103 serum samples from 82 intravenous drug abusers, all of them seropositive for antibody against HIV: 12 were asymptomatic, 54 had the AIDS related complex, and 16 had AIDS. The samples were obtained between July 1984 and December 1986 and repeated samples were taken in 18 patients after a time interval of more than six months.

Twelve samples were antigen positive: seven out of 16 samples from patients with AIDS (44%) and four out of 75 samples from patients with AIDS related complex (6%) ($p<0.05$). HIV antigen was not detected in any of the 14 samples from asymptomatic patients.

Study of specific antibody against the core protein (anti-p24) was performed in 12 antibody positive samples with a competitive enzyme linked immunosorbent assay (ELISA) (HTLV-III Envacore, Abbott) and showed a lack of anti-p24 in four out of 12 samples from four patients with AIDS; only one of four HIV antigen positive patients with AIDS related complex showed absence of anti-p24.

Eight patients with AIDS had oesophageal candidiasis as their sole opportunistic infection; HIV antigen was not recognised in any of them. Nevertheless, antigenaemia was present in seven out of eight patients who presented with opportunistic infections other than oesophageal candidiasis. Even though studies are required in a larger number of patients, this different incidence of HIV antigen among the patients with AIDS who presented with only oesophageal candidiasis could suggest a better prognosis for them.

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1 Goudsmit J, de Wolf F, Paul DA, *et al.* Expression of human immunodeficiency virus antigen (HIV-Ag) in serum and cerebrospinal fluid during acute and chronic infection. *Lancet* 1986;ii:177-80.
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Radiological diagnosis of deep vein thrombosis

SIR,—The leading article by Professor Graham Whitehouse rightly emphasised the need for methods which avoid the use of ionising radiation and injection of iodinated contrast media (3 October, p 801).

While ultrasonography fits this bill, an alternative imaging technique, not mentioned by Professor Whitehouse, is magnetic resonance imaging. Data presented at a consensus conference last month showed that with the development of new pulsing sequences magnetic resonance imaging when compared with phlebography holds great promise in making the correct diagnosis of deep vein thrombosis.[1] In conventional spin echo magnetic resonance imaging flowing blood is known to create a signal void and, depending on slice selection, is prone to "paradoxical enhancement," which makes it unreliable in assessing the patency of vessels. With new "fast scanning" sequences flowing blood reliably shows increased signal on the cross sectional image, and clot, when present, can therefore easily be identified. From anatomical considerations magnetic resonance imaging does well in evaluating veins in the proximal lower extremities and pelvis. Like ultrasound, it has the additional advantage that it may show conditions that mimic deep vein thrombosis, such as haematoma or abscess. Unlike ultrasound, once the correct magnetic resonance imaging pulsing sequences are set up for the imaging protocol acquisition of images does not depend on the skills of the operator.

Panel members at the National Institutes of Health consensus conference were of the opinion that at present magnetic resonance imaging for the evaluation of deep vein thrombosis could not be recommended for general clinical practice. This is, nevertheless, a fertile area for clinical research. Those concerned in performing efficacy studies for assessing technological advances should consider including magnetic resonance imaging in their trial designs, since it is a non-invasive technique which provides the relevant information about deep vein thrombosis without the use of contrast media or ionising radiation.

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1 Whitehouse G. Radiological diagnosis of deep vein thrombosis. *Br Med J* 1987;295:801-2.

Repeat prescribing of non-steroidal anti-inflammatory drugs

SIR,—In October 1986 we carried out an audit of our prescribing of non-steroidal anti-inflammatory drugs by examining a range of data similar to those of Dr K Steele and others (17 October, p 962) and relating to all patients receiving these drugs in our practice over one month (list size 13 500, total doctor-patient contacts for the period 3154).

We examined the records of all patients who received non-steroidal anti-inflammatory drugs during the study period, taking care to include all those who received prescriptions at home visits or prescriptions written by hand without the patient being seen as well as those issued by our computerised repeat prescribing system and at face to face consultations. We found 22 patients who received a repeat prescription for non-steroidal agents other than via the computerised system, including seven who had had prescriptions for these drugs renewed at a home visit.

