The patient was a Hausa woman, aged 50, living in a village in the savanna zone near Mallumfashi, North Central State, Nigeria. She complained of fever and dizziness for six weeks, weakness so that she was unable to walk more than about half a mile (805 m), and swelling of the feet for one week. She admitted to two pregnancies, with both children alive, the younger being about 12 years old. She gave no history of any previous illness. She appeared well nourished (weight 37.5 kg) but severely anaemic, with oedema of the feet and hyperpigmentation of both palms and soles (Fig. 1). Her haemoglobin

(Hb) concentration was 4.5 g/100 ml, with anisocytosis, both macrocytosis and microcytosis; polychromasia; hypochromia; and nucleated red cells in the peripheral blood smear. Bone marrow smears showed megaloblastic erythropoiesis, giant metamyelocytes, and stainable intracellular iron plentiful in the reticuloendothelial cells but not in the erythroid precursors. The total white cell count was 6,900/ μ l, with a normal differential count but hypersegmentation of neutrophil polymorphs; Hb electrophoretic pattern was AA, the serum vitamin B₁₂ concentration was 1,000 pg/ml (Professor B. O. Osuntokun, University of Ibadan), but the serum and red-cell folate activities were not estimated as the patient had received oral folic acid before specimens could be collected. A histamine test meal showed no free acid and the total acid was 3.0 mEq/l. Skin tissue for biopsy was not taken until the eleventh day after admission, when the patient was showing a haematological remission following folic acid therapy. The skin colour had not faded by this time and the section showed hyperkeratotic squamous epithelium with numerous pigment-containing melanophores in the basal layer. There was no other histological difference from normal pigmented skin.

The patient received oral folic acid 5 mg/day for two days before the possibility of vitamin B₁₂ deficiency was considered and this therapy stopped. She had a reticulocyte response reaching a maximum of 15% on the fifth day; the Hb began to rise from the eighth day to reach 10.5 g/100 ml on day 21 and 11.5 g/100 ml on day 27. Cyanocobalamin 1 μ g/day was given intramuscularly from day 21 to 29, but there was no further reticulocyte response. She received ferrous sulphate 200 mg three times a day for 29 days; she took the normal ward diet. She was discharged from hospital on day 29 with a supply of oral folic acid but was not seen again. The pigmentation had faded and her palms and soles were normal.

Investigations were far from complete in this patient, but vitamin B₁₂ deficiency was excluded by bioassay and she showed a complete haematological remission after oral folic acid. It may be concluded that her megaloblastic anaemia and skin hyperpigmentation were both the result of folate deficiency. No

cause of the deficiency was discovered, but the presence of hypochromic microcytes and intracellular iron in the histiocytes but not in the red cell precursors suggested that there was an underlying chronic inflammatory process.

Vitamin B₁₂ deficiency is usually more long-standing than folate deficiency at the time of diagnosis. It may be that skin pigmentation is a reflection of chronicity of megaloblastosis rather than specific to vitamin B₁₂ deficiency, and this would explain why folate-deficient South Africans show the sign in the late postnatal period while Nigerians do not when they are rapidly depleted by the demands of malarial haemolysis and pregnancy. The present patient was likely to have had a long-standing deficiency. Patients with sickle cell anaemia are sometimes deficient in folate for long periods before diagnosis, and it will be interesting to hear whether this sign has been noticed in these individuals.

The mechanism of hyperpigmentation remains obscure. Attempts to demonstrate a disturbance of melanin synthesis have not been helpful.⁵⁻⁷ Alternatively, it could be a manifestation of altered cell division, which had reverted to normal by the time the skin was examined histologically in the present subject.

