showed the beneficial effect of dapsone in preventing the spread of the disease.

I have also been surprised at the decision by the faculty to teach leprosy to medical students in the leprosarium, especially at Garkida, where there is an emphasis on institutional care, reconstructive surgery, and the making of prostheses and where so much time and money are spent on the patients *after* they have become crippled and so little on curing the patients and preventing the spread of the disease. The place to teach leprosy is in the outpatient clinic run by auxiliary staff, and the area around the medical school would be ideal for this purpose. Then it could be demonstrated that the disease can be cured, prevented, and eradicated by the administration of dapsone.

C L CRAWFORD

Department of Anatomy and
Embryology,
University College,
London WC1

¹ Ross, C M, in *Leprosy in Theory and Practice*, ed R G Cochrane and T F Davey, p 595. Bristol, Wright, 1964.

² Crawford, C L, *Leprosy Review*, 1969, 40, 159.

Occupational exposure to inhaled anaesthetics

SIR,—I wholeheartedly agree with Dr H T Davenport and his colleagues (20 November, p 1219) that there is "little or no information" on the real exposures of theatre personnel to anaesthetic agents and that studies of "spot concentrations in various parts of the operating suites" make it "extremely difficult if not impossible to evaluate methods of reducing exposure." To overcome the problem they advocate that the subject carries around on himself a continuous personal sampler which can estimate the average exposure of the subject integrated over time.

I would, however, suggest that data provided by this technique indicate only a *possible* health hazard—they do not in fact prove that the subject absorbs such contaminants. Only blood sampling will do this. Furthermore, blood samples in themselves provide "a simple and reliable measure of the average exposure of the person, integrated over time."

In other fields of atmospheric pollution direct sampling of the blood of the exposed subject is now the recommended technique¹ because atmospheric samples can be shown to provide misleading data.² For this reason this laboratory is at present carrying out a study of the blood levels of nitrous oxide in theatre personnel.

PETER COLE

Anaesthetic Laboratory,
St Bartholomew's Hospital,
London EC1

¹ Astrup, P, in *Proceedings of the European Colloquium on Health Effects of Carbon Monoxide Environmental Pollution*, Luxembourg, 1973, p 376. Luxembourg, Office for Official Publications of European Communities, 1974.

² Cole, P V, *Nature*, 1975, 255, 699.

Night cramp

SIR,—The older *National Formularies* had reference to tablets containing one grain (60 mg) of quinine bisulphate. One tablet of this strength taken nightly effectively prevented night cramp for most sufferers.

Our pharmacists now cannot provide these low-dose quinine tablets, the only quinine

tablet in the current *British National Formulary* being quinine bisulphate 300 mg. These stronger tablets are no more effective for cramp but their cost is greater and the risk of causing ototoxicity is proportionately increased (Dr H B Lee, 20 November, p 1259).

As cramp is now the major indication for the use of quinine in Britain my plea is for the reintroduction of the cheaper, safer, and equally effective 60-mg tablet of quinine bisulphate.

R EDGAR HOPE-SIMPSON

Cirencester, Glos

SIR,—The problem of nocturnal cramp recently reappeared in the *BMJ* and, as usual, various drug treatments are recommended (9 October, p 861, and 20 November, p 1259).

According to Rivlin¹ nocturnal cramp can be prevented by raising the foot of the bed about 25 cm (9 in). Surely this is worth a trial. Moreover, if cramp does occur there is a simple physiological method of aborting the attacks by using the reciprocal inhibition reflex. When one muscle group is contracted the antagonist muscles relax. Therefore instruct the patient to contract *actively* the muscles on the other side of the limb. Thus an attack of cramp in the calf is relieved by strong active dorsiflexion of the foot. Admittedly there are other reflexes such as the stretch reflex and the anti-stretch reflex which may be invoked in the treatment of cramp² but my personal experience, confirmed by others,³ is that the reciprocal inhibition reflex works very well.

