SIR,—S Y Chuah and colleagues conclude that patients sedated with intravenous midazolam tolerate upper gastrointestinal endoscopy without needing topical anaesthesia.[1]

Since 1986 we have performed upper gastrointestinal endoscopy in government hospitals in Malawi. All patients receive an explanation of the procedure just before the endoscopy, and then a topical anaesthetic (10% lignocaine spray) is applied to the pharynx. We do not use intravenous sedation; reasons include the expense, shortage of space and of trained staff to supervise patients after the procedure, and patients' convenience and safety (many come on foot as outpatients and need to return to their homes straight after the investigation). Compliance during endoscopy is usually excellent, and we rarely have procedural failures.

Lignocaine spray is not on the World Health Organisation's essential drug list for Malawi, and we have to rely on our own personal purchases or special orders, which may take a long time. If doctors decide to heed the advice of Chuah and colleagues and abandon the use of topical anaesthesia we would be grateful if they could consider sending us their spare bottles of lignocaine spray.

ANTHONY D HARRIES
JACK J WIRIMA

Department of Medicine,
Queen Elizabeth Central Hospital,
PO Box 95,
Blantyre,
Malawi

1 Chuah SY, Crowson CP, Dronfield MW. Topical anaesthesia in upper gastrointestinal endoscopy. *BMJ* 1991;**303**:695. (21 September.)

Treating carcinoma of the oesophagus

SIR,—When commenting on the treatment of carcinoma of the oesophagus Minerva[1] misrepresents an excellent article by Bown on managing carcinoma of the oesophagus with palliative intent.[2] Considering that it was produced by one of the world's experts on one particular palliative measure, this article presents an extremely balanced view of all modalities and the need for further study. Bown did not discuss the role of surgery and certainly did not make any comment about its futility. Minerva has fallen into the trap of expressing a personal conviction that was not mentioned by the author. She is right in saying that most patients with carcinoma of the oesophagus should be treated palliatively, but her comment is misleading.

We reported a study in which we elected to operate with curative intent on 35% of patients presenting at the Royal Devon and Exeter Hospital with oesophageal cancer from 1985 to 1987.[3] As the geriatric population is higher than average in our district other units might well consider that figure to be low. During the study 116 out of 125 patients were discharged from hospital able to swallow. The mortality in patients with localised disease who received palliative treatment was 3%; mortality for the operation was 7%; and the mortality in patients with distant metastases who received palliative treatment was just over 10%. There was nothing futile about our inclusion of surgery as one of the modalities in our management protocol.

We are currently collating our figures for the past four years, which we expect will be even better. Thanks to the improvements in anaesthesia and postoperative intensive care only one surgical patient has died during this period.

Many years ago Earlham and Cunha-Melo painted a gloomy picture of carcinoma of the oesophagus.[4] Sadly, their paper continues to be quoted frequently and has become dogma. Minerva's comments add further to this misconception. It is important that practitioners should know that a considerable number of their patients would be thought worthy of an attempt at curative surgery and that in units specialising in this form of surgery the mortality is extremely low. The five year survival may be only around 20%, but those who are not cured receive good palliative treatment and usually live longer than patients who are intubated or have brachytherapy or laser treatment.

Far from being futile, surgery has much to offer, and I recommend that practitioners should refer their patients to a surgeon with an interest in this disease, who will know better than anybody the risks of operation and, when operation is contraindicated, will be better informed about the most suitable palliative option. I have several patients who are well who, had they been treated with Minerva's philosophy, would have been long dead.

K M PAGLIERO

Royal Devon and Exeter Hospital,
Exeter EX2 5DW

1 Minerva. *BMJ* 1991;**303**:530. (31 August.)
2 Bown S. Palliation of malignant dysphagia: surgery, radiotherapy, laser, intubation alone or in combination? *Gut* 1991;**32**:841-4.
3 Kaul TK, Rowland CG, Pagliero KM. Carcinoma of the oesophagus: treatment with radical surgery and brachytherapy. In: Mould RF, ed. *Brachytherapy 2*. Leersum: Nucletron International, 1989:449-62.
4 Earlham R, Cunha-Melo JR. Oesophageal squamous cell carcinoma. I. Critical review of surgery. *Br J Surg* 1980;**67**: 381.