We thank Professor E. H. O. Parry and Dr. N. McD. Davidson for permission to publish details of this patient, who was under their care.—We are, etc.,

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- 1 Baker, S. J., Ignatius, M., Johnson, S., and Vaish, S. K., *British Medical Journal*, 1963, 1, 1713.
- 2 Watson-Williams, E. J., and Fleming, A. F., *Blood*, 1966, 28, 770.
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- 6 Satwaker, K., Radhakrishnan, A. N., and Baker, S. J., *Clinica Chimica Acta*, 1968, 20, 53.
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Dissecting Aneurysm and Autoimmune Thyroiditis

SIR,—Hashimoto's disease is reported with lymphomas¹ and thymomas,² and also after sarcoid thyroiditis.³ In this syndrome the chronic irritation of prolonged cellular immunity sometimes seems to alter and accelerate cell division so that neoplasms develop.⁴ The Hashimoto's thyroiditis in the 75-year-old woman with hypertension, reported by Drs. Angela Hilton and R. S. Whittaker (30 September, p. 827), was perhaps related more closely to the earlier bladder carcinoma than to the degenerative dissecting aneurysm.—I am, etc.,

G. A. MACGREGOR

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- 1 Cox, M. T., *Journal of Clinical Pathology*, 1964, 17, 591.
- 2 Dawson, M. A., *American Journal of Medicine*, 1972, 52, 406.
- 3 Karlisch, A. J., and MacGregor, G. A., *Lancet*, 1970, 2, 330.
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Foley-catheter Induction of Labour

SIR,—During the discussion time of a recent Upjohn symposium on prostaglandins I mentioned a method of inducing labour with the help of a Foley catheter. Since then I have had a number of inquiries about the technique. It was introduced to the Bedford maternity department in 1967 after I had read a paper by Embrey and Mollison,¹ and it is used for induction of labour only when the cervix is found to be unripe and unfavourable. Like the original authors, I have found it to be effective and sepsis has not been a problem.

The patient is given Pameran P100 (pethidine hydrochloride 100 mg and promethazine hydrochloride 50 mg) as premedication. She is then asked to pass urine and catheterization is avoided if possible. After placing her in the lithotomy position and carrying out the usual aseptic preparation the pelvis and cervix are assessed. If the cervix is found to be ripe and the presenting part favourable a low amniotomy is performed using Smyth's forceps or Dumoulin's instrument. If the cervix is unripe a 26-gauge Foley catheter is used. The tip beyond the balloon is cut off with sterile scissors before insertion. The catheter is then passed so that the balloon lies just inside the internal os and 50 ml of sterile water is inserted. Occasionally the os is so tightly closed that it is necessary to expose the cervix with a speculum and to hold its anterior lip with a pair of sponge-holding forceps.

If the catheter has not been passed spontaneously after 12 to 24 hours it is removed and the cervix reassessed. Almost always the cervix is found to have become effaced and partially dilated. A low amniotomy is then performed and usually labour progresses soon afterwards. Occasionally further stimulation of the uterus is required with intravenous oxytocin. Prophylactic antibiotics are not given.—I am, etc.,

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Bedford General Hospital,
Bedford

- 1 Embrey, M. P., and Mollison, B. G., *Journal of Obstetrics and Gynaecology British Commonwealth*, 1967, 74, 44.

General Practice Observed

SIR,—Your leading article, "General Practice Observed" (30 September, p. 781), drew attention to the recent flood of reports on general practice. After reading these documents it is perhaps worth making one or two points before we all get overwhelmed by a plethora of verbal nonsense.

Firstly, it is now being stated as if it were a brand-new discovery that general practitioners need to understand human behaviour and learn about the patients' social and cultural background and their influence on disease. Secondly, the move accelerates to involve general practitioners in hospital work, including the revival of that once oft-maligned institution the G.P. hospital.

