide intravenously to 10 patients with chest pain and arrhythmias of whom eight were subsequently shown to have myocardial infarction. Seven patients had ventricular premature beats, two had ventricular tachycardia, and one had atrial tachycardia. Heart rate, blood pressure, and a rhythm strip of the electrocardiogram were taken immediately an arrhythmia was noted. The measurements were repeated after 5 min, when a bolus injection of inert vehicle was given, followed by active disopyramide in a dose of 150 mg 5 min later. Further measurements and blood samples were taken at 5-, 15-, and 30-min intervals after the active drug was given.

In four patients the arrhythmia ceased before the active drug was injected, in two before and in two after the vehicle. Sinus rhythm was restored at 30 min in all but one patient whose ventricular premature beats persisted but were less frequent. Mean levels

of disopyramide ($\pm$ SD) at 5 min were 6.8 ± 2.68 mg/l, at 15 min 4.01 ± 1.33 mg/l, and at 30 min 3.82 ± 1.21 mg/l. No serious side effects were seen, but two patients required temporary catheterisation for urinary retention and three had hot flushes for between 30 s and 6 min after the injection of disopyramide. There was no alteration in blood pressure and heart rate except in the patients with ventricular and atrial tachycardia.

Our short experience shows that the blood levels of disopyramide obtained were sufficient to suppress premature beats. It also illustrates the difficulty of assessing the drug clinically when spontaneous remission may occur. We suggest that further controlled trials need to be done to establish the effectiveness of disopyramide as a possible alternative to lignocaine in the suppression of premature beats.

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Treatment of chronic hepatitis B virus infection with ribavirin

SIR,—The new antiviral agent ribavirin (1- β -D-ribofuranosyl-1,2,4-triazole-3-carboxamide) has been used in the treatment of acute B-virus hepatitis with conflicting results. Zuniga *et al*¹ reported a significant shortening of the course of the illness and a more rapid return to normal of serum bilirubin and enzyme levels. However, Moseley² could find no difference between the response of patients treated with ribavirin and those receiving a placebo. A clearer idea of the efficacy of the drug against the hepatitis B virus (HBV) might be obtained by treating patients with chronic HBV infection and using elimination of the hepatitis B surface antigen (HBsAg) from the patient's serum as an objective criterion of anti-HBV activity.

We studied 13 patients with chronic HBV infection, diagnosed by the presence of HBsAg in the blood on three consecutive occasions at suitable intervals. One patient was an asymptomatic carrier and another had no evidence of liver disease (he suffered from recurrent respiratory infections and was deficient in complement); the remaining patients had HBV-associated chronic liver disease—one suffered from chronic active hepatitis, two from chronic active hepatitis with cirrhosis, and eight from hepatocellular cancer with or without cirrhosis. There were 12 men and one woman and all but one were Black. Ribavirin was usually given in a dose of 800 mg daily for 21 days; one patient was treated for 28 days and another received 1200 mg daily for 10 days. Blood was taken for detection of HBsAg, selected liver function tests, a full blood count, and urea and electrolyte estimation before starting the drug, at weekly intervals during the trial, and after finishing the course of treatment.

In none of the patients did HBsAg disappear from the serum during or after treatment with ribavirin. No significant changes in liver function tests or in urea and electrolyte levels were noted. However, one patient (and another not included in this trial who was given ribavirin for extensive cutaneous warts) developed mild intravascular haemolysis which disappeared after stopping the drug. The direct Coombs test was negative, as was a ribavirin-induced Coombs test.

From these results it seems unlikely that ribavirin will be effective in the treatment of patients with HBV-associated chronic liver disease or asymptomatic carriers of the virus.

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¹ Zuniga, C. B., *et al*, in *Proceedings of the 10th Congress of the Sociedade Brasileira de Medicina Tropical*, Curitiba-Parana, February 1974, abstract 118.

² Personal communication to Dr R. W. Sidwell, ICRN Nucleic Acid Research Unit, Irvine, California.

"Experience not essential"

SIR,—Your issue of 12 March (p xxv) carries an advertisement for the post of lecturer in geriatric medicine at the University of Manchester, which states: "Previous experience in geriatric medicine is not essential." Surely it cannot be possible to teach a branch of medicine in which one has had no experience. Personally, even after many years devoted to research and clinical work in geriatrics, I have found it a difficult subject to teach to medical students who have not encountered the problems of elderly patients in their previous clinical work.