A W FOWLER

Department of Orthopaedic
Surgery,
Bridgend General Hospital,
Bridgend, Mid Glam

¹ Rivlin, S, *Lancet*, 1973, 1, 203.

² Fowler, A W, *Lancet*, 1973, 1, 99.

³ Conchubhair, S W, *Lancet*, 1973, 1, 203.

Measuring blood flow

SIR,—Your leading article (27 November, p 1279) rightly draws attention to the emergence of vascular laboratories in which patients with peripheral arterial disease are studied by non-invasive methods. However, the speculation that "patients will soon be selected for reconstructive arterial surgery on the basis of routine ultrasound investigations alone" grossly understates the importance of clinical and arteriographic assessment and gives a misleading impression of research objectives in this field.

Arteriography, particularly using biplanar views, is an effective, widely used, and relatively safe method by which the extent of disease and suitability for operation may be defined. Clinicians will justly regard with reserve the suggestion that prereconstruction arteriography is to be replaced by ultrasound examinations.

Non-invasive tests complement rather than replace arteriography in that they can help to (1) distinguish the symptoms of vascular insufficiency from those of neurological and orthopaedic conditions in patients with leg and foot pain, (2) monitor the function of arterial grafts intraoperatively and in the recovery room (particularly in patients undergoing aortoiliac reconstruction in the presence of a superficial femoral artery occlusion), (3) provide

an objective index of vascularity in outpatients under observation, and (4) predict the likelihood of successful healing of a below-knee amputation. It would surely have been more appropriate to illustrate the clinical contribution of ultrasound measurements of pulsatile blood flow in these areas than to imply that ultrasound is to replace the present concept that clinical assessment of the patient and clinical indications for operation are of paramount importance.

J H PEACOCK

ROGER BAIRD

University Department of Surgery,
Bristol Royal Infirmary,
Bristol

Allergic reaction to chlormethiazole

SIR,—Dr A A Khan (6 November, p 1105) was interested to know whether other cases of allergic reaction to chlormethiazole (Heminevin) have been noted.

A man aged 56 was given, outside hospital, chlormethiazole, three capsules daily, as treatment for alcoholism and promptly developed an itchy rash. He continued to drink heavily and so 14 days later was admitted to an addiction unit. On admission he had a faint, pruritic, raised, blotchy rash on the buttocks and thighs. Chlormethiazole dosage was raised to six capsules daily and then tapered to zero over the following week. Twelve hours after the start of the higher dose schedule the rash became more florid and extended to the lower trunk. The patient was not distressed and during reduction of dosage the rash faded.

Pruritus is a common though relatively untroublesome side effect of chlormethiazole but this is the only instance of allergic rash encountered among approximately 2000 patients who have received the drug in the unit. It is worth noting that until admission this patient was taking two sedative and dependency drugs: alcohol and chlormethiazole. The latter should be prescribed to alcoholics only in a short course under close supervision for the purpose of suppressing alcohol withdrawal symptoms.

N A HALSTEAD

J S MADDEN

Mersey Regional Addiction Unit,
Moston Hospital,
Chester

Perchloroethylene intoxication

SIR,—The inhalation of perchloroethylene, a volatile solvent much used in industry, may induce transient mental changes. Despite its characteristic odour, familiar in dry-cleaning shops, these cerebral effects are seldom reported. It would seem likely that they are often missed. I should like to record an example of this form of intoxication in a 62-year-old chemical plant worker.

Although he was well known as a sober sort of chap, the factory nurse thought that he must be "drunk." All the same she sent him to hospital. Here suspicion was aroused by the chemical smell from his clothing. Tests for alcohol were negative. Within six hours he had recovered, still unaware of what had happened to him. The plant manager insisted that there had been no working hazard. Later, however, it was found that the perchloroethylene content of the air in which the man had been working was 500 ppm, a significant concentration since similar symptoms have been described at 200 ppm.¹

The occurrence of this incident in a well-run factory suggests to me that many industrial employees may be exposed to unsuspected dangers from inhalation of perchloroethylene as well as to unmerited social stigma from a form of intoxication very similar to that caused by alcohol.