While most of us accept the need to try to improve general practice, especially with the advent of the new larger impersonal health centres, and the increasing use of deputizing services, these two points are but a return to the old pattern of general practice obtaining 50 or more years ago and carried on successfully by family doctors who had little if any formalized vocational training. All of which makes one question whether too much emphasis is being placed on vocational training schemes, many in-

volving hospital posts with little or no proper teaching sessions and which, one suspects, are looked upon by management committees as an easy method of filling certain less popular resident posts. This sort of training seems to fall into the same pitfall as undergraduate teaching in the past, in that it is too hospital orientated. Better results might be obtained from giving a much more prominent place to general practice in the medical school curriculum in conjunction with more responsible registrar grades in general practice after the usual house appointments.

Also if family doctors are to participate in hospital work there must be a reduction in the average practice list. This one single factor more than any other could do more to improve standards and attract doctors to general practice. It will need, however, more Government money for medical schools and for general practice.—I am, etc.,

JOHN NEASHAM

Ilkley, Yorks

Accident Flying Squad

SIR,—Dr. Roger Snook is to be congratulated on his papers on the improvement in the design of ambulances (2 September, pp. 569 and 574), a subject that has virtually been neglected by the local authorities. More especially his work on the accident flying squad is one that should be seriously considered by all those intimately associated with the accident services. The work of people such as Collins of Derby, Pym in the Thames valley area, Easton of Yorkshire, and many others has shown conclusively that the old concept that the life of a person unable to survive the journey to hospital was not salvagable anyway is invalid. I have no doubt at all that in the type of accidents dealt with by Snook and others the first ten minutes can not only preserve a life but preserve its quality.

It is pertinent to ask whether such admirable schemes should be limited to areas where there are enough enthusiasts and, very often, enough voluntary support and interest, or whether the time is not now ripe for the organization of such a service to become a national concern. This should surely be considered in the light of the reorganization of local authorities and the changes in the Health Service envisaged in 1974. Those of us interested in improving the accident service nationally should now be thinking of an overall pattern of expert mobile attention immediately available to go to the site of accidents and carry out the initial life-preserving procedures. In many areas such a service could well be based on a major accident department, but in the more rural areas remote from a major accident centre a system based on general-practitioner participation (which has in many areas already proved its worth) should be an accepted part of the scheme and encouraged. Such a national policy, in particular in association with the current plans to improve the skill and knowledge of the ambulance personnel in their initial assessment of cases, could be combined in the creation of an overall national scheme.—I am, etc.,

M. S. CHRISTIAN

Slough, Bucks

SIR,—It would seem that neither Mr. T. J. Orchard nor Dr. J. F. Redden (30 September, p. 831) dispute the need for early medical care but rather the method of organization of the Bath accident flying squad. At present ambulance men cannot carry out intubation, give infusions or drugs, or perform surgical procedures. I strongly favour upgrading ambulance training and responsibility, and one of the best ways of achieving this is for doctors to engage in the practical work of the ambulance service. One of the great benefits of medical attendance at the scene of accidents is the use of the experience so gained in training emergency service personnel. In Bath we have winter lecture-demonstration sessions and a programme of "in-hospital" training, including practical sessions on intubation and infusion. However, teaching the technique is one matter and assessing the clinical situation over a period of time another. Dr. Redden should remember that many general practitioners use intravenous techniques and may even have diplomas or experience in anaesthesia as well as experience from staffing local casualty departments, and any general practitioner wishing to develop an interest in this field is surely just as capable of learning medical techniques as anyone else.

Several factors enter into the method of transport used. The first is a matter of convenience. Having equipment and communications in the car reduces mobilization time and allows freedom of movement when on call. Travelling in a police car makes direct communications on the journey more difficult as ambulance and police radios work on incompatible systems. In this area the average distance to the incident is 5 miles (8 km) and the maximum mobilization time is 1½ min. The average mobilization time for the Derby scheme is quoted as 4 min by Dr. Keith Little (30 September, p. 807). If I drive at 45 m.p.h. for 5 miles my journey time will be 7½ minutes, and 1½ minutes for mobilization makes a total of 9 minutes for arrival at the scene. This compares with a journey time of 5 minutes at 60 m.p.h. over 5 miles (a reasonable speed for a police car) and 4 minutes (average) for mobilization, making a total of 9 minutes for arrival at the scene. In rural areas high speeds can be maintained safely by the ordinary motorist without arriving at the scene in a state of adrenal overactivity.