In the month of the study we issued 108 prescriptions for these agents to 3·42% of all doctor-patient contacts and at 3·1% of all face to face contacts. Of these 52 were issued for the first time in the month of the study and 56 were reissues. Like Dr Steele and others we found that more prescriptions were issued to women and to people over 65 years, though the differences between sexes and age groups were less pronounced. Thus 64 of 108 prescriptions for these drugs were issued to women and of the 56 which were reissues 24 were to people aged over 65.

The indications for long term use—that is, reissuing of a further prescription for a non-steroidal anti-inflammatory drug—were similar to those found in the Belfast study: osteoarthrosis 28; rheumatoid arthritis 8; soft tissue problems 11. The small differences from the authors' finding may well be accounted for by our different definition of long term treatment.

Three drugs—ibuprofen, naproxen, and indomethacin—accounted for 90 of the items prescribed, and a total of seven different agents were used. Our use of indomethacin was twice that of the doctors in the Belfast study (15 out of 108 *v* 15 out of 198).

We divided gastrointestinal problems into three categories: peptic ulceration with confirmatory documentation, peptic ulcer recorded in the notes without further evidence other than suggestive symptoms, and patients taking antacids or H_2 antagonists without diagnosis. When we examined the records of the patients having prescriptions renewed we found evidence of confirmed peptic ulceration in 10, suggestive symptoms in 3, and 3 taking concurrents antacids or H_2 antagonists without a diagnosis. Thus, up to 29% of our patients had some indication of gastrointestinal problems of relevance to their use of non-steroidal anti-inflammatory agents. Ten of the 56 patients being reissued with prescriptions had concurrent hypertension, one concurrent renal impairment, and one a documented history of congestive cardiac failure. Nine were taking antihypertensive agents and 14 diuretics. Only 16 were taking other analgesics excluding aspirin.

We also investigated the monitoring of patients who had been taking these drugs for more than a year. Eight of 34 had had their urea concentration measured or other renal function tests, three had had hepatic function tests performed, and 11 had had a full blood count within the previous year. However, many of these blood tests may have been done for reasons not connected with the monitoring of non-steroidal anti-inflammatory medication. Certainly the monitoring of patients on indomethacin was no better than that of those on less toxic agents. Side effects were recorded in the notes of eight patients who had been taking the drugs for more than a year. All were gastrointestinal and none had been reported to the Committee on Safety of Medicines. Only one had led to a change of treatment. While the recording of indications for long term non-steroidal anti-inflammatory use was satisfactory the recording of contraindications and side effects was poor.

Overall our small study largely confirms that of Dr Steele and others. It indicates that the prescribing of non-steroidal agents in this practice is for appropriate indications and from a small range of drugs. The use of indomethacin was greater and fewer patients were taking simple analgesics. There were important deficiencies in our recording and monitoring of side effects and contraindications, particularly in relation to gastrointestinal problems.

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Cytotoxic drug expenditure

SIR,—Professors T J McElwain and J S Malpas (31 October, p 1136) assert that the appointment of a medical oncologist reduces expenditure on cytotoxic drugs and refer to the Royal College of Physicians 1986 comitia document on this subject.

The Royal College of Physicians document, which is entitled *Cost Effectiveness of Medical and Paediatric Oncology*, lists the costs of cytotoxic chemotherapy in three hospitals before and after the appointment of medical oncologists. For one of these hospitals the costs given refer to one drug only. Many factors can have a bearing on drug expenditure, including loss of patents and commercial sponsorship of clinical research. No analysis is given which could lead to the conclusion that the change in expenditure was wholly or partly due to a change in prescribing habits, and no information is given on changes in chemotherapy costs at other institutions.

The credibility of this document is further undermined by the robust implications that skill in cytotoxic chemotherapy is the prerogative solely of medical oncologists and that no patients with metastatic germ cell tumours and only 5% of