last in a proper consideration by the latter organisation of the need to introduce a "special" examination in cytology. Through the appropriate committees the society is currently negotiating a full career structure for scientific officers. It is hoped that there will be equal and major modules in cytology and histology at both the ordinary and higher levels of the new TEC and Scotec (Technician Education Council and its Scottish equivalent) syllabus and examinations, allowing a broad common basis before specialisation occurs. This is because the actual practice of histological techniques and cytodiagnosis are substantially dissimilar. In many routine laboratories the same MLSOs have carried out both procedures on the basis that the screener's fatigue is relieved by other activities. It is justifiable nowadays to utilise the increasing amount of skilled technical processing of cytological materials required in a modern cytology practice to provide that variation and relief from screening.

From the pathologist's point of view, however, the picture is different. There is a wealth of special cytological techniques, as Dr Coleman points out, that can be developed in research, academic, and large regional laboratories; but almost 80% of routine cytodiagnosis is so closely allied to the practice of histopathology that the two skills are shown to be augmentative and should be performed by the same pathologist. For that reason the BSCC advocates a joint training programme in histopathology and cytopathology, as is the practice in many other countries, though it is obvious that there will be a number of pathologists who will ultimately wish to specialise and practice predominantly in cytodiagnosis in certain academic, research, or large regional departments.

The time has surely come to incorporate cytopathology into a dynamic economic and versatile diagnostic service practised by all cellular pathologists.

O A N HUSAIN
President, British Society for
Clinical Cytology

Division of Pathology,
St Stephen's Hospital,
London SW10 9TH

J ELIZABETH MACGREGOR
Chairman

Department of Pathology,
University Medical School,
Aberdeen

E BLANCHE BUTLER
Secretary

University Department of Pathology,
St Mary's Hospital,
Manchester M13 0JH

Cervical cytology reporting

SIR,—I was interested to read a general practitioner's critique of cervical cytology reporting by Dr R E G Sloan (19 May, p 1350), though I shall not be adopting his monitoring test. I agree that merely reporting "no malignant cells" in "all cases" gives the clinician no indication whether the smear contained endocervical cells or not and hence no information on the validity of the result.

In this laboratory it is the policy to state when endocervical cells are not present—though this comment has at times evoked an emotive response from the clinician, who has regarded it as a criticism of his clinical competence. We have not unfortunately kept a tally of the number of smears in which endocervical cells are not seen but my impression, for what it is worth, is that they are absent in

about 10-15% of our cervical smears. Perhaps the one technician requesting a "significantly higher number of repeats" was accurate in his assessment of smears without endocervical cells. Repeating a smear naturally increases public expenditure; but whether this is wasteful is, I think, debatable. Garrett (1964)¹ suggested that perhaps a third of "positive" cases may be missed on a single examination and Yule (1972),² performing a second test after three months on a randomly selected group of women who had negative cytology, found an error rate of 18.9%—that is, one-fifth of the precancerous lesions were missed at the first test.

M J SWORN

Department of Pathology,
Royal Hampshire County Hospital,
Winchester, Hants

¹ Garrett, W J, *Obstetrics and Gynaecology of the British Commonwealth*, 1964, 71, 517.
² Yule, R, *Acta Cytologica*, 1972, 16, 389.

Oligoclonal immunoglobulins and multiple sclerosis

SIR,—We have read the letter from Dr B R Casey and Mr A J Mason (28 April, p 1149) with regard to our article on oligoclonal immunoglobulins and multiple sclerosis (6 January, p 16).

