patients the depletion in dopamine could affect not only the nigrostriatal synapses but also other tracts of the accessory motor pathway.

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Reptilase test in cirrhosis and hepatocellular carcinoma

SIR,—I read with interest the report by Dr P J Johnson and others (1 October, p 869) of their experience with the reptilase test in patients with various liver diseases, in which these authors contrasted their data with those which I had recorded in a group of Africans with primary liver cancer.¹ Pursuing the latter studies on a group of British patients I became aware of striking differences, particularly in regard to dysfibrinogenemia. Unfortunately Dr Johnson and his colleagues do not appear to have evaluated this phenomenon. In my experience the reptilase test has been consistently abnormal in British and African patients with primary liver cancer, with and without coexistent cirrhosis, in contrast to the normal results obtained in patients with carcinoma metastatic to the liver. However, the corresponding information in cirrhosis uncomplicated by tumour does indicate that many of these patients do have an abnormal reptilase test in the absence of dysfibrinogenemia. These data have been presented on a number of occasions,²⁻⁴ and a detailed account is to appear shortly.⁵ It includes a description of the modified reptilase test and a putative explanation for the racial differences and the apparently discrepant findings in cirrhosis.

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¹ Barr, R D, *et al*, *Quarterly Journal of Medicine*, 1976, **45**, 647.

² Barr, R D, Allardyce, M, and Brunt, P W, *Proceedings of the American Association for Cancer Research*, 1977, **18**, 15.

³ Barr, R D, Allardyce, M, and Brunt, P W, *Scottish Medical Journal*, 1977, **22**, 242.

⁴ Barr, R D, *et al*, Meeting of Pathological Society of Great Britain and Ireland, Aberdeen, July 1977.

⁵ Barr, R D, *et al*, *Journal of Clinical Pathology*. In press.

Confidentiality and life insurance

SIR,—As a general practitioner I am becoming progressively more concerned by the requests made by life insurance companies for information on the medical histories of our patients, particularly as they appear to be more and more interested in any history of mental disturbance, however trivial.

When a patient talks to his doctor in the privacy of his consulting room he does so with the assumption that this privacy will be maintained in every respect, and future life insurance is probably the last thing on his mind. If it were, then important information such as previous mental problems and alcohol and tobacco consumption might well be withheld for fear of future repercussions.

It does not appear to be general knowledge among the public that any information given to their doctor might be divulged to an insurance company; nor does it appear to be general knowledge that when a proposal for life insurance is signed the "life" is giving the

insurance company permission to obtain information from his general practitioner. I am surprised by the number of patients who are astonished when they discover that I have let an insurance company have details of their previous illnesses or operations.

It therefore seems that we either have to abandon the pretence of "patient confidentiality" and continue to treat patients' notes rather like vehicle registration documents, disclosing their contents without the knowledge of many of our patients, or this whole insidious business should be made public knowledge so that the public themselves can decide what they want their doctors to know and what they want life insurance companies to know.

In the meantime perhaps we should all display notices in our waiting rooms letting our patients know that whatever they say to us in private will be taken down and may be used in evidence against them when they come to apply for life insurance.

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Circadian rhythms and affective disorder

SIR,—Nikitopoulou and Crammer¹ refer to the need for a neurological theory to account for the disturbance in circadian rhythms seen in endogenous depression, a theory that views this illness as a disturbance in brain centres or organ function rather than in synapses or cellular function. They nicely demonstrate a disorganisation in diurnal body temperature rhythm in those kinds of depressive episode which are also characterised by early morning waking and by a diurnal variation in depth of depression.

Temperature regulation, sleep, and mood have all been shown to be influenced by hypothalamic stimulation or destruction.² The possible diencephalic integration of brain centres thus implied was in fact elaborated into a neurological theory,³ further developed⁴ under the general concept of a central nervous reticular autonomy pervading and co-ordinating such multicellular organisms as ourselves from an emotive hormonal core or heart, through a neural "circulation"^{5,6} in which visceral efferents are "arterial" and visceral afferents "venous" and synapses play the role of one-way valves.

Less certainly recognised than the diurnal variation in the depth of mood in endogenous depression is a similar diurnal swing in the intensity of some anxiety states. It has been observed⁷ that depressed patients occasionally feel worse towards the latter part of the day if anxiety is a prominent part of the clinical picture; but may it not be that this is a manifestation of a certain kind of anxiety itself and that such anxiety may sometimes complicate or be mixed with depression (rather than be an intrinsic occasional feature of the latter) somewhat as other mixed mental states occur? This would be in better keeping with the different diurnal patterns of sleep disturbance seen in depression and anxiety. Thus early morning waking is followed by greater depth of depression in the morning decreasing as the day wears on, whereas anxiety increasing towards the latter part of the day is followed by difficulty in getting off to sleep at night. It would be interesting to see if a disturbance in diurnal body temperature rhythms occurs in such states of anxiety,

which are perhaps as much endogenous as the equivalent kind of depression. The former do seem, however, to be less subject to the regular swings of mood over periods of weeks to months seen in manic depressives, and this might make a significant change in body temperature rhythm difficult to observe.

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¹ Nikitopoulou, G, and Crammer, J L, *British Medical Journal*, 1976, **1**, 1311.

² Fulton, J F, *Physiology of the Nervous System*, 2nd edn. London, Oxford University Press, 1943.

³ Crawford, J P, *Proceedings of the Royal Society of Medicine*, 1957, **50**, 704.

⁴ Crawford, J P, *American Journal of Psychiatry*, 1962, **118**, 741.

⁵ Crawford, J P, *Medical Press*, 1960, **244**, 525.

⁶ Crawford, J P, *Medical Press*, 1961, **245**, 139.

⁷ Rees, W L L, *Short Textbook of Psychiatry*, 2nd edn. London, Hodder and Stoughton, 1976.

Anxieties and fears about plutonium

SIR,—I write, as one with more interest in the politics of plutonium than in the technology of its production, in response to correspondence which you have printed (12 November, p 1288) about the article by Dr R H Mole (17 September, p 743).

It seems strange that in an article written to explain the background of the plutonium controversy to busy doctors Dr Mole should go to such trouble to review the literature about the possibility of plutonium causing lung cancer among those who work with it while dismissing what to many people is the important case against the mass production of plutonium and the much more toxic radioactive waste products with the unsupported words, "Nowadays the hypothesis that increased mutation from radiation could threaten the survival of the human race has lost scientific credibility."

If this statement can be supported then it should be supported. Otherwise it will be dismissed as rhetoric unless, of course, it means that Dr Mole's opinion is that a level of radiation high enough to threaten the human race with extinction by mutation would be high enough to kill us all from radiation sickness or render us all sterile.

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Lecithin : sphingomyelin ratio and presence of vernix in amniotic fluid

SIR,—We would like to report the results of a study relating the lecithin : sphingomyelin ratio (LSR) to the presence of vernix in the amniotic fluid. We felt that if a relationship could be established the maturity of the fetus would be better assessed by viewing the amniotic fluid through an amnioscope, a less invasive technique than amniocentesis.

Amniotic fluid from 79 consecutive successful amniocenteses was studied. The fluid was held against a good light and classified subjectively as clear, cloudy with doubtful presence of vernix, or vernix definitely present. The LSR was then measured.

The number of cases in each category is presented in the accompanying table. A strong association between the presence of vernix and a mature LSR is seen. This association is probably due to the common factor of gestational age. Although a mature