colleagues and of the Law. Nevertheless, in the eyes of the medical profession as a whole the prestige of the specialty is not everywhere as high as it ought to be. This is not, as some believe, an emotional matter of minor importance, but one that adversely affects recruitment and thus is a matter for public concern. We believe that the very existence of a college of anaesthetists would influence this situation.

A college is of importance to anaesthetists. Those academically inclined will turn to it for support and guidance in the furtherance of education and research at all levels. Consultants will see their problems of maintaining a high standard of anaesthetic service to the community receiving the attention they deserve. Many work in circumstances of intolerable strain in which only their devotion and skill are effective in limiting what might otherwise be a serious level of morbidity and mortality. Trainees, general practitioners, and medical students will all detect the changed climate in anaesthesia and will look on anaesthesia as a career with new interest. Those who become part of the college will have the satisfaction of knowing that they are helping to build their own physical and professional home.

The Royal College of Surgeons has encouraged our development for 25 years and our debt to it will never be forgotten. However, the specialty of anaesthesia is now large enough and vigorous enough to stand by, and to speak for, itself.—We are, etc.,

Belfast D. W. BARRON
Bristol P. F. BASTITT
Dublin J. BOWES
Leeds RAYMOND DAVYS
London T. T. ELLIS
LEON KAUFMAN
J. N. LUNN
W. W. MURPHY
M. ROSEN
Cardiff J. S. ROBINSON
Birmingham M. E. TUNSTALL
Aberdeen J. A. WOODCOCK
Dublin

Lymphocyte Reactivity in Pregnancy

SIR,—We were interested to read that Dr. Ronald Finn and others suggest in their paper (15 July, p. 150) that phytohaemagglutinin-induced lymphocyte transformation is reduced during pregnancy. Their results obtained using a morphological assay were supported by *in vivo* tuberculin testing, and they apparently confirmed the results reported by Purtilo, Hallgren, and Yunis¹ who used ³H-thymidine uptake to measure lymphocyte transformation.

In this laboratory lymphocyte reactivity to phytohaemagglutinin (PHA) is assessed by measuring the rate of ¹²⁵I-5-iodo 2'-deoxyuridine (¹²⁵IUDR) uptake into DNA. We have found that the serum of pregnant women frequently reduced the phytohaemagglutinin response of washed lymphocytes obtained from normal healthy donors when compared with normal human serum. Moreover, the inhibitory effect increases as pregnancy progresses and reaches a maximum at term (see Fig.). Maximum inhibition was observed at phytohaemagglutinin concentrations of 5-7 µg/ml culture, while at higher concentrations of phytohaemagglutinin (more than 15 µg/ml culture) the inhibition was overcome. Inhibition of lymphocyte reactivity by serum taken from mothers at the time of childbirth has been observed in one-way mixed leucocyte, vaccinia, and phytohaemagglutinin cultures.²

Non-specific serum inhibition of the phytohaemagglutinin response has been widely reported and in some cases the inhibitory substance has been identified—for example, an α globulin fraction in normal human serum.³ In pregnancy the increasing levels of circulating oestrogen and progesterone may result in an impaired phytohaemagglutinin response.⁴ Another possible inhibitory substance is α fetoprotein which also occurs with increasing concentration in maternal serum as pregnancy progresses.⁵ It would be interesting to know whether the cases with greatest reduction of phytohaemagglutinin response in Dr. Finn's study were from the later stages of pregnancy.—We are, etc.,

Effect of pregnancy sera on the PHA response. Cultures contained 0.57 x 10⁶ TC199 washed lymphocytes from a normal healthy donor (group 0), 2 ml of medium (TC199/20% serum), and 7 µg/ml PHA (Difco PHA-P, control 551099). After 67 hr incubation at 37° ¹²⁵IUDR (2.1 x 10³ mg) was added in a 1 hr pulse period. Control responses (no PHA added) were subtracted.

