LETTERS TO THE EDITOR

Exsanguinating pelvic fractures

EDITOR,—The resuscitation protocol for patients with multiple trauma (fig 1, algorithm) in the article by Meek and Ross on managing exsanguinating pelvic fractures in the UK is contrary to the discussion on imaging the abdomen in the text.¹

We are told that clinical examination is less reliable in multiple trauma to identify occult intraperitoneal injury, yet the algorithm (fig 1) recommends that the haemodynamically stable polytraumatised patient with pelvic ring fracture should be "watched very closely". This group should undergo immediate computed tomography instead. Computed tomography is able to detect associated intraperitoneal injury, as well as demonstrate the extent of retroperitoneal haematoma and injury to retroperitoneal structures such as the kidneys.² It should also specifically include more caudal cuts to provide additional detail regarding the configuration of the pelvic fracture, and may allow three dimensional bony reconstruction.³ Although the main concern of the paper was the management of exsanguinating patients with pelvic fractures, the algorithm would be strengthened by adopting this key alternative of computed tomography in investigating haemodynamically stable patients. Otherwise, the paper was an excellent review of management priorities in this potentially troublesome group of unstable trauma patients.

ANTHONY F T BROWN

Staff Specialist,
Department of Emergency Medicine,
Royal Brisbane Hospital,
Brisbane, Queensland 4029,
Australia

The authors reply

We thank Dr Brown for highlighting an apparent contradiction in our review and we agree with his comments about computed tomography in stable patients, although our review was concerned with the exsanguinating patient. In addition to close observation, emergency computed tomography of the pelvis, abdomen, and other areas as indicated in these stable patients is indeed invaluable. The box labelled "Watch very closely" should read "Watch very closely, computed tomography of pelvis and abdomen".

- 1 Meek S, Ross R. How should we manage exsanguinating pelvic fractures in the United Kingdom? *J Accid Emerg Med* 1998;15:2-6.
- 2 Jerrard DA. Pelvic fractures. *Emerg Med Clin North Am* 1993;11:147-63.
- 3 Burk D, Mears D, Kennedy W. Three dimensional computed tomography of acetabular fractures. *Radiology* 1985;155:183-5.

Cost of alternative models of care for primary care patients attending accident and emergency departments

EDITOR,—Among the tentative conclusions that Leydon *et al* make in their review paper is the suggestion that primary care physicians working in accident and emergency (A&E) departments conduct fewer investigations and

make fewer referrals than A&E doctors.¹ In coming to this conclusion they refer to four papers: three from the UK and one from the Republic of Ireland. It would be valuable to examine the findings of two of these papers more closely before accepting the conclusion of Leydon *et al* uncritically.

Dale *et al* attempted to randomly allocate primary care patients to a given doctor (general practitioner (GP) or A&E training grade) during certain sessions in the A&E department.² They point out that this system broke down when the primary care workload was excessive at which time additional doctors assisted in the treatment of these patients. In addition registrars assigned to treat primary care type patients were often prevented from completing these sessions by departmental circumstances. The registrars in this study identified a higher percentage of fractures in the primary care patients (9.3%) than the GPs (6.6%). This last piece of information gives rise to a number of possibilities, among them that the triage process was not rigorously applied, which in turn implies that the registrars and GPs dealt with different patient populations.

Murphy *et al* in their randomised controlled trial carried out in St James's Hospital, Dublin make the valuable point that the lower rate of investigation and referral by GPs may reflect the fact that these doctors were more experienced than the senior house officers they worked with.³ Murphy and his coauthors avoided triage bias by looking at all category 3 (semiurgent) and category 4 (delay acceptable) patients. They did not attempt to separate "primary care" from "A&E" patients. This prudent measure avoids the apparent error of Dale's paper and reflects the reality that there are some patients who could be looked after appropriately in an A&E or primary care setting, depending on the aptitude of individual GPs.

It is likely that GPs working in A&E look after non-urgent attenders more cost efficiently than less experienced A&E doctors. However, it is also a fact of life in most of the country's A&E departments (even those which provide a designated primary care service staffed by GPs) that A&E doctors will continue to look after some primary care problems. This being the case it would be useful to increase the emphasis on primary care in senior house officer and specialist registrar education programmes. It also highlights the desirability of a primary care secondment in the specialist registrar training programme. These measures could lead to a reduction of unnecessary investigation and admission by junior A&E doctors.

C V EGGLESTON

Consultant, Emergency Department,
Level C, Southampton General Hospital,
Tremona Road, Southampton SO16 6YD

The authors and Professor George Freeman reply

Mr Eggleston (rightly) points out the "tentative" nature of our conclusions in our review paper. This was a function of the limited information on the actual costs associated with some of the primary care interventions reviewed. Notwithstanding this hurdle we proceeded to systematically examine the evidence for the likely cost implications of different methods of dealing with the primary care attender at the A&E department.

Eggleston's suggestion that there may have been a difference in the case mix dealt with by

GPs and hospital doctors in the Dale study is valid. Indeed Dale and his colleagues highlighted this as a potential limitation themselves. The randomisation to registrars was the most problematic in the King's study as they were most likely to be called away. They also by chance seemed to have a higher rate of fractures in their case load, but the difference was not thought to be significant. The possible biases were fully explored in the Dale analysis, such as the possibility that the pressures in the A&E environment may effect the triage system in operation, and these were not thought to be significant.

Further, the size of the study, the significant difference in per case costs between GP and hospital senior house officer/registrar, and the similar levels of patient satisfaction expressed during follow up strongly supports the argument that GPs can treat certain types of patient more cost effectively in the A&E department, without deleterious effects on patient outcome and satisfaction. This conclusion is corroborated by other studies, in particular the study conducted by Murphy and his colleagues in Dublin.³

The effect that experience has on a doctor's (whether GP, senior house officer, or registrar) method of practice is, of course, an important issue that requires consideration in this context. In terms of years of experience, in the study of Dale *et al* GPs were all in the early years of their careers and the differential was not regarded as significant. This may not be the case in other studies (median age in Murphy's paper was 32 for GPs and 26 for the usual A&E medical staff). Differences in investigations, referrals, and so on may not just interact with years of experience but also with the type of experience, training, and "culture" worked in. Why GPs treating certain types of patients appears to be cheaper, despite higher staff costs per hour, is unclear. Is it experience and the confidence that follows? Is it training? Further, what effect does patient expectation play on the trajectory of the consultation and the decisions made? Do patients expect more "active" investigative work from a "hospital" doctor than from a GP working in A&E? These questions might be fruitfully explored further.

Finally, we would support the idea that senior house officer and specialist registrar training programmes should increase the emphasis on primary care and should include a secondment in general practice. This could lead to a better understanding of the options available for effectively managing this significant proportion of their patient population.

- 1 Leydon GN, Lawrenson R, Meakin R, *et al*. The cost of alternative models of care for primary care patients attending accident and emergency departments: a systematic review. *J Accid Emerg Med* 1998;15:77-83.
- 2 Dale J, Green J, Reid F, *et al*. Primary care in the accident and emergency department: II. Comparison of general practitioners and hospital doctors. *BMJ* 1995;311:427-30.
- 3 Murphy AW, Bury G, Plunkett PK, *et al*. Randomised control trial of general practitioner versus usual medical care in an urban accident and emergency department: process, outcome, and comparative cost. *BMJ* 1996;312:1135-42.

Primary care problems in patients attending a semi-rural accident and emergency unit

EDITOR,—We were interested to read the article by Cottingham,¹ however his article appears to be based on false premises and contains a number of serious inaccuracies. The aim of his study is described as being to