ize the age at first coitus when assessing behavioural differences between the groups[7] must make one very careful about extrapolating and allowing their conclusions to affect in any way the current British practice of dealing with dysplasia.

From the recent preliminary results[8] of a study of a high-risk population for the development of cervical malignancy evidence would tend to suggest that a proportion of the dysplastic lesions discovered are reflections of current sexual behaviour rather than of present vaginal "infections." The prevalence rate of the mild and moderate dysplastic lesions occurring in a subgroup of 148 unemployed young women (mean age 18 years), many of whom were known drug addicts and vagrants and who were leading a highly promiscuous sexual existence, was 75 per 1000. Inflammatory infiltration within the epithelium and stroma was predominantly by monocytes, lymphocytes, and plasma cells.[9] This reaction was more common in the first few years after starting coitus. Prostitutes within this population, as well as having a high rate of these minor dysplastic lesions (64 per 1000), had a high rate of severe dysplasia (86 per 1000). It may be that the minor (mild and moderate) and major (severe) stages of dysplasia represent a semiquantitative measure of short- and long-term patterns of sexual promiscuity. The continuation of this type of behaviour by the unemployed girl may lead in time to the development of the more severe type of dysplastic lesion.[9]

One could speculate that the intensity of the inflammatory infiltrate could represent an immune type of rejection mechanism initiated in the early life history of these disorders. This may well provide a basis for the well-known regression of the minor dysplastic lesions.[10] Inability of this mechanism or a similar one operating in relation to pregnancy and delivery[8] to destroy this tissue must invariably leave it with a malignant potential.[3] Unfortunately differentiation of the benign or malign nature of each one is not possible. Certainly they need treatment and close observation.—I am, etc.,

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1 Beral, V., *Lancet*, 1974, **1**, 1037.
2 Coppleson, M., and Reid, B., *Preclinical Carcinoma of the Cervix Uteri*, p. 146. Oxford, Pergamon Press, 1967.
3 Richart, R. M., in *Pathology Annual 1973*, vol. 8, ed. S. C. Sommers. New York, Appleton-Century-Crofts, 1973.
4 Stern, E., *Obstetrical and Gynecological Survey*, 1969, **24**. 711.
5 Thomas, D. B., *American Journal of Epidemiology*, 1973, **98**, 10.
6 Thomas, D. B., and Anderson, R. I., *American Journal of Epidemiology*, 1974, **100**, 113.
7 Singer, A., *Lancet*, 1974, **2**, 41.
8 Singer, A., *British Journal of Obstetrics and Gynaecology*, 1975, **82**, 81.
9 Singer, A., *The Cervix Uteri of Women in Prison*, D.Phil. thesis, University of Oxford, 1973.
10 Reagan, J. W., on *Dysplasia, Carcinoma in situ and Microinvasive Carcinoma of the Cervix Uteri*, ed. L. Gray, p. 294. Springfield, Thomas, 1964.

Trasylol for Pancreatitis

SIR,—I recently (21 September 1974, p. 741) described two patients with acute pancreatitis complicated by a consumptive coagulopathy in whom treatment with aprotinin (Trasylol) coincided with a marked deterioration in pulmonary function which improved remarkably when the infusion was stopped. I suggested that aprotinin, a potent fibrinolytic inhibitor, may have permitted the build-up of fibrin deposits within the microcirculation of the lung.

Dr. G. L. Haberland (23 November, p. 469), implies that the properties of aprotinin were not fully considered when assessing its effect in our patients. The process of intravascular coagulation is certainly highly complex and involves the activation of many proteases other than plasminogen, including those in the kallekrein-kinin and complement systems. Aprotinin, a broad-spectrum protease inhibitor, may indeed have significant effects in addition to those on the fibrinolytic mechanism. However, the evidence for a beneficial effect of this material in disseminated intravascular coagulation referred to by Dr. Haberland is derived mainly from animal experiments where the fibrinolytic response may differ considerably from that in man. I am sure I am not alone in my view that it is the intravascular deposition of fibrin which is primarily responsible for the failure of organ perfusion and the haemorrhagic manifestations which are basic to this pathological process in man. It follows that, except in very rare circumstances, the normal fibrinolytic response can be only beneficial and should, if anything, be enhanced rather than suppressed.

I feel strongly, therefore, that the experience with our two patients cannot be dismissed so lightly and that until the properties of aprotinin are more clearly defined this substance should be used with extreme caution where acute pancreatitis is complicated by evidence of intravascular coagulation.—I am, etc.,

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Classification of Non-Hodgkin Lymphomas

SIR,—Professor G. Hamilton Fairley and Dr. J. E. Freeman (28 December, p. 761) state that "the precise histological type" of lymphoma is important in predicting prognosis "which in turn has a bearing on the type of treatment to be used."

The authors present a "simple classification on which treatment is based." Though this classification might work in many cases for the reasons intended, it also might lead to considerable confusion; in addition, the classification is certainly not precise. I wish to present an alternative classification of non-Hodgkin's lymphomas (see table) on which treatment may be based. I believe this is not more difficult than the one presented by Professor Fairley and Dr. Freeman, yet it corresponds more closely to that used by most pathologists and may reduce the amount of confusion.