terone may result in an impaired phytohaemagglutinin response.⁴ Another possible inhibitory substance is α fetoprotein which also occurs with increasing concentration in maternal serum as pregnancy progresses.⁵ It would be interesting to know whether the cases with greatest reduction of phytohaemagglutinin response in Dr. Finn's study were from the later stages of pregnancy.—We are, etc.,

J. S. WALKER
C. B. FREEMAN
R. HARRIS

Department of Medical Genetics,
St. Mary's Hospital,
Manchester 13

- Purtilo, D. T., Hallgren, H. M., and Yunis, E. J., *Lancet*, 1972, 1, 769.
- Leikin, S., *Lancet*, 1972, 2, 43.
- Cooperband, S. R., Davis, R. C., Schmid, K., and Mannick, J. A., *Transplantation Proceedings*, (1969), 1, 516.
- Hagen, C., and Froland, A., *Lancet*, 1972, 1, 1185.
- Seppälä, M., and Ruoslahti, E. *Lancet*, 1972, 1, 375.

Cataracts after Renal Transplantation

SIR,—Though Mr. R. Porter and others (15 July, p. 133) incriminate only steroids in the causation of posterior subcapsular cataracts after renal transplantation it appears from their data that cyclophosphamide administration could also be associated with this complication. Unfortunately we are not clear what statistical analysis they employed in coming to their conclusion.

In respect of cyclophosphamide treatment our understanding of their data could be summarized as shown in the Table.

	With Cataract	Without Cataract	Total
Treated with cyclophosphamide	7	2	9
Not given cyclophosphamide	2	28	30
Total	9	30	39

An exact test on this 2x2 contingency Table shows the probability of there being no relation between cyclophosphamide administration and the development of cataracts to be less than 0.0001. So it appears that cyclophosphamide should not be entirely exculpated in this regard.—We are, etc.,

G. H. HALL
E. A. PROCTOR

Royal Devon and Exeter Hospital,
Exeter

P. C. R. TAYLOR

Institute of Biometry and Community Medicine,
University of Exeter,
Exeter

Contact Eczema in Agricultural Workers

SIR,—Within the past year we have seen five patients who developed a severe contact eczema while handling commercially prepared animal feeding meals. Three of the patients were male and two female. We believe that the allergen was quinoxaline dioxide which had been added to the meals as a growth factor. In all our patients pig farming, particularly the breeding and rearing of piglets, was the principal work carried on. The rash was maximal in, but not restricted to, light exposed areas. The lesions had a rather dry appearance and there was a tendency for fissuring to develop easily.

We carried out patch tests with samples of meal, both containing and not containing quinoxaline dioxide, also with quinoxaline dioxide 0.5% in white soft paraffin and copper sulphate 0.5% in aqueous solution. The test with copper sulphate was included as many of the meals were labelled to contain additional copper as well as quinoxaline dioxide. The concentration of copper was of the order of 100 to 200 p.p.m., according to the labels. The concentration of quinoxaline was of the order of 20 to 50 p.p.m. Our choice of concentration for patch-testing was empirical, but was made bearing in mind that preliminary tests with samples of meal had given negative or doubtful results. We therefore assumed that a much higher concentration of the allergen in question would be required to detect sensitivity by patch-testing than was necessary to produce clinical eczema, as is known to be the case, for example, with neomycin and dichromate sensitivity. Standard and photo patch tests were carried out on each patient. The standard patch tests were left in place for 48 hours, then removed, read at once and again at 72 hours. The photo patch tests were removed after 24 hours and the sites irradiated with a predetermined dose of ultraviolet light (approximately half the minimal erythema dose), using a mercury vapour arc lamp. Readings were made at 48 and 72 hours after application.

Two patients showed faintly positive results with meal containing quinoxaline dioxide. The results were slightly stronger with the photo patch tests than with the standard patch tests. In the other three patients testing with samples of meal gave negative or doubtful results. A very strong positive result was obtained with all the 0.5% quinoxaline dioxide patch tests. The results were again rather stronger with the photo patch tests than with the standard tests. In one patient the standard patch tests were all negative immediately on removal, but several hours later a strong positive result developed at the site of the 0.5%

quinoxaline dioxide test. All the copper sulphate tests were negative.