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Chlorpropamide-induced hyponatraemia

SIR,—With reference to the report by Dr C. J. C. Roberts of four cases of diuretic-induced hyponatraemia (22 January, p 210), I should like to report a case in which a similar condition was induced by chlorpropamide.

A 76-year-old woman was admitted in a violently confused state, unresponsive to questions. She had a two-day history of headache and had become drowsy and confused 12 h before admission. She had been started on chlorpropamide 250 mg twice daily one week before for her recently diagnosed diabetes mellitus. Her only other treatment was Delta-Butazolidine (a combination of phenylbutazone and prednisone), which she had been taking for several years.

On examination she was normotensive and the only abnormal findings were confusion, diminished reflexes, and bilateral extensor plantar responses. Her plasma sodium concentration was 118 mmol (mEq)/l, chloride 79 mmol (mEq)/l, and blood glucose 8.4 mmol/l (150 mg/100 ml). Standard bicarbonate, plasma potassium and creatinine, serum cortisol, and blood urea levels were all within normal limits. Brain scan and chest x-ray were normal. On the second day, serum osmolality was 258 mmol/kg and urine osmolality 346 mmol/kg. This is consistent with the syndrome of inappropriate antidiuretic hormone (ADH) secretion.

All drugs were stopped and within 10 days she had made a complete clinical and biochemical recovery. By the fifth day the plasma sodium had risen to 134 mmol/l and plasma chloride had fallen to 90 mmol/l.

Chlorpropamide-induced syndrome of inappropriate ADH secretion was reported by Weissman *et al*¹ in a series of five women who presented with symptoms of hyponatraemia. They postulated that 4% of people taking chlorpropamide are at risk of hyponatraemia, though Epstein *et al*² dispute this figure. Considering the severe symptoms that may arise from hyponatraemia, screening of patients

receiving thiazide diuretics or being over-hydrated for urinary tract infections or urological investigations seems indicated if they are also taking chlorpropamide, though I think this is the first symptomatic case to be reported in England and it seems less common than was originally supposed.

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¹ Weissman, P. N., Shenkman, L., and Gregerman, R. I., *New England Journal of Medicine*, 1971, **284**, 65.

² Epstein, S., *et al*, *New England Journal of Medicine*, 1972, **286**, 785.

Hexachlorophane—yes or no?

SIR,—In response to your leading article (5 February, p 337) and the subsequent correspondence, we have a number of comments.

(1) Hexachlorophane (HCP) is an effective skin antiseptic that has been used for 30 years as a surgical scrub and skin cleanser and has been found to be a highly effective agent in the control of staphylococcal infections and epidemics. There are adequate scientific and epidemiological data to support the use of HCP, and its marked activity against Gram-positive organisms is well documented. Immediately after the use of HCP was restricted a report from the US Center for Disease Control (CDC)¹ illustrated the dramatic rise in staphylococcal infection when HCP was discontinued for baby bathing. The rate of infection rose from a documented 1 case per 1000 births to 6 per 1000. This included serious staphylococcal diseases such as impetigo, enterocolitis, bacteraemia, and osteomyelitis. More recently Hyams *et al*² reported an increase in staphylococcal colonisation from 2.2% in HCP-bathed infants to 6% in non-HCP-bathed infants. This was followed by an epidemic of *Staphylococcus aureus* infection in the latter group which was controlled with HCP. Similar evidence from the United Kingdom is reported in the letter from Dr Beryl Corner and her colleagues (5 March, p 636). The US Food and Drug Administration (FDA) and the CDC recommend that nurseries consider HCP bathing to control an outbreak of Gram-positive infection and the American Academy of Pediatrics also endorses this procedure.

(2) As to the establishment of a "benefit to risk ratio" for HCP, we would point out that there is no evidence of neurotoxicity resulting from the use of HCP as a surgical scrub or as a skin cleanser by adults or by teenagers and children, who before the regulatory restrictions used 3% HCP extensively to treat acne and other skin conditions. An examination of 135 stillborn infants and infants dying in the neonatal period³ showed that there was no significant difference in the neurological findings in infants bathed in HCP at birth compared with infants not bathed in HCP. Plueckhahn's⁴ experience of 81 756 live births is impressive evidence for the lack of deleterious effects on growth and development of the babies bathed with pHisoHex and also for the lack of any deaths associated with HCP. Even in inherently high-risk patients, such as premature infants, the evidence for HCP neurotoxicity is not absolute, and the interpretation by Professor E. G. McQueen and Mr D. G. Ferry (5 March, p 637) of Plueckhahn's data ignores that author's clear evidence that three or more bathtings with 3% HCP are required