J K McMULLEN

Department of Medicine,
Victoria Hospital,
Blackpool

¹ Rowe, V K, *AMA Archives of Industrial Hygiene and Occupational Medicine*, 1952, 5, 566.

Prevention of hepatitis in travellers

SIR,—During the past six months I have seen six patients who developed acute hepatitis A within 2-6 weeks of their return from third-world countries. They were all young persons in their twenties and five of them had travelled overland to the Indian subcontinent.

In two patients the illness was severe and jaundice persisted for more than six weeks. One patient, a young man of 28 years, developed acute hepatitis A three weeks after his return from a climbing holiday in Nepal. One week later he died from fulminant hepatic failure. Although these patients had had inoculation against smallpox, cholera, and typhoid, none had had immunoglobulin prophylaxis for prevention of hepatitis. Normal human immunoglobulin (gammaglobulin) prevents clinical hepatitis A. Pollock and Reid¹ showed that a single dose of 750 mg of immunoglobulin protects persons working abroad against hepatitis A. Therefore immunoglobulin should be given to all prospective travellers intending to visit countries where hepatitis A is endemic.

A K R CHAUDHURI

Department of Infectious Diseases,
Belvidere Hospital,
Glasgow

¹ Pollock, T M, and Reid, D, *Lancet*, 1969, 1, 281.

Disopyramide in ventricular fibrillation

SIR,—Reading the case report by Dr T D I M S De Lanerolle and others (2 October, p 795) reminded me of a 61-year-old woman admitted to the coronary care unit at this hospital recently with acute myocardial infarction. The patient developed primary ventricular fibrillation (VF) 6 h after admission and was successfully defibrillated. While she was on an intravenous lignocaine infusion she developed recurrent attacks of ventricular tachycardia (VT) and VF resistant to intravenous procainamide, intravenous alprenolol, and pindolol and quinidine sulphate by mouth. In the first 48 h after admission the patient had 18 attacks of VT and 15 attacks of VF which needed DC shock. Six hours after all the antiarrhythmic drugs had been withdrawn further attacks of VT and VF stopped and the patient was free of cardiac arrhythmias during the next 10 days' stay in the coronary care unit.

Ventricular rhythm disturbances, including VF, have been reported following the use of drugs such as lignocaine, procainamide, quinidine, and psychotropic agents such as phenothiazines.¹ The so-called "response to disopyramide" in the case reported might have been due to the omission of lignocaine and procainamide. Only by performing a controlled trial can one conclude that disopyramide could

be used as an alternative to intravenous lignocaine in acute myocardial infarction with ventricular arrhythmias.

D P ATUKORALE

Cardiology Unit,
General Hospital,
Colombo, Sri Lanka

¹ Krikler, D M, and Curry, P V L, *British Heart Journal*, 1976, 38, 117.

"Babies for sale"

SIR,—The letter from Dr Christine Cooper (13 November, p 1193) was very timely, as this is certainly a matter which needs to be brought into the open. The fact that this "sale of babies" is probably more common in social class 1 or 2 than 4 or 5 does not by any means protect the babies in question from the results of ill-informed and inadequate adoption processes. Those responsible for the placings may be as unaware as the adopters of all the implications of the placement and, even more worrying, of what to do to safeguard the situation if things go wrong. That babies should change hands in the manner of merchandise is repugnant to all caring people, and at a time when by law the adoption process is being subjected to rigorous inquiry and raising of professional standards there is no possible excuse for such illegal exchange to continue. Penalties for so doing should be severe.

