grey and breathless in her cot. A tachycardia of 240/min was noted which settled over the following four hours. Examination showed no evidence of cardiac failure. A chest x-ray was normal. An ECG the next morning revealed a sinus tachycardia of 180/min. Her subsequent progress was uneventful and she was discharged home on her 65th day weighing 2.42 kg.

She failed to keep her follow-up appointment and we later learnt that she had been found dead in her cot unexpectedly at home at the age of 10 weeks. Post-mortem examination revealed no abnormalities.

One feels after reading the article by Dr Keeton and his colleagues, that a more detailed investigation by means of a 24-h ECG tape would have been helpful and perhaps life-saving.

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ECT in underdeveloped countries

SIR,—The guidelines by the Royal College of Psychiatrists on the use of electric convulsion therapy (ECT)¹ (10 September, p 713) have implications for psychiatric practice not only in the UK but also in those underdeveloped countries which depend upon Britain for expatriate staff and for training local students. Since the use of a double standard in the administration of such a controversial treatment is clearly unacceptable, attention needs to be drawn to the problems of applying the recommended standards of administration of ECT in underdeveloped countries and the possible consequences of not applying them.

The memorandum states without qualification that "every patient having ECT should be anaesthetised and given a muscle relaxant by an anaesthetist." This has become standard practice in the UK following recognition that it reduces the risk of bone injury and lessens the patient's distress. In underdeveloped countries, however, shortage of anaesthetists and resuscitative equipment means that ECT is usually given "straight"—that is without anaesthetic and muscle relaxant. A study² of complications associated with straight ECT administered to 1105 patients at Butabika Hospital, Kampala, during 1972 and 1973 recorded two cases of serious bone fracture. A related study³ in 1972 confirmed that observers of straight ECT find it an unpleasant and frightening spectacle. Recognition of the disturbing effect of even modified ECT upon a patient who happens to see or hear another being treated⁴ presumably underlies the recommendation that patients should be treated singly and if possible in a single room. This need for privacy is not always observed in the crowded psychiatric institutions of underdeveloped countries.

When anaesthetists and resuscitative equipment are not available it becomes especially important to "weigh any possible disadvantages of ECT against the probable benefits." The problems facing doctors in underdeveloped countries who have to make such decisions have been discussed by Orley⁵: "Doctors in a hospital admitting over 60 patients a week and who usually do not speak the patients' language find it almost impossible to do more than give rough symptomatic treatment with medication and ECT, and sometimes do not bother with the niceties of diagnosis."

The evidence which is available^{6, 7} suggests that the incidence of severe depressive illness at Butabika Hospital at the time of the above

investigations was relatively low. One might therefore expect, in view of the evidence presented in the memorandum, that ECT would have been prescribed relatively infrequently. However, comparison of the number of patients receiving ECT (1105 for 1972 and 1973 combined)² with the annual admission rate (2900²) suggests that this was not the case. Hays⁸ has cautioned against "a tendency, in overcrowded and under-doctored institutions, to use it [ECT] too frequently on incompletely assessed patients." It is also recognised that under such conditions there is an increased risk of ECT being used as a method of control rather than as a therapeutic intervention. The RCPsych guidelines, if followed, should help to safeguard against such abuse. However, given the problems which Orley refers to and the high rate of illiteracy in the Third World, it is hard to see how the important recommendations concerning written informed consent could be implemented in underdeveloped countries. In the UK some protection against the misuse of ECT is provided by pressures such as the court hearing in the 1950s (*Bolam v Friern Hospital Management Committee*), which stimulated a series of inquiries into the risks associated with straight ECT, and the recent public pressures which precipitated the publication of the RCPsych guidelines. Such pressures will normally be absent in underdeveloped countries, where the social distance between patients and doctors is far greater than in the UK and where patients are less likely to be aware of their limited legal rights. This is another factor indicating a need for a critical appraisal of the use of ECT in the Third World.

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¹ Royal College of Psychiatrists, *British Journal of Psychiatry*, 1977, **131**, 261.

