54 patients with localized or primary malignant melanoma had circulating cytoplasmic antibody. A few patients formerly positive but who had converted to negative, and some who on clinical grounds had a primary lesion but who had negative tests for cytoplasmic antibody, were found to have developed metastatic lesions.

It is postulated that the halo naevus represents a seldom seen interim stage natural protective mechanism—that is, a rejection phenomenon of malignant melanoma. It is the visualization, so to speak, of the surveillance system normally so effective in preventing malignant melanoma from developing in every individual. The study of such aspects in the behaviour of moles and melanomas raises the question not only why are halo naevi spontaneously rejected and heal, but why do malignant melanomas develop and persist in patients who in all other respects appear to have normal and intact immunological mechanisms.—We are, etc.,

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- 1 Rolleston, H. D., *Proceedings of the Royal Society of Medicine*, 1910, (Clinical Section), 3, 195.
- 2 Sutton, R. L., *Journal of Cutaneous Diseases*, 1916, 34, 797.
- 3 Lewis, M. G., *Lancet*, 1967, 2, 921.
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Particles in Spleens

SIR,—Dr. A. E. Stuart and others have described unusual particles in spleens from cases of idiopathic thrombocytopenic purpura (I.T.P.) and hemolytic anemia (18 December 1971, p. 721). They have called our attention to morphological similarities of these particles with platelet lysosomes, yet they have interpreted these structures as "virus-like particles."

We have observed similar structures in the spleen from a case of sickle cell disease¹ as well as in spleens from other haematological disorders. These structures are most often seen in spleens where phagocytic activity in the spleen is exaggerated (I.T.P. and various haemolytic anemias). They tend to occur in clusters, particularly in sinusoidal linings cells and occasionally in adventitial cells and other macrophages. On morphological grounds we believe they represent platelet lysosomes. The interaction of platelet and vascular endothelium is well known.^{2,3} Platelets are often seen within the vascular endothelium. Recently Molnar and Rappaport⁴ have described the presence of ferritin-laden platelets in sinusoidal lining cells of the spleen in cases of hereditary spherocytosis. Since the lining cells, though phagocytic, notoriously lack lysosomal structures, these workers have suggested that platelet lysosomes may play a part in digestion of red cell particles within the sinusoidal endothelium. It is likely that the phagocytic function of splenic sinus endothelium is accomplished through collaboration of these reticular cells and platelets: the lining cells take up both particulate matter of various origin and platelets, then they use platelet

lysosomes to digest particles they have taken up.

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- 1 Tavassoli, M., and Weiss, L., in *Formation and Destruction of Blood Cells*, ed. T. J. Greenwalt, and G. A. Jamieson, Philadelphia, Lippincott, 1970.
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Testing for Australia Antigen

SIR,—Mr. J. M. Leach and Mr. B. J. Ruck (4 December, p. 597) describe a latex agglutination test for the detection of Australia antigen (HAA) which seems to be quite promising. One problem, however, is a large number of false positives occurring in fresh serum and I think this can readily be eliminated by heat inactivation at 56°C for 30 minutes. The heat would readily destroy complement factor, which has caused false positive latex fixation tests for rheumatoid factor, and we have recently found that a complement factor-like substance can inhibit the detection of Australia antigen when using reaction electrophoresis.¹ This is logical since complement factor mimics rheumatoid factor, which is capable of masking the presence of Australia antigen—even the ultracentrifuged Australia antigen has been shown to be an antigen-antibody complex.^{2,3}

The heat inactivation of the sera to be studied by latex fixation testing would eliminate some false positives (a serum containing true rheumatoid factor might well give a false positive reaction) and also uncover "masked" Australia antigen in certain specimens—thus both specificity and sensitivity would be enhanced.—I am, etc.,

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- 1 Ziegenfuss, J. F., Miller, J., Rossman, D., *New England Journal of Medicine*, 1971, 284, 1104.
- 2 Cheng, C. T., Persellin, R. H., *Annals of Internal Medicine*, 1971, 75, 683.
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Donors for Organ Grafting

SIR,—We read with considerable interest your leading article (4 March, p. 582) urging the need for more potential organ donors for transplants. A paper will appear shortly,¹ in which we have suggested that the condition of "irreversible brain damage" be legally certifiable by two doctors; they should be independent of the transplant team and one should be nominated by the relatives if they so wished. At the moment, there could be circumstances in which the doctor stopping the resuscitation measures before organ excision might be acting illegally technically.