Another result of the current and probably continuing shortage of normal, straightforward young babies for adoption is the need for doctors in fertility and sterilisation clinics to look very clearly at the advice being given to their patients. The infertile couple can no longer be advised to apply to adopt a child and the sterilised man or woman can even less count on being able to have his or her family in this way. Far too many vasectomies in inadequately counselled men are followed by an application to adopt. In fact, increasingly this operation is being done after a man has one or two children and as a preliminary to adoption application. The reason given by the couple is usually the social one "to give a home to a child who hasn't parents without increasing the population themselves." This concept has considerable inbuilt hazards, of which those experienced in adoption may be unaware.

To all infertile and sterilised patients today the warning should be given that adoption of a normal, straightforward young baby is likely to be very difficult indeed and that sterilisation on social grounds should not be contemplated by any man who is uncertain that his family is complete.

IRIS G KNIGHT

Medical Adviser,
Essex Area Adoption Agency

Steeple Bumpstead,
Haverhill, Suffolk

Pyorrhoea as a cause of pyrexia

SIR,—It was at the turn of the century that William Hunter introduced the concept of dental sepsis producing signs and symptoms elsewhere in the body. Quite rightly the extreme actions which these views provoked have since been abandoned, but as Drs E Berry and J Silver suggest (27 November, p 1289) perhaps the pendulum has swung too far in the opposite direction. A number of points arise from their article.

In presenting such cases it is vital that the oral examinations of the patients is as thorough and the write-up as meticulous as the medical aspects of the cases. In the paper the descriptions of the oral pathology are vague and the terminology confused. "Pyorrhoea" is scientifically meaningless. It is a lay term and at best implies severe, advanced, chronic periodontal disease. Similarly "periodontitis" is not clinically useful. Periodontal disease is not remotely related to dental caries or dental (alveolar) abscess, although these conditions are mentioned as relevant findings in each case history despite the title of the paper. Descriptions of periodontal disease should be comprehensive and include depths of pocketing around teeth, degree of bone loss, tooth mobility, etc.

The incidence of periodontal disease in the dentate adult population is such that if the authors' deductions are correct one would expect to see a great many cases in which chronic (as opposed to acute) dental sepsis had produced systemic manifestations. It may well be that we need to look again at this topic, and the authors are to be congratulated on drawing attention to this matter. To be convincing, however, such cases must be thoroughly assessed and documented in all respects and follow-up prolonged.

C YATES

King Edward VII Hospital,
Windsor, Berks

Fibreoptic bronchoscopy in intensive care

SIR,—Artificial ventilation may markedly interfere with the normal protective mechanisms of the lung. The nasopharynx, which normally filters and humidifies the inspired air, is bypassed. Ciliary action can be impaired by both the presence of an endotracheal tube¹ and by high concentration of inspired oxygen.² These insults can only be made worse by blind suctioning procedures. Areas of mucosal oedema and erosion may be produced and often the left bronchial tree is sampled inefficiently.³ The fibreoptic bronchoscope is like a "suction catheter with an eye" and allows selective and highly efficient removal of secretions from all areas of the bronchial tree.

Dr J S Milledge mentions this use in the intensive care unit (11 December, p 1427). There are, however, further advantages in the use of the fibreoptic bronchoscope in this situation: (1) direct inspection of the airways is possible so that stenotic, traumatised, and inflamed areas can be recognised; (2) sterile wire loops or brushes may be guided into peripheral segments to obtain material selectively for culture; (3) transbronchial lung biopsy can be carried out under fluoroscopic control for definitive diagnosis in patients with bilateral "white-out"; and (4) the bronchoscope may be used to intubate difficult patients by sliding the tube over the shaft of the bronchoscope and guiding it under direct vision between the vocal cords.

Although a number of connections may be modified to allow bronchoscopy of the ventilated patient a commercial adaptor is available (modified 15-mm connector for fibreoptic bronchoscopy—Portex Ltd, Hythe, Kent). Provided the bronchoscope is lubricated (I use 2% lignocaine jelly) it can be manipulated easily without an air leak. In some centres in Japan fibreoptic bronchoscopy is routinely