- ¹ Tidmarsh, D., Woode, Susanne, King, J. K., Report on Research at Camberwell Reception Centre, 1972.
- ² House of Commons. Parliamentary Debates (Hansard), *Single Homeless People*, August 2nd, 1972, p. 639. London, H.M.S.O.
- ³ National Association for Mental Health. Mind Report No. 7, *Hospital, Prison or Pad*. London, N.A.M.H., 1972.

Geriatric Practice

SIR,—Dr. Graham M. Hunter and others (28 October, p. 224) are to be congratulated on the succinct way in which they presented a number of important aspects of the practice of geriatric medicine. I would make two comments.

(1) There may be some advantages in the clinical management of cases if the pre-admission home assessment visit is paid by a physician in the geriatric unit. One basic principle in geriatric medicine is the need to make a diagnosis, and he is perhaps the best skilled person to assess the medical component of the multiple disorders (physical, mental, social and economic) which may be present and so estimate the degree of urgency for hospital admission. Early assessment by the medical social worker is also essential so that the patient's discharge from hospital can be anticipated even before hospital admission is arranged, but the details of the help that may be required cannot be arranged until the patient is nearing "peak performance" after investigation, treatment, and rehabilitation.

(2) Perhaps one should be cautious about putting steroids into weight-bearing joints. The relief of pain may allow the patient to over-exercise the joint and there is a risk of the development of a Charcot-like joint. —I am, etc.,

C. COHEN

Stracathro Hospital,
Brechin, Angus.

Hereditary Nephritis

SIR,—Your leading article on hereditary nephritis (12 August, p. 367) states that "though the urinary abnormalities are present equally in affected males and females, the prognosis differs enormously between the sexes," and that "this pattern of the disease is consistent in the majority of families, but rarely there is a more benign disorder [in men] or more serious lesions in females." Indeed such peculiarities of the typical pattern of the disease were until recently only exceptionally reported in the literature, and the severity in female patients

was usually attributed to intercurrent pregnancies, though some observations contradicted this concept.^{1,2} Our own experience with 12 Greek families seven of which have been published³ is consistent with the recent suggestion that "prognosis appears to differ not only between sexes but also among kindreds."^{4,5} One such family, in which the disease was severe in the female patients, is shown in the figure. Out of four sisters in the third generation three were dead from uraemia at the ages of 43, 24, and 24 respectively. The fourth, now 40 years old, is already uraemic.—We are, etc.,

ALEXANDER SYMBOULIDIS

SONIA VOUDICLARIS

DORA MAYOPOULOU-SYMYVOULIDIS

ANTONIOS KATIRTSGLOU

Renal Unit,
2nd Department of Internal Medicine,
University of Athens,
Hippocraton Hospital,
Athens

¹ Buchem, F. S. P., Van Beetsstra, A., *Acta Medica Scandinavica*, 1966, **179**, 319.

² Purriel, P., *American Journal of Medicine*, 1970, **49**, 753.

³ Symbooulidis, A., Voudiclaris, S., Mayooulou-Symbooulidis, D., Oreopoulou, D., and Yatzidis, H., *Nosokomiaca Chronica*, 1968, **30**, 491.

⁴ Chazan, J. A., Jacks, J., Cohen, J. J., and Garella, S., *American Journal of Medicine*, 1971, **50**, 764.

⁵ Ferguson, A. C., and Rance, C. P., *American Journal of Diseases of Children*, 1972, **124**, 84.

Hypothyroidism in the Elderly

SIR,—Dr. Graham M. Hunter and others (28 October, p. 224) are to be congratulated on their charming tale of two sisters, which tells how the diagnosis and treatment of their multiple maladies led to the preservation of the integrity of their home. Hypothyroidism is indeed one of the diseases of insidious onset which is easily missed by the unwary, especially if the sufferer has already been classified in the doctor's mind as "senile."

