respiratory depression.⁵ Both codeine⁶ and dihydrocodeine,⁷ which are constituents of two of the three opiate preparations identified in this study (table), have been reported to cause prolonged narcosis in patients with renal impairment. NSAIDs can exacerbate existing renal impairment and can, in their own right, cause renal damage, eg, tubulo-interstitial nephritis.⁸

The risks of drug toxicity amongst elderly patients with renal impairment, could be reduced by increasing awareness that renal impairment can accompany normal serum creatinine concentrations, and that prescribing

opiates and NSAIDs in the presence of renal impairment is potentially dangerous. To further minimise drug toxicity, the creatinine clearances of elderly patients could be routinely calculated on deciding their discharge and their drug prescriptions reviewed before discharge. We plan to disseminate these guidelines (box 2) within our unit and to review their effects on the recognition of renal impairment and on discharge drug prescribing in a future study.

We thank Professor J Grimley Evans and Drs PJ Cook, DS Fairweather and SJ Winner for permitting the study of their patients' data and for reviewing this manuscript, and Ann Jeffries for help in collating the study data.

- 1 Brown WW, Davis BB, Spry LA, *et al.* Aging and the kidney. *Arch Intern Med* 1986;146:1790-6.
- 2 Joint Formulary Committee. *British National Formulary*. London: British Medical Association and Royal Pharmaceutical Society of Great Britain, March 1996.
- 3 Cockcroft DW, Gault MH. Prediction of creatinine clearance from serum creatinine. *Nephron* 1976;16:31-41.
- 4 Gral T, Young M. Measured versus estimated creatinine clearance in the elderly as an index of renal function. *J Am Geriatr Soc* 1980;28:492-6.

- 5 Fitzgerald J. Narcotic analgesics in renal failure. *Conn Med* 1991;55:701-4.
- 6 Matzke GR, Chan GLC, Abraham PA. Codeine dosage in renal failure. *Clin Pharm* 1986;5:15-6.
- 7 Barnes JN, Goodwin FJ. Dihydrocodeine narcosis in renal failure. *BMJ* 1985;290:740-2.
- 8 Clive DM, Stoff JS. Renal syndromes associated with nonsteroidal anti-inflammatory drugs. *N Engl J Med* 1984;310:563-72.

Images in medicine

A fortunate adverse drug reaction

A 21-year-old woman presented with this isolated lesion suggestive of superficial skin necrosis of her left lower leg. She was hospitalised and a skin biopsy demonstrated limited purpura fulminans. A thorough search failed to reveal the presence of any infection or thrombophilic state, leading to a clinical suspicion of an unusual manifestation of drug hypersensitivity. The patient's history included Arnold-Chiari malformation, mild mental retardation and 'recurrent seizures' for which she had been prescribed phenytoin (600 mg/day, serum levels 16 µg/dl) a couple of months earlier. Close observation and electroencephalogram studies during the attacks revealed them to be 'pseudoseizures'. Phenytoin was discontinued with no ill effects and the skin lesion gradually cleared spontaneously.

A SCHATTNER
A FRUMKIN

Department of Medicine, Hebrew University,
Hadassah Medical School, Jerusalem, Israel

Accepted 24 October 1997