Contrary to Mr. Orchard's conclusions, the costing of the scheme was for all 132 accidents attended. This cost is then deducted from the Road Research Laboratory figures, for which I am not responsible. Very few of the 132 calls could be regarded as wasted. When considering the effect of early medical treatment it must be remembered that patients can and do die from simple, reversible causes as well as multiple trauma. Two of the cases (2 and 6) can be paired with fatal cases from similar pathology. It is not enough to provide fast transport to hospital in place of early medical treatment. This will not help the trapped nor the critically injured. The equipment carried is basically similar to that carried by the Derby team except for the latter's extra anaesthetic and more elaborate surgical equipment—neither of which has been needed and both of which could be easily obtained from the accident department should the occasion arise. (Chest aspiration equipment, though

not detailed, is included in the intubation set and includes chest trochairs and Heimlich valves.) I think it would be wrong to conclude that any one method of organization is best. Each scheme should be an adaptation to the needs of the particular area.

In conclusion I can only say, somewhat defensively, that the system described actually works in practice, has not interfered with normal work, and has benefited the ambulance service training already. Perhaps the greatest difficulty lies in condensing a 220-page university report containing 47 colour photographs and numerous charts and diagrams into a five-page article for publication. I invite anyone still unconvinced to inspect the scheme in its continuing form before suggesting it is unnecessary or inadequate.—I am, etc.,

R. SNOOK

Bath

Admission to Geriatric Units

SIR,—I feel that I must protest about the difficulty of placing acutely-ill old people in hospitals in this area. It is almost impossible to get emergency admissions into the local geriatric unit and they must therefore go to acute general medical beds. These are always in short supply and resident medical officers are not surprisingly reluctant to fill them with potentially chronic geriatric cases. I am not critical of any of my colleagues but of the hospital admission system. If a patient merits urgent hospital treatment it should be available, preferably in these cases in a geriatric unit. Unfortunately, with the closure of more geriatric units and private nursing homes and the increasing number of old people in the population this is a problem that is going to get very much worse in the near future.—I am, etc.,

P. KALLIS

Manchester

Rhesus Isoimmunization and Twins

SIR,—Further to our letter (2 September, p. 587) we would like to review another case of multiple pregnancy in association with Rhesus Isoimmunization.

A gravida-5, aged 27 years, was found at about 22 weeks' gestation to have a twin pregnancy. She was group O rhesus negative, probable genotype cde/cde, and her husband was group O rhesus positive, probable genotype CDe/CDe. In 1967 she had a twin pregnancy, twin one being stillborn owing to intrauterine asphyxia. In 1968 she came for her first antenatal visit at 34 weeks' gestation. She was found to have anti-C 1/64 by enzyme and 1/64 by I.A.G.T., anti-D 1/128 by enzyme and 1/512 by I.A.G.T. Intrauterine death had occurred and she was subsequently delivered of a still-born fetus with hydrops. In 1969 she had a 24-week and in 1971 a 28-week abortion of a hydropic fetus, and the antibody titres were: anti-C 1/32 by enzyme and 1/16 by I.A.G.T., anti-D 1/64 by enzyme and 1/64 by I.A.G.T.

In the present pregnancy ultrasound showed the placentas to be in the upper segment posteriorly and the fetuses lying side by side. Antibody titre was weak saline anti-C+D and anti-C 1/128 and anti-D 1/256 by I.A.G.T. Amniocentesis of both sacs was possible and the results extrapolated back to 23 weeks (Table). Plasmapheresis was begun and it was intended to attempt intrauterine transfusion of both fetuses. Unfortunately, neither fetal heart could be heard after three days. Later the patient