I often think the medical profession should cultivate that persistent and astonished inquiry epitomized so well by Father William's son in *Alice in Wonderland*,

*You are old, said the youth, and your jaws
are too weak
For anything tougher than suet;
Yet you finished the goose, with the bones
and the beak—
Pray how did you manage to do it?*

It is unsafe to assume that age, dementia, and incompetence go hand in hand without making diligent inquiry. Fortunately patients seldom react to this as Father William eventually did.

But there is another aspect of this condition which deserves notice. I have twice been asked to admit a patient because she had become too much for her daughter or he for his wife to manage. In one case the proposed patient was not suffering from any noteworthy disorder or incompetence, but to shake the daughter's hand was enough to reveal her coarse, dry, cold skin and to recognize that it was myxoedema in the daughter aged 60 not disease in her mother aged 84 which was the root cause of the trouble.

In another case, though the husband was confined to his bedroom by osteoarthritis and pain (which proved to be due to myelomatosis), it was apparent on visiting the house that hypothyroidism developing in his wife was partly responsible for her impaired capacity to care for him.

Dr. Hunter and his colleagues describe how their patients' problem was solved by investigation within the hospital. I would like to stress, though not for their benefit, the value of home visiting and domiciliary consultation by the physician. Consideration of the patient's social setting and the influence of disease on it affords much of the delight of geriatrics. Medical diagnosis is certainly easier in hospital but people live at home, and the pleasure obtained from helping them to do so is great indeed.—I am, etc.,

T. W. LLOYD

Gloucestershire Royal Hospital,
Gloucester

Mercury in the Environment

SIR,—Your leading article on mercury in the environment (10 June, p. 605) stated that the International Red Cross did a fine job in organizing the rehabilitation of 10,000 people paralysed by triorthocresyl phosphate sold as edible cooking oil in Morocco in 1959, "but the devastation in Iraq is probably less amenable to therapy and rehabilitation." We would like to comment on this point.

The damage from the mercury poisoning is believed to be "irreversible." Presumably that is why you state that the condition is "less amenable to therapy." It is true that necropsies, especially in our cases of pre-natal poisoning, have shown extensive cellular necrosis in the brain. Clearly that is an irreversible process. But a remarkable improvement of function in some of our cases makes us feel that the grim outlook predicted for all patients needs to be revised. All the cases that were graded as "mild" or "moderate," having symptoms of numbness, tremors, ataxia, paresis, etc., have made great progress on physical therapy, some of them losing their symptoms completely. Many of those who were graded as "severe," being completely paralysed and bedridden, improved greatly and began to be independent in caring for themselves and walking around after several weeks of patient physical therapy. Partial sight was recovered by some and partial hearing by others. This happened not only in the children who received treatment with chelating agents or polythiol resin but also in those who had no drug therapy. Possibly this indicates that new neurological pathways have come into use.

We shall be publishing these findings soon, but whatever the reason for this improvement we are certain that international organizations could give great help in the field of rehabilitation. W.H.O. should immediately direct its efforts in that way rather than believing that nothing can be done for the large number of crippled patients.—We are, etc.,

SALEM F. DAMLUJI
LAMAM AMIN-ZAKI
SAMI B. ELHASSANI

Medical College,
Baghdad University,
Baghdad, Iraq

Micropipette for Skin Testing with Dinitrochlorobenzene

SIR,—Dinitrochlorobenzene (DNCEB) is a potent skin allergen.¹ Its use in the investigation of cell-mediated immunity in Hodgkin's

disease was reported by Aisenberg.² A modification of this test is described here.

The skin of the deltoid region is cleansed with acetone, and a circle 2 cm in diameter is drawn on the skin with a ball-point pen. Wearing plastic gloves, a micropipette (Drummond 10 microlitres) is charged by unscrewing the stopper of the container and inserting the pipette into the solution of DNCB (see Fig.). Complete filling of the pipette should be verified by carefully watching

for the entry of solution into the portion of the micropipette which lies within the microcap. The point of the charged pipette is then drawn over the skin to coat evenly the demarcated area. The solvent evaporates almost immediately. The area is then covered with a vaccination pad. Two solutions have been used: a sensitizing solution containing 2 mg DNCB in 0.01 ml of acetone, and a challenging solution containing 0.2 mg DNCB in 0.01 ml acetone. They may be distinguished and rendered more visible by colouring them respectively with traces of gentian violet and scarlet red.