One would leave the traditional certification of death as it is at present, thus avoiding future legal problems associated with decisions about the precise moment of death. We believe that, with suitable safeguards, the new certification of "irreversible brain damage" should be required before

organ excision is started. This certification would act as legal authorization to stop resuscitation, and to proceed with excision. It would give to transplant surgeons legal protection which may be lacking at present. With this certification, relatives would probably be as willing to authorize excision as they are in the United States.² One would hope that it would go some way towards allaying public anxiety of premature organ excision, and it should thus increase the number of potential organ donors.—We are, etc.,

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- 1 Hillman, H., and Aldridge, T. M., *Solicitors Journal*, in press.
- 2 Griep, R. B., Stinson, E. B., Clark, D. A., Dong, E., and Shumway, N. E., *Surgery, Gynaecology, and Obstetrics*, 1971, 133, 792.

Thrombosed Shunts

SIR,—It is well known that when an external arteriovenous shunt is thrombosed and removal of the thrombi fails revision of the shunt is necessary. In patients in whom this has happened repeatedly it can be a great problem to find vessels in good condition for a revision. Two methods are described for salvaging shunts which have thrombosed and which conventional methods have failed to clear.

For external shunts the thrombus was removed through an incision in the vessel distal to the Teflon tip. Angiograms were performed to establish the extent of the thrombosis. Under local anaesthesia, a 2-cm transverse skin incision was made over the site of the thrombosed vessel. A sphygmomanometer cuff was inflated to prevent embolization of the thrombus and to facilitate the phlebotomy. The thrombus discharged itself spontaneously through the incision, aided by irrigation with heparinized saline through the silastic tube of the shunt. To clear thrombi from the arterial side a similar technique is used, the vessel being occluded by a bulldog clamp proximal to the arteriotomy. A rather unusual case prompted me to employ open thrombectomy when a dislodged Teflon tip was removed via a transverse phlebotomy, and the shunt remained patent for a further three months, at which time the patient had a successful cadaveric renal transplant.

Thrombosed internal fistulae can be refashioned by end-to-end anastomosis of the vessels proximal to the block. Under local anaesthetic a transverse skin incision is made 3-4 cm proximal to the previous thrombosed fistula. The artery is formed into a loop, leaving the vein in a straight line.

The above methods have been successful so far in all cases.—I am, etc.,

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Traumatic Perforation of Oesophagus

SIR,—Your timely leading article (26 February, p. 524) concluded with the following sentences: "It is encouraging that the in-

roduction of modern, malleable fibre-optic endoscopes has been accompanied by a fall in the incidence of oesophageal injuries. However, even the most skilled endoscopist using the latest apparatus must still be ever awake to the risk of oesophageal damage."

Smith and Tanner's¹ figure of one perforation in every 300 gastroscopies and one perforation in every 100 oesophagoscopies refers to the use of rigid instruments; Ariga² collected information on 123,900 gastroscopies. The perforation rate with rigid instruments was 0.065% and with early fibre-scopes 0.03%. Its apparent safety is contributing to the rapid increase in the number of fibre-endoscopies being performed in patients of all ages by endoscopists of varied experience. Instruments are becoming more complex and investigators more ambitious. It is therefore important to obtain accurate and up-to-date knowledge of the incidence of all the complications of modern fibre-endoscopy. We hope that this information will shortly be available from a survey being undertaken among members of the British Society for Digestive Endoscopy.—We are, etc.,

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- ¹ Smith, C. C. K., and Tanner, N. C., *British Journal of Surgery*, 1956, 43, 396.
- ² Ariga, K., *Gastroenterological Endoscopy (Japan)*, 1966, 8, 7.

Haemophilus Epiglottitis

SIR,—I read with interest the experience of Dr. Patricia E. Mortimer and others (26 February, p. 567) in their management of patients with haemophilus epiglottitis. However, their statement suggesting "endotracheal intubation as a method of maintaining the airway is undesirable if it does not completely relieve the obstruction in a patient likely to develop cardiac arrest" and concluding that tracheostomy is easier to manage, infers that tracheostomy will relieve the obstruction if intubation does not do so adequately. If intubation cannot relieve obstruction of the upper airway, neither will tracheostomy. As has been pointed out, in haemophilus epiglottitis the obstruction is supraglottic, and Dr. Mortimer describes in one of her cases how intubation through the cords was easily possible at postmortem. If airway obstruction to some degree is still present after the use of an artificial airway, it suggests that there is co-existing peripheral obstruction. Moreover, bilateral pneumothorax complicated tracheostomy in one of the described cases, and it should be realized that this can arise in one of two ways.¹ Either violent inspiratory efforts suck air through the cervical incision into the mediastinum with rupture through the mediastinal pleura into one or both pleural cavities; or expiratory obstruction leads to alveolar rupture with tracking of air along the bronchovascular planes into the mediastinum and subcutaneous tissues, and possibly again into the pleural cavities after rupture of the mediastinal pleura.