Adenoma screening and colorectal cancer

SIR,—C B Williams and colleagues are in danger of allowing professional interests to cloud the issues.[1] Our editorial stated that there is uncertainty as to the effectiveness of the current practice of polypectomy in the prevention of colorectal cancer.[2] This is no armchair exercise, nor a debate of the relative merits of available data, but an illustration of the difficulties in achieving clinical consensus in the absence of good epidemiological studies.

The issue for clinicians, since most adenomas never progress to cancer, is, what should the policy be? We make two recommendations. We suggest that in the absence of other clinical guidelines, the King's Fund statement on colorectal cancer is a good place to start.[3] We also state that there must be further research into developing better predictors of risk than those currently available (size, histology, and degree of dysplasia). This should include a randomised controlled trial of polypectomy, which is a common procedure but has never been shown to be effective in preventing colorectal cancer.

It is regrettable that Williams *et al* consider that such a common procedure as polypectomy should be exempt from a clinical trial on the grounds that the number of patients required for such a trial are too large. Are they not aware that there is currently a very large trial in colorectal cancer of faecal occult blood testing which involves over 156 000 participants?[4] The estimate of 7000-21 000 patients (depending on risk category) required for a randomised control trial of polypectomy appears trifling in comparison. Moreover, given the high prevalence of polyps in the population and the large numbers of people undergoing polypectomy annually, is it ethical not to mount a randomised control trial of an unproved intervention, which carries with it significant risks of morbidity and mortality? In 1987 over 42 000 colonoscopies were performed in England and Wales.[5] The average cost of a colonoscopy is £107-£250.[6] Surely patients have the right to know what procedures are effective in reducing the risk of colorectal cancer?

Until a national research strategy ensures that researchers seriously address these issues, which must include examining the efficacy of what clinicians do, then the case for adenoma screening and polypectomy still remains unproved.

ALLYSON M POLLOCK

Department of Public Health Medicine,
University College London,
London WC1E 6EA

PHILIP QUIRKE

University Department of Pathology,
Leeds General Infirmary Trust,
Leeds LS1 3EX

1 Williams CB, Talbot IC, Atkin WS. Adenoma screening and colorectal cancer. *BMJ* 1991;**303**:925. (12 October.)
2 Pollock AM, Quirke P. Adenoma screening and colorectal cancer. *BMJ* 1991;**303**:3-4.
3 King's Fund Centre. Cancer of the colon and rectum: the seventh King's Fund consensus statement. *Br J Surg* 1990;**77**:1063-5.
4 Hardcastle JD, Thomas WM, Chamberlain J, Pye G, Sheffield J, James PD, *et al*. Randomised controlled trial of faecal occult blood screening for colorectal cancer: results for the first 107 349 patients. *Lancet* 1989;i:1160-4.
5 British Society of Gastroenterology. *Report of a working party on the staffing of endoscopy units*. London: BSG, 1987.
6 Walker A, Whynes DK, Chamberlain J. The hospital costs of diagnostic procedures. *J Clin Epidemiol* 1991 (in press).

Orthopaedic surgeons and thromboprophylaxis

SIR,—The survey by M D Laverick and colleagues[1] confirms the statement of Michael J F Fordyce and colleagues[2] that, despite the many regimens described, there is no consensus on the most suitable prophylaxis for preventing deep venous thrombosis after total hip replacement.

In Ireland, as in Britain, most orthopaedic surgeons have avoided using heparin because of the perceived risks of bleeding complications. Some have used dextran 70, although there are no published reports of a significant benefit for dextran 70 over placebo.[3]

Excellent results, with rates of deep vein thrombosis of around 13%, have been reported by workers using adjusted doses of subcutaneous heparin.[4] Unfortunately, the necessity for close monitoring and adjustment of the dose means that this method can be successful only when there is a high degree of commitment and laboratory facilities are available seven days a week.

