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.

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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.

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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.

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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.

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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.

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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