In retrospect, we think that a concentration of 0.5% quinoxaline dioxide in white soft paraffin is unnecessarily high for patch testing in view of the very strong positive results we obtained. We think a concentration of 0.01% would be sufficient for use in future suspected cases.

We conclude that quinoxaline dioxide is a potential sensitizer and that sensitivity to it was associated with the development of contact eczema in the five patients mentioned above.

We are indebted to Dr. C. W. Marsden, Imperial Chemical Industries Ltd., Pharmaceuticals Division, for providing us with helpful information about quinoxaline dioxide and for sending us a sample of it which was used to prepare the patch tests.

—We are, etc.,

T. A. J. DAWSON
K. W. SCOTT

Department of Dermatology,
Lurgan and Portadown Hospital,
Lurgan, Co. Armagh

Atheroma of the Aortic Bifurcation

SIR,—We read with interest Mr. R. C. Lallemand and others' (29 April, p. 255) report of localized atheroma and thrombosis at the aortic bifurcation in six relatively young women. We wish to point out that in 1958 and 1960 this type of lesion was commented upon by Starer and Sutton,^{1,2} who attributed the early onset of occlusion to embolization from the heart. Again in 1961 one of us, J. H. Louw,³ reported on localized aortic or aorto-iliac disease in young females. The material removed was atheromatous and in none of them was there evidence of proximal cardiac or aortic disease. It was then suggested that the pathogenesis in young females differs from that in other patients, and our subsequent studies have shown that aortic hypoplasia plays an important role. It is, therefore, of interest that two of the cases reported by Mr. Lallemand and colleagues had hypoplastic aortas.

These authors also refer to some interesting work by Womersley⁴ and Gosling,⁵ and here we have to disagree with them. Womersley showed on theoretical grounds that the proportion of a pulse wave that is reflected by a bifurcation depends on the "area ratio"—that is, the ratio of the sum of the cross sectional areas of the branches to the cross sectional area of the parent vessel. Therefore, at the aortic bifurcation:

$$\text{Area ratio} = \frac{\text{sum of cross sectional areas of iliac arteries}}{\text{cross sectional area of the aorta}}$$

Gosling *et al.* calculated that reflection will be minimal when the ratio is 1.15 and that the proportion reflected (and the size of the standing pressure wave) will increase progressively with any divergence from that "ideal" value. A study of 45 randomly selected anatomical and postmortem adult cadavers in our laboratories gave a completely different value for this area ratio. Using a caliper we measured the circumference of the opened aorta at its bifurcation and the iliac vessels at their origin. Using these direct measurements we found a mean value for the area ratio of 0.734; S.D. 0.214; S.E.M. 0.032. With a randomly selected group of this size, these figures would appear highly significant and we feel that the figure 1.15 derived from theoretical considerations and from aortography may well be ideal from a hypothetical point of view, but should

not be taken as the normal in man. Furthermore, our findings suggest that the area ratio used in the design of prostheses for replacement in this region should approximate to the figure of 0.7 rather than to the higher figure given by Womersley, Gosling, and Lallemand.—We are, etc.,

RICHARD S. ARNOT
J. H. LOUW

Department of Surgery,
University of Cape Town,
S. Africa

- ¹ Starer, F., and Sutton, D., *British Medical Journal*, 1958, 1, 1255.
- ² Starer, F., and Sutton, D., *British Medical Journal*, 1960, 2, 644.
- ³ Louw, J. H., and Roberts, W. M., *South African Medical Journal*, 1961, 135, 346.
- ⁴ Womersley, J. R., *Physics in Medicine and Biology*, 1958, 2, 313.
- ⁵ Gosling, R. G., Newman, D. S., Bowden, N. L., and Twinn, K. W., *British Journal of Radiology*, 1971, 44, 850.

Removal of Darning Needle with a Fibreoptic Gastroscope

SIR,—A sharp foreign body was successfully removed from the stomach with a fibre-optic gastroscope. Twelve similar cases were described at a recent meeting of endoscopists in Bristol in March of this year.