It would seem that the bands which are being visualised in the region are probably high-molecular-weight haptoglobin oligomers, which are sharp rather than being diffuse when they are oligoclonal bands produced by many different clones of lymphocytes. It is for this reason that we stressed the importance of distinguishing the two types of bands in the final sentence of the first paragraph under "Methods." It is clearly possible to have both oligoclonal diffuse IgG bands and the sharp haptoglobin oligomers of high molecular weight that will occur from the transudation of serum proteins into the CSF along with the locally synthesised immunoglobulins. The three haptoglobin types can be distinguished by their different mobilities in the gel. As we also mentioned in the "Methods" section, the diffuse bands of IgG are more prominent on the Coomassie gel than on the naphthalene black gel, whereas the sharp haptoglobin oligomers are possibly more prominent on the naphthalene black gel than on the Coomassie gel. Therefore the three parameters of (a) diffuse versus sharp bands, (b) relative mobility, and (c) Coomassie versus naphthol allow the ready distinction of immunoglobulins from a high-molecular-weight leak.

E J THOMPSON

Institute of Neurology (Queen Square),
London WC1N 3BG

Air embolism and intravenous catheters

SIR,—I read with interest the short paper entitled "Air embolism after accidental removal of intravenous catheter" (14 April, p 987). Central venous pressure lines are commonly introduced subcutaneously via the subclavian route. We train our resident staff to familiarise themselves with this technique, both electively for total parenteral nutrition and in resuscitation of patients in shock.

The period of greatest risk for air embolism occurs during the insertion of the catheter and can be reduced by placing the patient in the Trendelenburg position. At our institution we

experienced three near-mishaps from air embolism. Fortunately the outcome was good in all three patients. After introduction into a vein the catheter (length 20 cm) is usually threaded down a 14-gauge introducer needle and the needle drawn back. Our experience with air embolism has been in patients who had a disconnection accidentally occurring at the hub connection. This prompted the invention of a simple device to prevent such disruptions from occurring.¹ This device, constructed of stainless steel, can be reused. It can be modified in both length and diameter of the orifices to fit different connections. If desired, tapes can be used to make the connection even more secure.

In the case described, removal of the introducer would have prevented any possibility of air embolism occurring with accidental removal of the intravenous catheter.

BRIAN P D COLQUHOUN

University Hospital,
Saskatoon,
Saskatchewan S7K 3H3, Canada

¹ Colquhoun, B P D, *Canadian Journal of Surgery*, 1977, 20, 565.

Bastard conceived in intensive care unit

SIR,—I have on many occasions corrected nurses and junior doctors who have reported that "the drip issued." Never did I expect this monstrosity to appear in the pages of the *BMJ*, but there it was (14 April, p 987): "... she had a peripheral venous drip, but this issued."

Did the Editor nod, or does this extend the trend mentioned in the comment on Mr Karl Sabbagh's letter (31 March, p 894), in which you refer to "... our correspondence columns, where we try to retain the individual flavour of the contributions"?

Rubbing salt into the wound is the fact that the report came from the intensive care unit of one of my own hospitals, and there cannot be many bastards conceived in intensive care units. I have always tried to persuade anaesthetists to take precautions before conjoining to put pen to paper, but clearly without success.

B B MILSTEIN

Thoracic Surgical Unit,
Papworth Hospital,
Cambridge CB3 8RE

Antiplasmin concentrations after surgery

SIR,—May we comment on the article by Dr D A Taberner and others (28 April, p 1122)? Recent studies in our laboratories^{1,2} have revealed that excellent correlations between functional activities and concentrations of antiproteases are obtained with plasma samples from healthy volunteers. Such correlations are not found, however, with plasma samples taken from patients whose plasma protease systems (for example, coagulation, fibrinolysis, kallikrein-kinin) have been activated.

By utilising chromogenic peptide substrate and immunochemical assays³⁻⁵ we have compared functional activities and concentrations of plasma antiproteases in samples from normal subjects, patients with septicaemia, and patients undergoing major heart surgery employing a haemodilution regimen.⁵ Our results show that it is not sufficient to measure

antigenic concentrations of plasma anti-proteases, as protease-antiprotease complexes with no functional activity are still detected immunochemically. Of particular relevance to the above mentioned article were the observations of Teger-Nilsson,⁷ who found that functional antiprotease activities in patients with acute venous thrombosis were normal on the day of diagnosis and that elevated activities were found three and four days after the diagnosis. Another point to be considered is the possible role of platelet antiproteases released during thrombus formation. Platelets contain inhibitors of fibrinolysis,⁸ which would certainly hinder thrombus resolution.