Recently, several low molecular weight heparinoids have become available. The results obtained by P F Leyvraz and colleagues in their comparison of adjusted dose heparin with fraxiparine provide further evidence that these agents may finally produce a consensus among orthopaedic surgeons as to which regimen is best for prophylaxis.[5]

Another low molecular weight heparin, enoxaparin, became available in Ireland late last year. The manufacturer's datasheet indicates that it can be given in a fixed dose once daily for prophylaxis against deep vein thrombosis after surgery, including joint replacement surgery.[3] Because the drug is expensive there were considerable financial implications if it was to be adopted for thromboprophylaxis in elective joint replacement surgery. After extensive review of published reports the Drugs and Therapeutics Committee added enoxaparin to the formulary. It is now used by all orthopaedic surgeons performing total knee and total hip replacement in the hospital. Enoxaparin was added to the formulary because of the evidence that its use could reduce the rate of thrombosis to 10% or less without an unacceptable risk of bleeding complications.[6,7]

Consensus was reached with the hospital anaesthetists that the first dose of enoxaparin would be given 12 hours before surgery. The pharmacokinetics of enoxaparin suggest that epidural anaesthesia is safe when the first dose is given this way.[8] This was supported by interim, unpublished results of a large multicentre trial (Rhone Poulenc-Rorer, personal communication, 1990)—an important factor for anaesthetists,

many of whom would not risk epidural cannulation in a patient receiving standard unfractionated heparin. There is evidence that the period of greatest risk of thrombosis in hip replacement surgery is during surgery itself, when the femoral vein is subject to stress from the heat of polymerisation of bone cement and from the hip being maintained in a forced position in which the vein may be folded or kinked.[9] As the addition of the drug to the formulary was based on studies in which the first dose was given 12 hours preoperatively this cleared the way for enoxaparin to be added to the formulary.

In Ireland the regulatory authorities have not stipulated that monitoring of antifactor Xa activity of enoxaparin is necessary, and the drug has been promoted on this basis. Furthermore, the recommended dose in joint replacement surgery is a standard 40 mg and is not based on weight. Indeed, the presentation of the drug in prefilled syringes discourages dose adjustment. Dose adjustment has not been shown to be necessary with enoxaparin and would reduce the simplicity of the drug's administration and hence the likelihood that this method of thromboprophylaxis would be adopted (A Planes, personal communication).

Although based on a subjective measure—a considerable reduction in the incidence of clinically suspected deep vein thrombosis—this hospital's experience in the eight months since enoxaparin was introduced leads to the conclusion that our decision to use enoxaparin has been justified and that low molecular weight heparins will become the drugs of choice for this indication.

TIM DELANEY

Pharmacy Department,
Adelaide Hospital,
Dublin 8,
Republic of Ireland

1 Laverick MD, Croal SA, Mollan RAB. Orthopaedic surgeons and thromboprophylaxis. *BMJ* 1991;**303**:549-50. (7 September.)
2 Fordyce MJF, Baker AS, Staddon GE. Efficacy of fixed minidose warfarin prophylaxis in joint replacement. *BMJ* 1991;**303**: 219-20. (27 July.)
3 Hirsh J, Levine M. Prevention of venous thrombosis in patients undergoing major orthopaedic surgical procedures. *Br J Clin Pract* 1989;**43** (suppl 65):2-8.
4 Leyvraz PF, Richard J, Bachmann F, Van Melle G, Treyraud JM, Livio JJ, *et al.* Adjusted versus fixed-dose heparin in the prevention of deep-vein thrombosis after total hip replacement. *N Engl J Med* 1983;**309**:954-8.
5 Leyvraz PF, Bachmann F, Hoek J, Büller HR, Postel M, Samama M, *et al.* Prevention of deep vein thrombosis after hip replacement: randomised comparison between unfractionated heparin and low molecular weight heparin. *BMJ* 1991;**303**: 543-8. (7 September.)
6 Planes A, Vochelle N, Fagola M. Total hip replacement and deep vein thrombosis. A venographic and necropsy study. *J Bone Joint Surg [Br]* 1990;**72**:9-13.
7 Turpie AG, Levine MN, Hirsh J, Carter CJ, Jay RM, Powers PJ, *et al.* A randomized controlled trial of a low-molecular-weight heparin (enoxaparin) to prevent deep-vein thrombosis in patients undergoing elective hip surgery. *N Engl J Med* 1986;**315**:925-9.
8 Frydman AM, Bara L, Le Roux Y, Woler M, Shauliac F, Samama MM. The antithrombotic activity and pharmacokinetics of enoxaparine, a low molecular weight heparin, in humans given single subcutaneous doses of 20 to 80 mg. *J Clin Pharmacol* 1988;**28**:609-18.
9 Planes A, Vochelle N, Fagola M. Total hip replacement and deep vein thrombosis. A venographic and necropsy study. *J Bone Joint Surg [Br]* 1990;**72**:9-13.

