2 Laporte JR, Carné X, Vidal X, Moreno V, Juan J. Upper gastrointestinal bleeding in relation to previous use of analgesics and non-steroidal anti-inflammatory drugs. *Lancet* 1991;337:85-9.

3 Registre de Malalts Renals de Catalunya. Deu anys del Registre de Malalts Renals de Catalunya. *Bulleti Epidemiologic de Catalunya* 1994;15:165-7,173-6.

4 Morlans M, Laporte JR, Vidal X, Cabeza D, Stolley PD. End-stage renal disease and non-narcotic analgesics: a case-control study. *Br J Clin Pharmacol* 1990;30:717-30.

5 Perneger TV, Whelton PK, Klag MJ. Risk of kidney failure associated with the use of acetaminophen, aspirin, and non-steroidal antiinflammatory drugs. *N Engl J Med* 1994;331:1675-9.

6 Kaufman DW, Kelly JP, Levy M, Shapiro S. *The drug etiology of agranulocytosis and aplastic anemia*. New York: Oxford University Press, 1991.

7 Van der Klauw MM, Stricker BHC, Herings RMC, Cost WS, Valkenburg HA, Wilson JHP. A population based case-cohort study of drug-induced anaphylaxis. *Br J Clin Pharmacol* 1993;35:400-8.

Mefenamic acid is more dangerous than most

EDITOR,—We are particularly concerned about the continued use of mefenamic acid in elderly patients.¹ Despite its apparent popularity this drug can provoke frank colitis in patients with no known predisposing factors² and is neurotoxic in overdose. Reports of acute renal failure due to mefenamic acid, mainly affecting elderly people, have appeared steadily over the past 15 years.^{3,4} Most patients presented with abdominal pain and diarrhoea and were not oliguric; not all cases were reversible.

We have recently seen five patients with non-oliguric renal failure. The table gives their clinical histories. Diarrhoea was a feature in only two patients, the rest presenting non-specifically with immobility and falls, though all were clinically dehydrated. One patient (case 1) had a history of renal calculi but had had normal renal function documented previously; no other patient had a history of renal disease. In all cases, mefenamic acid was stopped and fluid replacement and antibiotic treatment given. All patients improved clinically and biochemically initially; three recovered fully, but two died subsequently (one (case 1) of bronchopneumonia and the other (case 2) of cardiac failure).

Intrarenal prostaglandins play an important part in maintaining renal perfusion and hence the glomerular filtration rate when the renin-angiotensin system is activated—for example, in salt and water loss, diuretic treatment, or heart failure. This autoregulatory mechanism can be abolished by non-steroidal anti-inflammatory drugs, which therefore have the potential to cause clinically important renal impairment as well as fluid retention and hypertension. Elderly people seem particularly susceptible to these effects. In our series of patients four were receiving diuretic treatment, all five had evidence of urinary tract infection potentially leading to fluid depletion, and two presented with diarrhoea. Thus all had reason to be susceptible to the nephrotoxic effects of mefenamic acid. The indication for mefenamic acid in these patients was in all cases musculo-skeletal pain, which was due to degenerative rather than inflammatory disease and for which, in our opinion, safer and more appropriate treatments (both pharmacological and physical) exist.

An authoritative pharmacological text recently stated: "It has been argued for more than a decade that, since a wide range of effective and less toxic drugs are available, there seems no reason for

continuing to prescribe mefenamic acid."⁵ It is time that this advice was heeded.

DAVID J GRANT
Consultant physician in geriatric medicine
Liberton Hospital,
Edinburgh EH13 0EQ

A M MACCONNACHIE
Principal pharmacist
Ninewells Hospital,
Dundee DD1 9SY

1 Bateman DN, Kennedy JG. Non-steroidal anti-inflammatory drugs and elderly patients. *BMJ* 1995;310:817-8. (1 April.)

2 Hall RJ, Petty AH, Cobden I, Lendrum R. Enteritis and colitis associated with mefenamic acid. *BMJ* 1983;287:1182.

3 Robertson CE, Ford MJ, Van Someren V, Dlugolecka M, Prescott LF. Mefenamic acid nephropathy. *Lancet* 1980;iii:232-3.

4 Taha A, Lenton RJ, Murdoch PS, Peden NR. Non-oliguric renal failure during treatment with mefenamic acid in elderly patients: a continuing problem. *BMJ* 1985;291:661-2.

5 Dukas MNG, ed. *Meyler's side effects of drugs*. 12th ed. Amsterdam: Elsevier, 1992.

Authors' reply

EDITOR,—Adrian Hopper correctly draws attention to the adverse effects of codeine, to which we alluded. In practice, however, many patients have self administered paracetamol before their consultation, and the combined products we mentioned are an alternative in such situations, although we endorse paracetamol as a first line treatment for most patients. Low doses of codeine may cause adverse reactions of the type Hopper mentions, but in our experience this is uncommon and may be minimised if patients are given advice during the consultation.

