that "after many attempts to find any small intact nerves, the search was abandoned." I am sure that in a case of this nature the dye would have enabled him to find most of these small intact nerves.

In a personal communication to me on the use of leucomethylene blue to detect the vagal fibres, A. A. Gunn stated that in 65 truncal vagotomies done in 1970, in 54 of these operations he found further fibres following testing with leucomethylene blue; 75 of the fibres so removed proved vagal. There is, therefore, no doubt whatsoever that these additional fibres would not have been detected otherwise.

I therefore submit that, although the leucomethylene blue dye is not, and I emphasize not, a test for completeness of vagotomy, it can be of considerable help in enabling the operator to detect the small nerve radicles, which he can then remove, thus ensuring that a satisfactory vagotomy is performed. The Burge machine is not easy to manipulate, and there are various factors which can upset its operative value.—I am, etc.,

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Antimacrophagic Properties of Antilymphocytic Serum

SIR,—Antilymphocytic serum (A.L.S.) of whatever provenance has been found to have antimacrophagic activity which impedes capillary migration of macrophages.¹ Conflicting reports have appeared concerning the effect of A.L.S. on in-vivo carbon clearance with both suppression² and no interference³ being found. Since this antimacrophagic activity might be of importance in determining A.L.S. immunosuppressive capacity in vivo, experiments have been carried out to determine whether or not A.L.S. depresses phagocytic activity of macrophages in vitro.

Adherent monolayers of normal guinea-pig peritoneal macrophages were allowed to form in a modified Sykes-Moore tissue culture chamber in a nutrient medium of TC 199 and 20% normal homologous serum. They were treated for varying periods up to eight days with 1 in 80 rabbit antiginea-pig thymus serum (A.T.S.) after which carbonyl iron powder was added to the chamber. The serum was one which gave a 90% inhibition of macrophage capillary migration.¹ Treatment with the A.T.S. for these varying periods did not impair ability of these macrophages to take up the foreign particulate matter as compared to those untreated. Macrophages preserved their phagocytic activity even after eight days continuous pretreatment with A.T.S. while strongly aggregated throughout. Macrophage aggregation power of A.L.S. allied to migration inhibition activity thus appears to be divorced from a phagocytosis depressing action. The latter may indicate contamination of A.L.S. with antimacrophage serum⁴ perhaps related to the method employed in raising the A.L.S.—since a survey of the literature suggests that the use of Freund's adjuvant in particular tends to result in antiphagocytic properties.

In referring to "antimacrophagic" proper-

ties of A.L.S. it is therefore important to distinguish the properties in mind. An extended account of these experiments will be presented elsewhere.—I am, etc.,

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Cardiac Arrest and Bone Cement

SIR,—I would be grateful if I could comment on the letters about acrylic cement packing of the femur in total hip replacement operations (29 August, p. 523).

The purpose of using acrylic cement with the femoral component of total hip replacements is to spread the load from the stem of the prosthesis to as large an area of the endosteal surface of the upper femur as possible.¹ To decrease the axial stress to physiological levels using screws, or drill holes plugged with acrylic cement as Mr. Eric S. Glen (p. 523) suggests, would require 43 $\frac{1}{16}$ in. (3.5 mm.) drill holes.²

Rotary strain mentioned by Mr. Glen is an important factor in femoral component loosening.³ It has been shown⁴ that a torque stress in excess of 90 in. lb. (102 cm. kg.) may be created in certain movements of a metal to metal hip replacement. The tensile strength of polymethylmethacrylate made in ideal conditions is nearly 10,000 lb./sq. in., but will be much less in vivo due to cleavage layers filled with blood. A simple sum will show that multiple drill holes plugged with cement would be required to resist the shear stress at the endosteal surface of the femur.

To get a firm packing of the cement into the endosteal surface of the femur the cement must be wedged by the stem of the prosthesis as it is inserted.¹ This wedging cannot take place if the cement is too soft, or if an efficient vent in the femoral shaft remains. Cine-radiographic studies (to be published) have shown the effectiveness of using a plastic tube inserted down the prepared femur while the cement is being packed. This allows the escape of blood and air from below the advancing cement. The tube is removed before the final packing push, made before the stem is inserted.

No one, so far as I know, has incriminated the pressurizing of the femoral medullary cavity with air and the debris of reamings, which will happen in an unvented femur as the cement is packed in, as the cause of a lowered blood pressure.