SIR,—P F Leyvraz and colleagues' article on the use of fractionated heparin after hip replacement emphasises the reduction in the incidence of deep venous thrombosis after hip surgery.[1] Many other studies confirm this reduction, but the evidence that any form of prophylaxis with heparin reduces the incidence of fatal pulmonary embolism in hip surgery is scant,[2] reaching significance only if many series are summated.[3]

In their editorial J Parker-Williams and R Vickers understate the case for warfarin,[4] and the excellent results of Amstutz *et al's* regimen of low dose warfarin[5] have been completely overlooked in the articles[1 4 6] and the subsequent correspondence. This is a remarkable omission in view of the reported zero incidence of fatal pulmonary embolism and fatal bleeding complications (and the 0·2% incidence of pulmonary embolism) in a series of 3000 patients compared with five pulmonary embolisms, one fatal pulmonary embolism, and one fatal bleeding complication in a series of only 349 patients.[1]

The editorial's subtitle is "prophylaxis now or negligence claims later,"[4] and the authors go on to advocate the use of an unproved agent, fractionated heparin. We emphasise Wroblewski and Triffit's views that this opinion is inappropriate.[7] Though we acknowledge that some form of prophylaxis is essential, potential complications such as wound haematomas in the treatment of hip fractures carry a high morbidity and mortality. Such complications from the use of prophylaxis of unproved efficacy could equally justifiably attract negligence claims.

PETER W HOWARD
RONAN B C TREACY
PETER GRIGORIS

Royal Orthopaedic Hospital,
Birmingham B31 2AP

1 Leyvraz PF, Bachman F, Hoek J, Buller HR, Postel M, Samama M, *et al.* Prevention of deep venous thrombosis after hip replacement: randomised comparison between unfractionated heparin and low molecular weight heparin. *BMJ* 1991;**303**: 543-8. (7 September.)
2 Evarts CM, Alfadi RJ. Thromboembolism after total hip replacement. Failure of low dose heparin in prevention. *JAMA* 1973;**225**:515-6.
3 Collins R, Scrimgeour A, Yusuf S, Peto R. Reduction in fatal pulmonary embolism and venous thrombosis by perioperative administration of subcutaneous heparin. *N Engl J Med* 1988;**318**:1162-73.
4 Parker-Williams J, Vickers R. Major orthopaedic surgery on the leg and thromboembolism. *BMJ* 1991;**303**:531-2. (7 September.)
5 Amstutz HC, Friscia DA, Dorey F, Carney BT. Warfarin prophylaxis to prevent pulmonary embolism after total hip replacement. *J Bone Joint Surg [Am]* 1989;**71**:321-6.
6 Laverick MD, Croal SA, Mollan RAB. Orthopaedic surgeons and thromboprophylaxis. *BMJ* 1991;**303**:549-50. (7 September.)
7 Wroblewski BM, Triffit PD. Orthopaedic surgeons and thromboprophylaxis. *BMJ* 1991;**303**:923. (12 October.)

SIR,—J Parker-Williams and Roger Vickers's alarmist editorial on thromboembolism and major orthopaedic surgery on the leg probably overstates the risk by suggesting that one in 40 patients die of pulmonary embolism after total hip replacement,[1] but nevertheless they have stimulated discussion and will challenge the 10% of surgeons who do not use any form of prophylaxis.