The skin reactions observed have been moderate and well circumscribed. Aisenberg² employed a sensitizing dose of 5 mg DNCB in 0.1 ml of acetone and he placed the solution in a 2.2-cm well and applied it to the skin. The acetone was evaporated by a warmed-air stream from a hair dryer. An objection to this method is that sensitized subjects can be affected by droplet-borne particles of DNCB carried across the room in which the test is being carried out. Pooling of solution round the wall of the well may produce more severe reactions. Also spillage is more likely in dispensing 0.1 ml of solution than in the micropipette method, which has proved simple to use. Sensitization of the skin over the deltoid is readily accomplished, minimizing the risk of self-inoculation of other skin areas. The container has been designed to restrict the evaporation of solvent, which can lead to unintentional overdose. The brass collar, cemented in place by Araldite, has an upper reservoir to catch any solution which may seep past the pipette.

Drummond "Microcaps" 10 microlitres size are sold by Shandon Scientific Company Limited, Pound Lane, Willesden, London N.E.10. Vaccination protective pads are sold by Wade Pharmaceuticals Ltd., Bishopbriggs, Glasgow. The containers were made for me by Mr. W. Hyslop, Department of Clinical

Physics and Bioengineering Workshops, Western Infirmary, Glasgow. The figure was drawn by Mr. Gabriel Donald, Department of Medical Illustration, Western Infirmary, Glasgow.—I am, etc.,

D. S. ANDREW

Western Infirmary,
Glasgow

- ¹ Epstein, W. L., and Kligman, A. M., *Journal of Investigative Dermatology*, 1959, 33, 231.
- ² Aisenberg, A. C., *Journal of Clinical Investigation*, 1962, 41, 1964.

Acute Renal Failure from Carbamazepine

SIR,—We would like to report the following case of acute renal failure in a patient treated with carbamazepine.

A man aged 59 was admitted to hospital in July 1971 with a two-year history of attacks of typical trigeminal neuralgia, more severe in the past month. Carbamazepine 200 mg four times a day for 14 days before admission had failed to control the pain. He was unable to eat, drink, or shave for fear of precipitating an attack. He had not taken any drugs other than carbamazepine. His general health was good. He had no past history of renal disease. Routine blood examination and liver function tests were normal. The symptoms were controlled by increasing the dose of carbamazepine to 400 mg four times a day and he was discharged.

The patient was readmitted in September 1971, eight weeks after starting on carbamazepine and five weeks after increasing the dose. Two weeks before readmission he developed dry throat and later felt ill, with fever and sweating. He had been passing small amounts of dark urine, and, in the belief that he was suffering from a urinary tract infection, he was treated at home with ampicillin 250 mg four times daily. Three days before admission his eyes and face became swollen and he began to pass large volumes of pale urine. On admission he was pale and anxious. There was no periorbital oedema. His temperature was 37°C, respiration normal, pulse 110/min, and blood pressure 140/90 mm Hg. Haemoglobin was 11.0 g/100 ml; total white cell count 7,900/mm³; blood sedimentation rate 84 mm/1st hr; blood urea 285 mg/100 ml; serum creatinine 6.5 mg/100 ml; Na⁺ 131 mEq/l; K⁺ 5.1 mEq/l; Cl⁻ 93 mEq/l; HCO₃⁻ 22 mEq/l; blood sugar 100 mg/100 ml. The urine showed a trace of protein and on microscopy some hyaline casts but no red cells. The urinary output was 2,790 ml in the first 24 hours after admission.