A 29-year-old woman was admitted to the London Hospital following a grand mal seizure. She was known to have been mentally subnormal and epileptic since infancy, with an I.Q. of between 55 and 60. Four days after admission she complained of diffuse abdominal pain and, although physical examination revealed no abnormality, a straight abdominal x-ray showed numerous foreign bodies, including a large darning needle, in the stomach (Fig.).

Conservative management was undertaken with regular x-ray surveillance, and large doses of Isogel to aid passage of the sharply pointed needle. All the objects other than the needle passed without incident into the large intestine. The needle, however, re-

mained in the stomach, and after ten days observation it was decided to attempt its removal with the ACMI forward-viewing fibre-optic gastroduodenoscope. After an overnight fast and a 10 mg intravenous injection of diazepam the needle was located with ease lying along the greater curvature. It was grasped without much difficulty with the biopsy forceps. Careful attention was paid to orienting the needle in the axis of the gastroscope. The end of the forceps was withdrawn just within the biopsy channel; the instrument, forceps, and needle were withdrawn together, as is the usual practice at oesophagoscopy. A constant flow of air

maintained the patency of the oesophagus and the needle was viewed throughout the manoeuvre. Particular care was taken as the needle was withdrawn through the pharynx.

The majority of ingested foreign bodies pass through the gastrointestinal tract without difficulty. In a recent series of 660 patients under the age of 16, only 43 of the 412 patients not subjected to oesophagoscopy required operative intervention (20 November 1971, p. 469). In a series of 35 patients who had ingested pins and needles only three required operative removal and the rest were managed with radiological observation in hospital.¹

The indications for active intervention and removal are the danger of perforation and failure to progress. Various methods of removal of foreign bodies from the stomach are described including the use of the rigid gastroscope, special forceps or magnets, and gastrotomy. The use of the fibre-optic gastroscope for this purpose has not previously been described in the literature.

Gastrosocopy with this instrument, in trained hands, is a simple and safe procedure with rare complications. We anticipated impaction in or perforation of the oesophagus by maintaining its patency with a continuous flow of air, by ensuring the orientation of the needle, and by constant visualization throughout withdrawal.

We wish to thank Dr. J. R. Ellis for permission to report the details of this case.

—We are, etc.,

E. T. SWARBRICK
M. J. LANCASTER-SMITH
W. AVELING
J. T. WRIGHT

Department of Gastroenterology,
London Hospital,
London E.1

- ¹ Siddons, A. H. M., *Proceedings of the Royal Society of Medicine*, 1939, 32, 885.

β -Thalassaemia, G-6-PD Deficiency, and Atypical Cholinesterase in Cyprus

SIR,—In 1966, a W.H.O. scientific group working on haemoglobinopathies and allied disorders pointed out certain areas where more detailed studies on the incidence of thalassaemias and G-6-PD deficiency were considered necessary in anticipation of the importance of these disorders as a public health problem.¹ Among these areas was Cyprus where clinical reports suggested a high incidence of both these hereditary red cell abnormalities, but detailed studies on their incidence were scanty. Banton,² using red cell osmotic fragility as a screening test, reported a 20% incidence of the thalassaemia trait, whereas Plato *et al.*³ found an incidence of only 6.8%.

We studied a representative sample of male Greeks, consisting of 158 army recruits of the National Guard of Cyprus aged 18–20 years originating from all over the island. In addition to the β -thalassaemia trait and G-6-PD deficiency it was thought worth investigating the prevalence of atypical cholinesterase (ACH) as there was evidence from the literature suggesting that it is high.

For the detection of the β -thalassaemia trait, Hb, Ht, red cell counts and morphology, osmotic fragility, starch gel electrophoresis, and Hb F and Hb A₂ were determined. The methods and criteria used were identical to those described elsewhere.⁴ G-6-PD activity was estimated by the B.C.B. decolorization test, and atypical cholinesterase by a screening test using RO2-0683 as in-