Regarding Dr. Phillida M. Frost's comment (p. 524) about acrylic cement temperature while polymerising; the temperature will depend on the thickness of the cement mass, and whether it is in contact with metal, which will conduct heat away, and also whether there is a good blood flow nearby to do the same. Charnley,² using his method of bone preparation in cadaveric femora, found a rise of temperature at the bone cement interface of only 12°C. Ohnsorge and Goebel⁵ using curretted cadaveric

femora, giving a greater thickness of cement, found temperatures up to 68°C.

Even very slight movement of the femoral component in total hip replacements causes symptoms, and usually failure. It would thus be unwise to alter a technique found satisfactory unless it can be proved that it is the cause of complications.—I am, etc.,

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Prophylaxis of Deep Venous Thrombosis

SIR,—In view of the continuing interest in deep venous thrombosis and the emphasis on treatment once the condition occurs (27 June, p. 773), a different approach may be of interest.

In 1965 the incidence of deep venous thrombosis and/or pulmonary embolism was giving rise to apprehension in the orthopaedic wards of this hospital when major surgical procedures were undertaken, particularly those on the hip. An investigation was begun and after several false starts it seemed clearly established that the principal prerequisites for deep venous thrombosis were postoperative infection of the wound and lack of attention to the diet of the patient before and after operation. As a result of continuing close attention to these two points, and principally to the methods and standards of cleanliness and sterilization in the hospital laundry and central sterile supply department, the incidence of these post-operative complications has been satisfactorily reduced. Cases of deep venous thrombosis are now minimal and can be explained in terms of trauma, age, infection, diet, etc.

Regarding diet, patients are asked to diet strictly while they are on the waiting list, avoiding fats and sugars as much as possible, and where they are noticeably overweight they are asked to reduce their weight by at least one stone (6.5 kg.). It is explained to them that they have to prepare themselves for operation as they would for any unusual physical effort. On admission to hospital, they are given chits explaining why they are put on a diet before and after operation. The diet has a high protein content before operation, and postoperatively is graduated from fluids to meat over a period of ten days. The patients accept this routine without protest, and the diets present no difficulty to the kitchen.

Attention was acutely focused on this condition some years ago, when a healthy woman of 35 admitted for excision of the head of the radius unexpectedly dropped dead from pulmonary embolism a few days after the operation. The term deep venous thrombosis is used to denote all postoperative degrees of this condition from

sudden pain in the calf to death from massive pulmonary embolism.

Apprehension still exists as continuing investigations indicate that there are grave discrepancies in the recommended methods of laundering and sterilizing in the hospital service. The non-clinical approach is paramount. Hospital flora are now accepted, apparently calmly (8 August, p. 305). Just how far have we gone backwards in 22 years? Do we need another Lister?—I am, etc.,

GAVIN C. GORDON.

Carlisle.

Acute Malaria in Newborn Infants

SIR,—I read with great interest Dr. N. E. Okeke's observation on malarial parasitaemia in newborn babies (11 July, p. 108).

Chloroquine, however, is absorbed extremely rapidly when given by the intramuscular route as he recommends, and is very liable to give rise to encephalopathy and convulsions in children. The risk is a real one, and I have recently seen a fatal collapse in a 6-month-old infant within 10 minutes of an injection of chloroquine. In most instances the oral route is satisfactory, and a case can also be made out for subcutaneous injection where absorption is sufficiently retarded for toxicity to be uncommon.—I am, etc.,

TERENCE G. GEDDES.

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Wrong Operations

SIR,—Dr. P. H. Addison's letter (22 August, p. 461) deserves careful attention. Various safeguards may be employed to prevent mistakes of identity—for example, the patient wearing a name bracelet, and to prevent operation being performed on the wrong area by marking the site with an indelible pencil. In either case whoever carries out these tasks has to be "fed" the correct information, and carelessness may lead to mistakes.

Surely, Sir, it is the responsibility of the surgeon to examine his patients himself, preferably on the day previously, in order to decide what operation he proposes to carry out and in what order the operations on the list are to be done. If he is wise he will see to it that a note is made on the patient's case records, which he should either write himself, or sign. Identification of the patient and scrutiny of the case notes must also be undertaken by the anaesthetist, who should share in the responsibility of the correct patient being given the correct operation.—I am, etc.,

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London W.1.