I would reinforce the urgent treatment of the septicæmia by intravenous chloramphenicol, and emphasize that the condition is eminently suitable for endotracheal intubation as has already been written.^{2,3} Tracheostomy is *not* the easy operation in

infancy that some appear to believe; it has a morbidity and mortality rate, and is fraught with much danger if carried out as an "emergency" procedure.—I am, etc.,

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- ¹ Reading, P., *Journal of Laryngology and Otology*, 1958, 72, 785.
- ² Newlands, W. J., *British Medical Journal*, 1972, 1, 374.
- ³ Edwards, J. M., and Roberts, K. D., *British Medical Journal*, 1972, 1, 246.

Red Cell Size and Age

SIR,—We read with interest Dr. T. Okuno's report (26 February, p. 569) of an increase in mean red cell volume with age in normal subjects, and his suggestion that the normal range of values for the M.C.V. should be revised from the currently accepted 76–96 μ^3 or 82–92 μ^3 .

In 1970, using a Coulter A cell counter and a microhaematocrit centrifuge, we reported similar findings in mentally retarded patients.¹ In addition, we demonstrated the increase in the mean red cell volume with increasing age in both mentally retarded epileptic patients treated with anticonvulsants and in patients suffering from Down's syndrome, these latter patients having been previously shown to have macrocytosis.² All these patients had haemoglobin levels within the normal range for their age and sex. In the mentally retarded epileptic patients treated with anticonvulsants we were also able to show that the degree of macrocytosis was related to the dose of phenobarbitone,³ and that correction of folate deficiency, as measured by red cell folate concentration,⁴ did not reduce this macrocytosis significantly.⁵

With the advent of instruments such as the Coulter S, research into red cell size could now progress rapidly.—We are, etc.,

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- ¹ Eastham, R. D., and Jancar, J., *Lancet*, 1970, 1, 896.
- ² Eastham, R. D., and Jancar, J., *Journal of Clinical Pathology*, 1970, 23, 295.
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Prevention of Deep Vein Thrombosis

SIR,—We were interested to read the comments of Dr. V. C. Roberts and his colleagues (4 March, p. 628) on the results of our trial of intermittent pneumatic compression in the prevention of deep vein thrombosis. We feel, however, that some of their remarks cannot be allowed to go unchallenged.

They suggest that we have confirmed their findings, but we would remind them that a preliminary report of our trial was presented to the meeting of the Surgical Research Society at Birmingham in July, 1971, and subsequently published.¹ Since this was the first reported series using intermittent pneumatic compression in the prevention of postoperative deep vein thrombosis, both the trial reported by Dr.

Roberts and his colleagues and our second report in fact confirm our original observations.

To compare the results of both trials overall (their 82% reduction against our 60%) is quite invalid for several reasons. The method of selection of patients in the two trials was not the same; in our series the patients were entered consecutively, stratified, and then randomly allocated to either group, whereas in Dr. Roberts's series the patients were "randomly selected", and it is not clear what this means. The assessment of the incidence of thrombosis was also different. Scintillation counts of the legs were measured for at least seven days in our series, whereas counting was performed for only three days in theirs. Our results therefore include all thrombi developing during that period, surely an essential assessment if we are to develop an effective prophylactic regimen.

We would question the use of the term "significant reduction" in respect to their series of 8 patients with malignant disease. Using an exact two-tailed test² the figures are not significant even at the 10% level of confidence.

It is not possible to claim therefore that one device is superior to the other in the prevention of postoperative deep vein thrombosis, since the evidence needed to compare the two is not available.—We are, etc.,

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- ¹ Hills, N. H., Pflug, J. J., Jeyasingh, K., and Calnan, J. S., *British Journal of Surgery*, 1971, 58, 855.
- ² Finney, D. J. *Biometrika*, 1948, 35, 145.

Multiple Crashes on Motor Ways

SIR,—Without wishing to impugn one section or other of the community in this now all too frequent and alarming situation, might not the aggressive behaviour of the odd irresponsible driver, who apparently triggers off the tragedy, be related to blood sugar levels? Carrying this point further, has the incidence of diabetics taking insulin been higher in such accidents than that of the non-diabetic driver?

It is a well known fact that many diabetics prior to an insulin coma become irritable, aggressive, and irresponsible. I submit this suggestion in all humility, as it occurred to me following a recent episode under rather similar conditions with a patient who happily was not driving his motor car.—I am, etc.,

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Cardiac Arrhythmias during Laparoscopy

SIR,—I should like to thank your correspondents, for their interest in the article by Dr. D. G. Julian, who is at present in Australia, and myself (12 February, p. 411). I note that they all prefer to use controlled respiration for laparoscopy, and doubtless this serves their own situation very well. For the performance of laparoscopies in this hospital, however, we could consider this