Group 1	Follicular (nodular), poorly differentiated lymphocytic
	Well differentiated lymphocytic (chronic lymphocytic leukaemia)
Group 2	Diffuse, poorly differentiated lymphocytic
	Diffuse and follicular histiocytic

Most pathologists today classify non-Hodgkin's lymphomas on the basis of both cytological features and histological pattern as either follicular (nodular) or diffuse.[1] A lymphoma with a follicular histological pattern generally is associated with a better prognosis than the same lymphoma with a diffuse pattern. In our experience and the experience of others[2] most of the follicular lymphomas are those of the poorly differentiated lymphocytic type (about 50% of these cases at the time of the initial lymph-node biopsy are follicular), and the follicular pattern is associated with a considerably better prognosis and a longer period of survival than the diffuse type of the poorly differentiated lymphocytic lymphoma. Into which group would one place a follicular lymphoma (group 1 of Fairley and Freeman's classification) of the poorly differentiated type (group 2)? There also appears to be a difference in length of survival between patients with follicular and diffuse types of histiocytic lymphoma, though both histological types of this lymphoma appear to be considerably more aggressive than the lymphocytic types. The histiocytic lymphomas, therefore, should remain in group 2.

The well differentiated lymphocytic lymphoma, in our experience, is almost always diffuse and is always also leukaemic, being called chronic lymphocytic leukaemia when diagnosed in blood and bone marrow. The enlarged lymph nodes in chronic lymphocytic leukaemia represent the infiltration by the well-differentiated or mature-appearing lymphocytes. The disease is therefore usually widespread, but nevertheless is usually associated with a relatively good prognosis.—I am, etc.,

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1 Gall, E. A., and Rappaport, H., in *Seminar on Diseases of the Lymph Nodes and Spleen*, ed., J. R. McDonald. Chicago, American Society of Clinical Pathologists, 1958.
2 Jones, S. E., *et al.*, *Cancer*, 1973, **31**, 806.

Needs and Resources

SIR,—In your leading article "Lean Times Ahead for N.H.S. Finances" (8 February, p. 297) you refer to the extra responsibilities imposed on the N.H.S. as a result of reorganization; there are other extra responsibilities. The fall in the birth rate during the past 10 years and estimates of the size and age composition of the population during the remaining 25 years of this century suggest that the load on the N.H.S. will continue to increase while the numbers in the age groups from which nurses and paramedical staff are recruited will diminish. These trends, indeed, make sense of the slower projected growth rate in education which you mention.

The number of births in England and Wales has fallen from 867 000 in the year to mid-1965 to 653 000 by mid-1974; that means that last year there were 214 000 less births than occurred in the year nine years previously. Inevitably this means a rise in the proportion of elderly people in the population. But equally important is the continuing rise in the number of persons aged 75 years or more until the end of this century (the birth rate did not fall below 20 live births per 1000 persons living until 1924-5). The education service can be trimmed to anticipate expected changes in school entry numbers five years in advance. It is more difficult to make the correct adjustments to the allocation of resources to the N.H.S. and the personal social services

to meet the demands of an increasing number of persons in the population aged 75 years or more.

There are data that indicate that the demands are likely to be extensive. The consultation rate in general practice is 451 per 100 population for males aged 75 years or more compared with 256 for males of all ages; the figures for females are 446 per 100 compared with 343.[1] The older age group accounts for 20·9% of the average number of hospital beds used daily by males and 40·7% by females (excluding maternity beds and psychiatric hospitals). Community surveys (for example, that by Harris[2]) have found that between 30 and 40% of persons aged 75 years or over are impaired physically. It is essential that co-ordinated plans are made now between the N.H.S., personal social services, and housing authorities to meet the present and foreseen needs of the elderly.

Expenditure on housing is forecast to increase substantially in the next three years.[3] If the problems of the N.H.S. and related social services are not to be compounded and the increase in community care not frustrated local authorities must increase the number of dwellings provided by them that are suitable for disabled and elderly people. Surveys have shown that a large number of these elderly people are prepared to move house, thus releasing accommodation for others at the same time as easing some of their own physical and self-care difficulties. Your leading article, quite rightly, sounds a warning about the cut in the planned rate of increase in expenditure on the personal social services. The increase in expenditure on housing is to be welcomed—and watched, for failure here will have serious repercussions on the health and personal social services.—I am, etc.,

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1 Office of Population Censuses and Surveys, *Morbidity Statistics from General Practice, Second National Study, Studies on Medical and Population Subjects No. 26.* London, H.M.S.O., 1974.
2 Office of Population Censuses and Surveys, *Handicapped and Impaired in Great Britain*, by I. A. Harris, London, H.M.S.O., 1971.
3 House of Commons, *Public Expenditure to 1978-79*, Cmnd. 5879, London, H.M.S.O., 1975.