Another controversy with regard to thromboembolism remains the use of the oestrogen contraceptive pill. We performed a brief postal survey of 35 major orthopaedic units in the United Kingdom and found a surprising variance of policies in our 26 replies. Seventeen of the units told patients to stop taking the pill: two specified that they should stop eight weeks before surgery, three that they should stop six weeks before, and 12 that they should stop four weeks before (though in three units this last applied to major surgery only). Six units allowed women to carry on using the pill; of these, three used heparin and three did not. Three units did not have a policy.

The increased risk of venous thrombosis associated with the contraceptive pill is small, but even this small risk is diminished by stopping the pill or in emergencies by using heparin to increase antithrombin III activity, which is reduced by oestrogen.[2]

With patients' increasing awareness of the dangers of oral contraceptives containing oestrogen (however alarmist these may be), it is still cause for concern that roughly a fifth of orthopaedic units either have no policy or, perhaps worse, choose to ignore the risk.

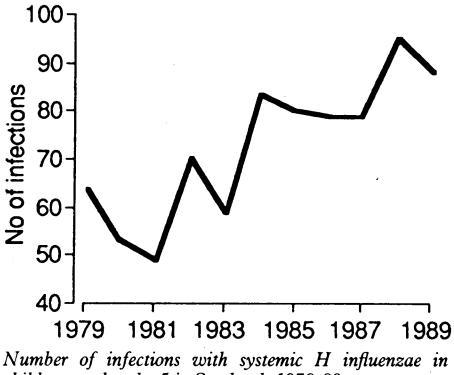
C B D LAVY
T W R BRIGGS

Royal National Orthopaedic Hospital,
Stanmore,
Middlesex HA7 4LP

1 Parker-Williams J, Vickers R. Major orthopaedic surgery on the leg and thromboembolism. *BMJ* 1991;**303**:531-2. (7 September.)
2 Aitkenhead A. Prudence with the pill. *Journal of the Medical Defence Union* 1990;winter:62-4.

Haemophilus influenzae type b invasive disease

SIR,—A J Howard and colleagues report a high annual rate of infection with *Haemophilus influenzae* type b in children under the age of 5 years in Wales.[1] In Scotland 801 laboratory notifications of systemic infection with *H influenzae* (both type b and type not specified but presumably b) in children aged under 5 years were reported to the Communicable Diseases (Scotland) Unit by the bacteriology laboratories in Scotland during 1979-89 inclusive. The annual figures increased over the years (figure). In addition, 42 cases were



Number of infections with systemic H influenzae in children aged under 5 in Scotland, 1979-89

reported in children aged 5-9 years. There were 118 cases of epiglottitis and 618 of meningitis; "other infections" and cases in which blood cultures had been positive but there were no clinical details accounted for the remaining 107 cases. Of the children aged under 5 years, 76 were aged 0-5 months, 197 were aged 6-11 months, and 528 were aged 12-59 months.

The population of children aged 0-59 months in any one year over this period was roughly 325 000; hence the overall annual notification rate was 22·4/100 000 children under the age of 5. If, however, a particular cohort (children born in 1985) is studied the results are as shown in the table. The total number of children in the cohort was 68 892, excluding 680 who died neonatally. The cumulative rate in this cohort was roughly 112/100 000; thus the chance of a child in Scotland being infected under the age of 5 years was one in 893, a much lower rate than reported by Howard and colleagues.

Systemic infections with H influenzae in children born in 1985

Year of life	No	Rate/100 000
1	21	30·5
2	22	31·9
3	18	26·2
4	13	18·9
5	3	4·4
Total	77	112/100 000

Inevitably there must be underascertainment of invasive *H influenzae* type b infections as the diagnosis can be made only in a laboratory and accurate ascertainment depends on all infections being seen by a practitioner, appropriate samples always being taken, and the infecting organism being recognised. There is no evidence that bacteriological services and notifications are other than satisfactory in Scotland (and surveillance of meningococcal disease supports this view), so we