useful quick test of functional iron deficiency, but we agree with Macdougall and colleagues that further studies are required. Meanwhile, adequate oral supplements (about 300 mg/day of elemental iron) should be given; parenteral iron, with its attendant problems, should be reserved for those who cannot, or will not, take oral iron. The serum ferritin concentration should be measured monthly until the target haemoglobin concentration is achieved, followed by estimations every two to three months thereafter.

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1 Macdougall IC, Cavill I, Hulme B, Bain B, McGregor E, McKay P, *et al.* Detection of functional iron deficiency during erythropoietin treatment: a new approach. *BMJ* 1992;**304**: 225-6. (25 January.)
2 Macdougall IC, Hutton RD, Cavill I, Coles GA, Williams JD. Poor response to treatment of renal anaemia with erythropoietin corrected by iron given intravenously. *BMJ* 1989;**299**:157-8.
3 Gokal R, Millard PR, Weatherall DJ, Callender STE, Ledingham JGG, Oliver DO. Iron metabolism in haemodialysis patients: a study of the management of iron therapy and overload. *Q J Med* 1979;**48**:369-91.
4 Cook JD. Clinical evaluation of iron deficiency. *Semin Haematol* 1982;**19**:6-18.

Back pain and thrombolysis

SIR,—Timothy J Hendra and Andrew J Marshall report that four of the 77 elderly patients who received thrombolytic drugs in Derriford Hospital experienced back or abdominal pain.[1] Although back pain after thrombolysis has been reported before,[2] little is known about the frequency of its occurrence or its cause.

So far, 174 patients have received anistreplase during the Royal College of General Practitioners' myocardial infarction study, and four have subsequently experienced back pain (table). One patient's low back pain was severe enough to require the discontinuation of the injection and the administration of diamorphine and Entonox. All patients recovered within a few minutes. Interestingly, the first patient subsequently received alteplase in hospital because screening for clotting on admission gave normal results. This may support the hypothesis that back pain after thrombolysis is an allergic manifestation,[2] although none of the patients had any other symptoms of an allergic reaction. It would be interesting to know if any patients who had been given alteplase have experienced similar problems, since this agent is thought to produce a low allergic response.

It is worth noting that in the royal college's study two of the doctors did not think that the events were serious or related to treatment when they completed their recruitment forms, although on further questioning one doctor did wonder whether the backache was related to treatment. Thus it is likely that half of the episodes would not have been reported to the Committee on Safety of Medicines through the yellow card scheme. This illustrates the need for the careful monitoring of any newly introduced drug and supports the rationale for the study, which is primarily a postmarketing surveillance study of anistreplase.

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1 Hendra TJ, Marshall AJ. Increased prescription of thrombolytic treatment to elderly patients with suspected acute myocardial infarction associated with audit. *BMJ* 1992;**304**:423-5. (15 February.)
2 Shah M, Taylor RT. Low back pain associated with streptokinase. *BMJ* 1990;**301**:1219.

Diagnosing Alzheimer's disease

SIR,—R E Butler and colleagues suggest that single photon emission tomography is the imaging method best tolerated by elderly demented subjects.[1] As evidence they cite our work, in which 138 of 178 patients with Alzheimer's disease had computed tomography,[2] and their success in scanning 22 demented patients with single photon emission tomography. It would be a shame if the general medical reader was to believe this.

Our sample of 178 patients included many who were severely demented and could participate in few investigations. Many had difficulty in completing an interview and were physically disabled or behaviourally disturbed. It is not clear from what population Butler and colleagues chose their sample, but it was probably highly selected. Thus, one could say that the procedure was well tolerated in those selected to undergo it. We have carried out studies of single photon emission tomography[3-5] and can assure readers that the intravenous injection and 15 minute scan used are less well tolerated than a non-invasive computed tomographic scan lasting about a quarter of the time.

Finally, single photon emission tomography and computed tomography measure different things (cerebral blood flow and structure, respectively) and thus should be seen as complementary and not exclusive.