Financing the Health Service

SIR,—The sudden cessation of major building work at Leeds, St. Mary's, The London Hospital and no doubt in other large hospitals is indicative of a serious defect in the method by which the Department of Health and Social Security deals with the money it receives from the Treasury. It is inescapable that at department level, but not at regional level, there is insufficient distinction between money for capital works and that for recurrent expenditure. The two should never be confused.

An increase in recurrent expenditure caused by inflation and a sudden reduction in Government spending has been dealt with in the D.H.S.S. by a savage cut back in agreed capital expenditure. This is the real cause of "Leeds Infirmary blues." The solution is clear. The whole cost of building projects should be allocated to the appropriate authority at the time of consent to the building. Indeed it would be salutary for the authority to be given the money outright, thus providing a real sanction against last-minute expensive alteration of plans.

The Department of Trade and Industry manages its affairs much more realistically than does the D.H.S.S. A grant is made to an ailing industry and that is that. There is no question of telling the workers' co-operative at Meriden that they can have £5m. but after one year and the expenditure of only £1m. telling them that they can have nothing further.

Of course in the first four years of the change of policy, assuming that four years is the average time from laying foundations to completion of building, some projects would have to be postponed, but after that the progress of capital works would be sustained and the Treasury would have to face the realities of inflation in the N.H.S. as it does in other departments of state. It would be unable to solve its difficulties in recurrent expenditure by raiding sums allocated and agreed for capital works, as at Leeds, because these would have been paid for already.—I am, etc.,

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Unusual Diathermy Hazard

SIR,—We report an unusual hazard which resulted in three patients receiving diathermy burns during general anaesthesia. The sites of the burns in all cases were the four contact points of E.C.G. electrodes attached to Videograph E.C.G. oscilloscopes used as monitoring devices. The accidents occurred in different operating theatres using different diathermy machines and different oscilloscopes. In each case the indifferent electrode of the diathermy was a large flexible plate attached firmly to the mid thigh. The E.C.G. electrode contacts were made by metal discs 1 cm in diameter mounted on adhesive plaster (as supplied by Dracard Ltd.) and skin contact was by small blobs of E.C.G. paste. In the three cases there was prolonged use of the diathermy.

Seemingly the burns occurred as a result of small zones of high density current passing through the E.C.G. contacts, despite apparently good surface contact of the skin with the indifferent electrode of the diathermy, and the excessive heat was the consequence of prolonged and intensive use of the diathermy. The good skin surface contact of the diathermy plate and its electrical continuity was confirmed by two experienced physicists. The diathermy machine was a modern one with an alarm system for detecting failure of the continuity of the connexion to the indifferent electrode plate. This suggests that the margin of safety of the flexible diathermy plate may not, despite visually good skin apposition, be adequate to safeguard the patient when high diathermy currents are used in conjunction with small E.C.G. contact discs—that is, the leakage current through these contacts may still be sufficiently great to cause harm.

The Dracard E.C.G. contacts are very good and for routine use they provide consistently better electrical continuity between the patient and the E.C.G. cable leads than do the more traditional large metal plates with screw-in leads. They need less E.C.G. salt paste and result in less skin irritation than do the traditional plates. They are also conveniently quick to apply. Therefore, rather than abandon the use of these electrode discs, we recommend that each lead of E.C.G. cables used with monitoring devices during anaesthesia should have a 10 kΩ resistor placed in series with the leads close to the patient end of the cable, as is already done in leads supplied by some manufacturers. This might cause some minor degradation of the E.C.G. signal, but that is a small price to pay for safety.—We are, etc.,

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E.C.G. Abnormalities Associated with Raised Intracranial Pressure

SIR,—It was with interest that we read the careful study by Dr. S. J. Jachuck and others (1 February, p. 242) on the effects of rising intracranial pressure on the electrocardiogram. We have shown that, though E.C.G. abnormalities are common in patients with strokes, most of these patients do have significant cardiac disease on histological examination.[1] With these facts in mind it is noteworthy that the only young subject (case 5) was found to have no E.C.G. abnormality other than a notched T wave, even when his C.S.F. pressure rose to 85 mm Hg, whereas cases 1 and 2, who were middle-aged men, developed S-T changes in conjunction with tachycardia.

We suggest therefore that though the authors have made a good case for the close correlation of U-wave changes with raised intracranial pressure, the S-T changes found may be more directly related to coronary artery disease.—We are, etc.,

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1 Tomkin, G., Coe, R. P. K., and Marshall, J., *Journal of Neurology, Neurosurgery, and Psychiatry*, 1968, 31, 250.

Lumbar Puncture

SIR,—In your leading article on this subject (4 January, p. 3) the statement that "examples [of the need to include lumbar puncture in the management of neurological diseases] include the decision to give anticoagulants to a patient with a stroke in evolution" implies that if blood is not present anticoagulants may be given. Post-mortem experience of strokes shows that the absence of blood in the spinal fluid is no guarantee that a haemorrhage has not occurred. Indeed, it has been stated that in cerebral haemorrhage the spinal fluid is bloody in only 80% of cases.[1]

Furthermore, it was pointed out by Hurwitz[2] that in stroke in evolution "the differential diagnosis between infarction,