Sleeping Pills

SIR,—The discussion on the use of hypnotics is most gratifying. I wholeheartedly agree with Dr. A. A. Lewis (22 August, p. 463) that "Dependence on sleeping pills is a condition created and maintained by doctors."

While in charge of a male admission unit for 24 psychiatric patients of all types and ages I discontinued the use of sleeping tablets, except for very occasional doses in states of severe excitement or imminent withdrawal fits. These doses were not given for longer than three nights.

The following observations were made:¹ The majority of patients gave a history of taking hypnotics for years before admission. All patients began to sleep without hypnotics after perhaps a few sleepless nights. It was surprising to see how easily and quickly the normal sleep rhythm re-established itself. All patients confirmed that they had never slept so well in their life.

Night and day nursing staffs, who had been very sceptical at first, confirmed that the ward was quieter and better than in the past when hypnotics were liberally distributed.

Appropriate and adequate psychiatric treatment had of course to be given from the moment of admission. Unfortunately, quite a number of patients relapsed unnecessarily into their previous habit when they returned home.—I am, etc.,

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Transurethral Resection

SIR,—In his lecture on transurethral resection (1 August, p. 241) Mr. J. P. Mitchell omits the discussion of complications related to the absorption of irrigating fluid into the circulation and its effects: overhydration, haemolysis, and hyponatraemia. Perhaps he avoids these contributors to morbidity and the occasional fatality primarily by being swift (the dexterous and experienced surgeon can complete the removal of a 20 g. adenoma in less than 45 minutes), but also by operating under low irrigating fluid pressures and by using isotonic solutions as the irrigating fluid.

Mr. Mitchell refers fleetingly to the use of general anaesthesia for patients undergoing transurethral resections and this, I believe, merits some discussion. Most of the complications, including overloading of the circulation, may be detected early by an alert and knowledgeable anaesthetist, provided the signs and symptoms are not masked by general anaesthesia. These signs and symptoms have been reviewed by several authors during the past number of years.¹⁻³ Subarachnoid spinal analgesia, carried no higher than the 11th dorsal segmental level, will provide the patient with adequate analgesia without compromising the pulmonary or circulatory systems. The occasional slight fall in systemic arterial blood pressure does not require treatment and, in fact, will produce the controllable mild hypotension that Mr. Mitchell finds desirable.

Early restlessness, nausea, and vomiting will warn the surgeon and anaesthetist of circulatory overload. Generalized abdominal pain or lower abdominal pain and rigidity will suggest perforation of the bladder, either intraperitoneal or extraperitoneal perforation.

Although the mortality rate of transurethral resection is in the region of 1%, even lower rates and decreased post-operative morbidity may be expected with the use of subarachnoid analgesia—a technique that is more controllable in the older age group than lumbar or caudal epidural analgesia.—I am, etc.,

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Fainting in Mumps

SIR,—We wish to bring to your notice three instances of acute vasovagal collapse triggered by rotation of the neck during the acute stage of mumps.

The first two observations were subjective; they occurred at the height of neck swelling and each was brought on by rotation of the head when searching for a bottle of aspirin. The sensation was unpleasant with faintness, sweating, and bradycardia of 30/min. lasting for about 30 minutes. An electrocardiogram taken shortly after the second episode was normal. The third incident was in a young policeman again in the "bull neck" stage of the illness; when on request he rotated his head he lost consciousness in a typical vasovagal attack.

The cause of this phenomenon would appear to be unusual pressure on the carotid sinus produced by rotation of an acutely swollen neck. It would be interesting to know whether other readers have had similar experiences.—We are, etc.,

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Anaemia and Psychomotor Function

SIR,—I read the paper by Drs. P. C. Elwood and D. Hughes (1 August, p. 254) with interest, but feel they have just missed the boat having such a vast source of clinical material at their finger tips.

In my own practice of family medicine I have seen many women in this Northern Ontario mining community with so-called "depression." In all these cases I have had their haemoglobin level estimated and found it to be 10.5g./100 ml. or over, whereas the serum iron was either low or below normal. If Drs. Elwood and Hughes had estimated the serum iron levels of their patients under survey, they would have told a different story.

The haemoglobin level alone (or the packed cell volume) does not give any indication of the haematological picture in patients with any disturbance or alteration of psychomotor function.—I am, etc.,

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