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1 Butler RE. Diagnosing Alzheimer's disease. *BMJ* 1992;**304**: 574-5. (29 February.)
2 Burns A, Jacoby R, Philpot M, Levy R. Computerised tomography in Alzheimer's disease. Methods of scan analysis. Comparison with normal controls and clinical/radiological association. *Br J Psychiatry* 1991;**159**:609-14.
3 O'Brien J, Eagger S, Levy R. A study of regional cerebral blood flow and cognitive performance in Alzheimer's disease. *J Neurol Neurosurg Psychiatry* (in press).
4 Burns A, Philpot M, Costa D, Ell P, Levy R. Investigation of dementia of the Alzheimer type with single photon emission tomography. *J Neurol Neurosurg Psychiatry* 1989;52:248-53.
5 Philpot M, Costa DC, Burns A, Ell P, Levy R. SPET in Alzheimer's disease—a follow up study. *International Journal of Geriatric Psychiatry* 1991;**6**:767-74.

Details of patients who experienced back pain after anistreplase was given in the community

Sex	Age (years)	Interval between onset of infarction and administration of anistreplase (hours:minutes)	Events following treatment	Timing of event in relation to anistreplase	Other treatments given	Time for pain to resolve (minutes)	GP's assessment of relation between events and anistreplase
F	41	5:10	Vomiting, backache	During injection	Diamorphine, prochlorperazine	5	Not related
F	66	4:10	Very severe lower back pain	During injection (injection discontinued)	Diamorphine,* Entonox*	10	Serious related event
M	72	4:00	Nausea and sweating for 5 minutes; pain in back for 5 minutes	5 Minutes after start of injection	Diamorphine, metoclopramide	5-10	Related event
M	74	1:10	Moderate back pain	Immediately after injection	Frusemide, Cyclimorph 15	10	Did not initially think related, but on reflection wondered if it might be

*Given for back pain.

Monitoring lithium treatment

SIR,—R F Kehoe and A J Mander report that similar patients receiving lithium are monitored by general practitioners and hospital doctors but the "stringency of lithium surveillance varies greatly among doctors" and "certain aspects of practice gave cause for concern."[1]

During my training in general practice in Sidcup, Kent, a computer search of all the patients receiving repeat prescriptions for lithium showed that, out of a practice population of just under 14 000, only 15 were receiving lithium. Their ages ranged from 26 to 81.

The protocol recommended by the local psychiatrist was three monthly monitoring of lithium concentration in patients whose condition was stable. The study showed that, in 12 of the 15 patients, the lithium concentration had been measured only once in the previous six months in five patients, once in the previous year in two, and once in the previous two years in two, and three had not had their concentration checked in the previous three months, as recommended by the psychiatrist. Thirteen patients had been seen in consultations at the surgery in the previous four months, thus giving ample time for opportunistic screening. In fact, two patients had asked for their serum lithium concentration to be checked as they were worried about toxicity. It is not surprising, therefore, that "medical insurance companies report 10% of claims for negligent psychiatric practice are associated with inadequate lithium monitoring."

In view of the poor results a protocol was set up whereby patients picking up their regular three monthly prescription for lithium were sent to the practice nurse for measurement of their serum lithium concentration. Also, as recommended by the local psychiatrist, each year serum urea, electrolyte, and creatinine concentrations were measured, thyroid function tests done, and a midstream specimen of urine examined. The results were reviewed by the practitioner, who recalled the patient immediately if necessary.

Now that general practitioners are increasing their supervision of patients it is important that they are given full responsibility for setting up their own protocols for monitoring patients receiving lithium. These protocols should be suited to the needs of the clinical guidelines of the local psychiatrist. This is far better than the method used by Kehoe and Mander, whereby the chemistry laboratory sent reminders to practitioners of patients known to be receiving lithium who had not had serum concentrations estimated in the previous three months. The new protocol for monitoring patients receiving lithium in this practice will be used for medical audit in the future.

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1 Kehoe RF, Mander AJ. Lithium treatment: prescribing and monitoring habits in hospital and general practice. *BMJ* 1992;**304**:552-4. (29 February.)

SIR,—R F Kehoe and A J Mander's advice on action to be taken when serum lithium concentrations are high was useful.[1] It did not, however, help