Charles M Grossman mentions enteric coated aspirin. We limited our article to the management of aches and pains in elderly people and therefore evaluated aspirin as an analgesic rather than as prophylaxis against vascular disease. The doses of aspirin used to attain analgesia are far larger than those used for vascular prophylaxis. While it is true that several studies suggest that enteric coated forms of aspirin and other non-steroidal anti-inflammatory drugs carry a reduced risk of adverse effects,^{1,4} there have been criticisms of the small size of such studies and the possible presence of confounding factors; in addition, the doses of aspirin used were generally less than those required for analgesia, and several studies involved endoscopic or radiological evaluation of healthy young volunteers after short courses of aspirin. The study by John Weil and colleagues mentioned by Grossman examined prophylactic aspirin rather than analgesic doses.⁴ Furthermore, the authors cautioned that substituting low dose enteric coated aspirin is unlikely to eliminate risk in view of evidence that non-steroidal anti-inflammatory drugs exert their adverse effects at least partially by systemic distribution. Therefore we would advise extreme caution in treating elderly patients with analgesic doses of aspirin even if an enteric coated formulation is used. The effect of enteric coated aspirin in older patients in the general population taking analgesic doses is unclear and requires further study.⁵

We apologise to Joan-Ramon Laporte and colleagues for inadvertently misquoting their work. They reported an incidence of upper gastrointestinal bleeding of 210 cases per 100 000 people, rather than per million people over 60 as we stated. This, however, strengthens our comment that non-steroidal anti-inflammatory drugs are best

avoided in patients over 60, since the incidence is 10 times higher and the difference between young and old people remains pronounced (2100 per million over 60; 350 per million under 60). Their figure emphasises even more the public health impact of iatrogenic disease caused by inappropriate use of non-steroidal anti-inflammatory drugs in elderly people.

D N BATEMAN
Reader in therapeutics
J G KENNEDY
Lecturer in primary care therapeutics
Northern and Yorkshire Regional Drug and Therapeutics Centre,
Wolfson Unit of Clinical Pharmacology,
University of Newcastle upon Tyne,
Newcastle upon Tyne NE1 4LP

1 Willett LR, Carson JL, Strom BL. Epidemiology of gastrointestinal damage associated with non-steroidal anti-inflammatory drugs. *Drug Safety* 1994;10:170-81.

2 Guess HA, West R, Strand LM, Helston D, Lydick EG. Fatal upper gastrointestinal haemorrhage or perforation among users and non-users of non-steroidal anti-inflammatory drugs in Saskatchewan, Canada 1983. *J Clin Epidemiol* 1988;41:33-45.

3 Savesin SM, Boyce HW, King CE, Mann JA, Ruoff G. Comparative evaluation of gastrointestinal intolerance produced by plain and tri buffered aspirin tablets. *Am J Gastroenterol* 1988;83:1220-5.

4 Hawthorne AB, Mahida YR, Cole AT, Hawkey CJ. Aspirin-induced gastric mucosal damage: prevention by enteric-coating and relation to prostoglandin synthesis. *Br J Clin Pharmacol* 1991;32:77-83.

5 Weil J, Colin-Jones D, Langman M, Lawson D, Logan R, Murphy M, et al. Prophylactic aspirin and risk of peptic ulcer. *BMJ* 1995;310:827-30. (1 April.)

Rethinking consultants

EDITOR,—A spate of recent publications¹⁻⁴ and the Rethinking Consultants series in the *BMJ*,⁵ propose timely challenging suggestions for post-graduate clinical career progress and subsequent practice. Although the general philosophies are exciting, large problems are identified but left largely unresolved.

I believe that both the inadequacy of consultant members and the gap at the end of specialist training can be overcome in one step by replacing the emotive but anachronous term consultant with specialist.

Each newly certificated possessor of the "certificate of completion of specialist training" would be appointed immediately as a specialist within a major clinical specialty. Each would be a clinician carrying full independent clinical but clearly defined responsibility compatible with his or her level of training within the specialty; he or she would not be a junior or assistant consultant by another name.

The proposals of the Specialist Advisory Committee in Surgery that various levels of precertification training would allow some of the newly certificated specialists to practise as super-specialists within a narrow field is unacceptable because of their lack of experience at this stage.³

Each specialist would be paired with a senior specialist as a team (rather than working under the senior specialist). Specialists would have responsibility for clearly defined general clinical activities in their chosen field, including emergency duties out of hours, and would have the opportunity to "find their feet," as suggested by Graham Winyard,⁶ in a somewhat protected environment.

Trusts alone or in association with others will determine the number of specialists each needs for

Clinical histories of patients with non-oliguric renal failure during treatment with mefenamic acid

Case No	Age (years)	Sex	Diagnoses	Treatment with diuretics	Presentation	Urea (mmol/l)	Creatinine (μmol/l)	Bicarbonate (mmol/l)	Finding on urine culture
1	86	F	Cerebrovascular accident, polymyalgia, renal calculus	Yes	Immobility, falls	51.1	1206	15	<i>Escherichia coli</i>
2	85	F	Congestive cardiac failure, old deep vein thrombosis	Yes	Diarrhoea, anorexia	41.1	764	6	<i>Escherichia coli</i>
3	79	F	Chronic back pain	Yes	Immobility, falls	30.4	421	17	<i>Escherichia coli</i>
4	90	F	Congestive cardiac failure	Yes	Falls, abdominal pain	39.8	229	20	Mixed
5	83	M	Parkinson's disease, osteoarthritic spine, ulcerative colitis, prostatism	No	Diarrhoea, nausea	31.7	522	10	<i>Escherichia coli</i>