² Revill, M G, and Cox, J L. Unpublished observations.

³ Farrant, W, Cox, J L, and Farrhounumund, N. Unpublished observations.

⁴ Slater, E, and Roth, M, *Clinical Psychiatry*, p 234. London, Balliere, Tindall, and Cassell, 1969.

⁵ Orley, J, *East African Medical Journal*, 1972, **49**, 18.

⁶ Wood, J F, in *Uganda Atlas of Disease Distribution*. Kampala, Makerere University, 1968.

⁷ German, G A, *British Journal of Psychiatry*, 1972, **121**, 461.

⁸ Hays, P, *New Horizons in Psychiatry*, p 100. Harmondsworth, Penguin Books, 1964.

Thrombophlebitis with intravenous naftidrofuryl oxalate

SIR,—We wish to add our comments to the several letters regarding the paper by Mr C R J Woodhouse and Mr D G A Eadie (21 May, p 1320) concerning thrombophlebitis associated with naftidrofuryl (Praxilene) infusion as we feel that neither the pH nor the drug itself is responsible for the observed complication.

In hospitals where a pharmacy cannot provide a comprehensive additive service it is well known that drugs added to an infusion at ward level can result in particulate and bacterial contamination of the delivery system. The contamination has been associated with a number of complications, which include infusion phlebitis.^{1, 2} Where five ampoules of Praxilene must be opened to prepare an infusion the risk of contamination at ward level must be assumed to be high.

The pharmacy at this hospital has overcome the problem in the following manner. Naftidrofuryl 200 mg is dissolved in 225 ml 0.8%

sodium chloride, and the solution is filtered through a 1.2- μ m membrane filter which has a diameter of 47 mm. The filtrate is autoclaved at 121°C for 35 min. The content of naftidrofuryl is assayed using the technique of Cawood and Marshall³ and the solution was found to be stable for one year at room temperature. Over a one-year period starting in July 1976 over 500 doses of the drug prepared in this manner have been infused intravenously and no instances of infusion phlebitis or complications from contamination have been recorded by vigilant observers.

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¹ De Luca, P P, et al, *American Journal of Hospital Pharmacy*, 1975, **32**, 1001.

² Phillips, I, et al, *Proceedings of International Symposium, University of Sussex, March 1976*. Lancaster, MTP, 1976.

³ Cawood, A, and Marshall, I W, *Journal of Hospital Pharmacy*, 1975, **33**, 149.

Cerebral vascular disease and cortical function

SIR,—With reference to the article by Dr J C Murdoch and others (23 July, p 226) and the letter from Dr W Hughes (10 September, p 702) it might be of interest to your readers to hear of the surprising results of the neuropathological investigations carried out on the brains of two individuals who were of great significance to twentieth century history, President von Hindenburg and V I Lenin. The former died in old age after a period of progressive dementia with a few episodes of sudden loss of consciousness towards the end. His brain showed no trace of vascular disease. Lenin died at 54 after recurrent attacks of cerebral vascular accident, in between which he invariably regained his usual extreme intellectual ability and efficiency. His brain was riddled with necrotic areas in all stages and the little amount of apparently unaffected parenchyma aroused great amazement as to the patient's mental performance immediately before his death. Unfortunately I have not been able to trace the reference to the publication in which these two post-mortems are compared—a not entirely anecdotal contribution to the discrepancy between clinical assessment of cortical function and morphological evidence occasionally encountered.

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Complications of high translumbar aortography

SIR,—Mr C W Imrie and his colleagues, in their short report on cases of pancreatitis following translumbar aortography (10 September, p 681), assume that this was induced by direct damage to the pancreas although puncture was at the appropriate level in only two of the cases. I suspect that this complication is more likely to be due to direct toxicity of the contrast medium. Iothalamate and diatrizoate compounds are less toxic than acetrizoate, diodone, or sodium iodide. They are, however, more toxic than normal saline and it seems likely that the toxic effects are