The patient improved rapidly on conservative management of the renal failure and withdrawal of carbamazepine. Dialysis was not required. During the next two weeks blood urea fell to 60 mg/100 ml, with normal serum electrolytes. The haemoglobin was then 9.1 g/100 ml with a blood sedimentation rate of 53 mm/1st hr. There was no evidence of throat or urinary tract infection. Unfortunately the renal biopsy specimen contained only medullary tissue, which showed non-specific tubular damage, and it was thought unjustified to repeat this examination. Since discharge the patient has remained well with only a few minor attacks of facial pain. The haemoglobin has risen to 13.9 g/100 ml, the blood urea is 51 mg/100 ml, and the creatinine clearance 46 ml/min.

Carbamazepine has many dose-related side effects. Animal studies showed no evidence of nephrotoxicity, though a review by Arieff and Mier¹ of carbamazepine in clinical use mentioned a case of oliguria, hypertension, and vertigo. Since then Rompel and Bauermeister² noted a single case of dysuria in an extended therapeutic trial in 48 patients with migraine. A therapeutic trial of 12 patients with trigeminal neuralgia in Poland reported one case of transient haematuria.³ Our

patient was receiving the maximum dose of carbamazepine. It seems certain that the acute renal failure was due to acute tubular necrosis resulting from the treatment, and this toxic effect of carbamazepine has not been reported before.

We are grateful to Dr. R. T. Williams for his permission to report this case and for his helpful criticism, and also to Dr. A. W. Galbraith, of Geigy Pharmaceuticals Ltd., for his advice.—We are, etc.,

D. P. NICHOLLS
M. YASIN

Ancoats Hospital,
Manchester, Lancs.

- ¹ Arieff, A. J. and Mier, M., *Neurology*, 1966, 16, 107.
- ² Rompel, H., and Bauermeister, P. W., *South African Medical Journal*, 1970, 44, 75.
- ³ Szulc-Kuberska, J., *Neurologia i Neurochirurgia Polska*, 1967, 1, 687.

Vasectomy in the Surgery

SIR,—I read with dismay Dr. E. R. Seiler's letter (28 October, p. 232) concerning his experiences of vasectomy performed under local anaesthesia. I am a general practitioner myself, and I have been trained to perform this simple operation entirely under local anaesthesia. I am now actively engaged (via the training courses arranged by the newly-formed Vasectomy Advancement Society of Great Britain) in training my general-practitioner colleagues in this technique.

I feel that the difficulties encountered by your correspondent are greatly exaggerated. Total local anaesthesia is certainly not only possible but is also almost instantaneous if the proper technique is used. The vas must first be digitally fixed subcutaneously in the scrotum (a knack which can be learned and taught), a skin bleb raised, and then 2% lignocaine infiltrated into the sheath of the vas with a $\frac{3}{8}$ in (16 mm) subcutaneous needle. A total of 10 ml of local anaesthetic or less is all that is required.

A few patients are tense, but this can be assessed at the preoperation discussion and can be dealt with by giving diazepam 10 mg orally half an hour preoperatively or, in rare instances, by giving 7-10 mg intravenously. Even in these cases the patient is able to go home half an hour postoperatively.

Now that vasectomy is to become available on the N.H.S., and anticipating the logistic difficulties that this will raise, I feel that it is imperative that full encouragement should be given to all general practitioners who wish to be trained in an operation which is eminently suitable to be performed by them—be it in their own surgeries (if properly equipped), local authority or family planning clinics, or hospital outpatient departments (if they are offered facilities), so relieving genitourinary or other surgeons of an additional and unnecessary work load.—I am, etc.,

MICHAEL KLINGER

Marie Stopes Memorial Centre,
London W.1

Protection against Hong Kong Influenza

SIR,—The possibility that attacks of "Asian" influenza may have provided some protection against "Hong Kong" influenza was discussed in your correspondence columns last year.^{1,2}

Evidence in support of this hypothesis is