We would like to suggest that chromogenic substrate assays for the estimation of functional antiprotease activities should be included in any protocol for studies on the various plasma protease systems. These assays, which are simple and rapid to perform, give a better indication of the inhibitor status than immunochemical determinations.

MICHAEL J GALLIMORE
ANSGAR O AASEN
E AMUNDSEN

Institute for Surgical Research,
Rikshospitalet,
Oslo, Norway

- ¹ Amundsen, E, *et al*, *Microvascular Research*, in press.
- ² Aasen, A O, *et al*, *Microvascular Research*, in press.
- ³ Amundsen, E, Svendsen, L, and Vefling, A, *IVth International Congress on Thrombosis and Haemostasis*, Vienna, 1973 abstract.
- ⁴ Gallimore, M J, *et al*, *Thrombosis Research*, 1979, **14**, 51.
- ⁵ Gallimore, M J, *et al*, *Thrombosis and Haemostasis*, in press.
- ⁶ Lilleaasen, P, *Scandinavian Journal of Thoracic and Cardiovascular Surgery*, 1977, **11**, 97.
- ⁷ Teger-Nilsson, A-C, in *Chromogenic Peptide Substrates, Chemistry and Clinical Usage*, ed M F Scully and V V Kakkar, p 269. Edinburgh, Churchill Livingstone, 1979.
- ⁸ Crawford, G P M, in *Haemostasis: Biochemistry, Physiology and Pathology*, ed D Ogston and B Bennett, p 342. London, J Wiley and Sons, 1977.

Mistaken prognosis

SIR,—During my morning surgery session an 82-year-old man mentioned that he had been born by caesarean section on 20 March 1897. The consensus of the five doctors attending the birth was that he would not survive for more than 24 hours. He was subsequently told that his was only the second caesarean section recorded in this country at which both mother and child survived. I suspect he must now be the oldest surviving baby delivered in this country by caesarean section and is a living reminder of the unreliability of the art of prognosis.

M BLACKMORE

West Moors, Dorset BH22 0JN

"Run for fun"—and health

SIR,—Dr T J Bassler's report of four cases of heat stroke during a "run for fun" (20 January, p 197) should not discourage those who hope to use running for risk-factor modification. As Dr Bassler points out, his cases span 11 years and four continents.

We have provided medical support for local races attracting thousands of participants and estimate that the incidence of heat illness averages 1 per thousand during events of 10 km or longer. However, all runners benefit from endurance events if we only concern ourselves with their serum lipids.

Anyone who doubts this is invited to repeat

the following simple study. (1) Obtain samples for total cholesterol and high-density lipoproteins (HDL) from middle-aged marathon runners. (2) Have subjects run 20 km or longer at their usual training pace. (3) Repeat lipid studies immediately. The nine men we studied showed total cholesterol increases averaging 7% while HDL increased 17%. These levels remained elevated until a large meal was consumed.

We suggest that long-distance running acutely elevates HDL levels in all runners, and that this leads to a chronic elevation of HDL—a powerful protection against coronary heart disease. The protective value of HDL has already been observed.¹ The small risk of heat stroke can be avoided if runners are given ample fluids and simple explanations of the hazards.

BEN ROSIN

Torrance Memorial Hospital,
Torrance,
California 90509, USA

- ¹ Kannel, W B, Castelli, W P, and Gordon, T, *Annals of Internal Medicine*, 1979, **90**, 85.

Dialysis for psoriasis

SIR,—Dr S M Breathnach and others have described (27 January, p 236) a case in which psoriasis developed during maintenance haemodialysis and therefore they "counsel caution against optimistic expectations of dramatic benefit from dialysis in patients with psoriasis."

After using peritoneal dialysis 32 hours once a week for 10 weeks in the treatment of severe disabling psoriasis in three patients with normal kidney function, we can report that a substantial improvement was achieved. However, the effect was relatively short lived, lasting about two months in all three patients. The search for a mechanism which can explain the effect of dialysis on psoriasis indicates that a "psoriasis factor" may exist (possibly a mediator of an immunological mechanism) and that this "factor" is dialysable by peritoneal dialysis. In view of these preliminary (as yet unpublished) data we are of the opinion that the psoriatic lesions of the patient described by Breathnach *et al* may well respond to chronic repeated peritoneal dialysis.

We agree with the author that we should not be too optimistic in our expectations of a dramatic, long-lasting benefit. Nevertheless, it is felt that it is important to carry on research in this field with the aim of clarifying the still unknown aetiology of this common disabling skin disorder.

J HALEVY
S HALEVY
E FEUERMAN
J B ROSENFELD

Beilinson Medical Center,
Tel Aviv University Medical School,
Tel Aviv, Israel

Fifty years of penicillin

SIR,—I recently enjoyed reading your leading article "Fifty years of penicillin" (28 April, p 1101) and would like to comment on one minor aspect of it.

Some of the Wright-Fleming Institute's vaccines were distributed for many years by Parke Davis and Co, perhaps a unique example of co-operation between a pharmaceutical organisation and an academic institute. The last of these vaccines continued to be marketed until only two years ago in the form of catarrh

vaccine (at one time there was even a "public schools'" version, which was extra potent).

Whether the vaccine is of dubious value I am not sure, for there were many protests from physicians when commercial marketing was discontinued. Moreover, there were sufficient numbers who thought it of value for its private manufacture to be continued by the Charterhouse Rheumatism Clinic.

NIGEL WALSH

Madison, New Jersey 07940,
USA

Sacroiliac strain

SIR,—Dr R T D Fitzgerald's assertion (12 May, p 1285) that sacroiliac strain is a rare condition seems to be based on his own definition of the sacroiliac joint as consisting of the parts of the sacrum and ilium which are in apposition. The fact is that the term "sacroiliac joint" comprises not only joint surfaces, capsule, and fibres joining the edges of the bony joint but also the dorsal sacroiliac ligament.

This complex of fibres overlies the interosseous ligaments. It consists of several weak fasciculi, which arise above from the intermediate and below from the lateral crests of the sacrum and pass with varying degrees of obliquity to the posterior superior iliac spine and inner lip of the dorsal part of the iliac crest. Also included are the long and short posterior sacroiliac ligaments. Some fibres of the sacroiliac joint merge with the sacrotuberous and sacrospinous ligaments.¹ There can be strain or even rupture of some of the superficial fibres. These lesions are painful and tender and are the "tender spots" referred to in my letter (21 April, p 1085). Tears in ligaments may occur at either end or at the middle of a ligament irrespective of the cause of strain. They are commonly treated with injections of corticosteroids.²

A double-blind trial in progress at Oldchurch Hospital is designed to test the hypothesis that injections of triamcinolone acetonide or methyl prednisolone acetate cure low backache in a significant number of cases. The treatment is based on accurate localisation of tender spots at the sacroiliac joint as defined.³ I see no reason why the diagnosis should not be "sacroiliac strain."

JACK BOURNE

Back Pain Clinic,
Oldchurch Hospital,
Romford, Essex

- ¹ Warwick, R, and Williams, P L (editors), *Gray's Anatomy*, 35th edn, p 443. London, Longmans, 1973.
- ² Watson-Jones, R, *Fractures and Joint Injuries*, 5th edn, ed Wilson, J N, p 52. Edinburgh, Churchill Livingstone, 1976.
- ³ Bourne, I H J, *Practitioner*, May 1979.

The "drug lunch"

SIR,—Over the past decade there has been an expansion in pharmaceutical companies' promotional work in hospitals. It is now commonplace for a film or tape-slide to be shown and the audience subsequently to be entertained to a meal. Such meetings occur almost weekly in this hospital.

We have kept records of eight consecutive Monday lunch-time meetings during the last few months of 1978, when 10 out of 27 members of the junior medical staff attended five or more meetings. Doctors who attended less frequently were not included in this analysis.