antibiotics in these high risk situations has repeatedly been shown to reduce the incidence of subsequent infection.

In the labour ward attention to basic principles of asepsis and surgery can easily fall. This is understandable for a variety of reasons, but none the less it remains unacceptable. Lessons which were learnt by our predecessors from maternal deaths in the preantibiotic era are often forgotten by junior doctors, to whom antibiotics can become the panacea of all ills.

By all means let us use prophylactic antibiotics for caesarean section in patients at high risk, but at the same time let us audit the figures for our own units and make sure that they are not being used to compensate for lack of proper attention to basic obstetric, aseptic, and surgical techniques. These result in savings that cost nothing.

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- 1 Mugford M, Kingston J, Chalmers I. Reducing the incidence of infection after caesarean section: implications of prophylaxis with antibiotics for hospital resources. *Br Med J* 1989;299:1003-6. (21 October.)
- 2 Willson JR. The conquest of caesarean section related infections: a progress report. *Am J Obstet Gynecol* 1988;72:519-32.

SIR,—Ms Miranda Mugford and her colleagues showed that in Oxford routine antibiotic prophylaxis for caesarean sections would reduce the average cost of postnatal care by £13.39 per caesarean section.¹ Midwifery staffing was the most important component contributing to the higher cost of caring for those patients with a postoperative infection.

This information, however, highlights the even greater need to analyse the cost effectiveness of the increasing incidence of caesarean section in Britain.² The introduction of an alternative policy for care in labour in a London hospital in 1984-5 was associated with an appreciable decrease in the incidence of caesarean delivery, without any adverse outcome.³ In terms of midwifery staffing, this policy of actively supervising childbirth has been shown to be three times more cost effective.⁴

Apart from clinical considerations, the implications of prophylaxis with antibiotics for caesarean section are small in magnitude compared with the implications for hospital resources of "unnecessary caesarean sections."

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- 1 Mugford M, Kingston J, Chalmers I. Reducing the incidence of infection after caesarean section: implications of prophylaxis with antibiotics for hospital resources. *Br Med J* 1989;299:1003-6. (21 October.)
- 2 Lomas J. Holding back the tide of caesareans. *Br Med J* 1988;297:569-70.
- 3 Turner MJ, Brassil M, Gordon H. Active management of labor associated with a decrease in caesarean section rate in nulliparas. *Obstet Gynecol* 1988;153:838-44.
- 4 O'Driscoll K. Impact of active management on delivery unit practice. *Proc R Soc Med* 1972;65:697-8.

Captopril in congestive cardiac failure

SIR,—Dr S Capewell and colleagues have shown that giving the converting enzyme inhibitor captopril produces venous and arterial dilatation in a group of patients with congestive cardiac failure.¹ This acute response to captopril was still present on reassessment after three months' treatment with captopril.

The authors have suggested that the mechanism producing venodilation is unclear, particularly in view of the evidence that angiotensin II is less

potent as a constrictor of veins than of arteries. Though some workers have found no evidence that angiotensin II acts directly to produce venoconstriction,² it seems that angiotensin II in high doses does produce venoconstriction, although this effect undergoes pronounced and rapid tachyphylaxis.³ Hence this direct action of angiotensin II is unlikely to contribute to raised venous tone in congestive cardiac failure. There is clear evidence, however, that antitensin II acts indirectly to maintain sympathetically mediated tone, by both a central⁴ and peripheral action.^{5,6} Although an improvement in systemic haemodynamic function during treatment with captopril may lead directly to a reduction in sympathetic tone, withdrawal of the indirect effect of angiotensin II on sympathetic function may produce an important additional contribution to the venodilator action of captopril in patients with congestive cardiac failure treated with diuretics, where the sympathetic nervous system is activated.⁷ Indeed, excluding two patients in whom a profound hypotensive response occurred with the first dose of captopril (an effect which may be primarily mediated through venodilation⁸) may have led to underestimating the indirect contribution of angiotensin II to maintaining venous tone in patients with congestive cardiac failure. This subgroup of patients might be particularly likely to benefit from converting enzyme inhibition and merits further investigation.

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- 2 De Pasquale NP, Burch GE. Effect of angiotensin II on the intact forearm veins of man. *Circ Res* 1963;13:239-45.
- 3 Collier JG, Robinson BF. Comparison of effects of locally infused angiotensin I and II on hand veins and forearm arteries in man; evidence for converting-enzyme activity in limb vessels. *Clin Sci Mol Med* 1974;47:189-92.
- 4 Zimmerman BG. Adrenergic facilitation by angiotensin: does it serve a physiological function? *Clin Sci* 1981;60:343-8.
- 5 Webb DJ, Seidlin PH, Benjamin N, Collier JG, Struthers AD. Sympathetically mediated vasoconstriction is augmented by angiotensin II in man. *J Hypertens* 1988;6 (suppl 4):S542-3.
- 6 Webb DJ, Benjamin N, Cockcroft JR, Collier JG. Augmentation of sympathetic venoconstriction by angiotensin II in human dorsal hand veins. *Am J Hypertens* 1989;2:721-3.
- 7 Bayliss J, Norrell M, Canepa-Anson R, Sutton G, Poole-Wilson P. Untreated heart failure: clinical and neuroendocrine effects of introducing diuretics. *Br Heart J* 1987;57:17-22.
- 8 Semple PF, Thoren P, Lever AF. Vasovagal reactions to cardiovascular drugs: the first dose effect. *J Hypertens* 1988;6: 601-6.

Peripheral vascular disease

SIR,—The subtitle of Professor E Ernst's leading article¹ was carefully chosen. "Physical treatments" may help patients with peripheral vascular disease, as indeed may a large number of other unproved methods. The question is, "Do they help?" In our view Professor Ernst has failed to justify the claim made in his last paragraph, that physical medicine has a place in treatment.

As is stated, the ideal solution for a blocked artery is to unblock it. When major surgery was the only means of achieving this many patients could not be helped, but their number is being steadily reduced by balloon angioplasty and more recently laser,² thermal,³ and mechanical⁴ techniques, none of which are mentioned.

Other than revascularisation the only treatments that have been shown to give lasting benefit are stopping smoking and taking exercise.⁵ It is strange that smoking is not mentioned in the editorial, and the effect of exercise may not be as pronounced as suggested. One recent study showed that over 60% of patients either failed to complete the treatment or had no response,⁶ and in a controlled study exercise alone was less effective

than surgery in relieving symptoms of claudication.⁷ Of the papers cited to support the use of exercise for rest pain, one did not describe a benefit⁸ (although another paper by the same authors states that of six patients with "mild pain at rest" three improved⁹) and the other describes case reports of gangrene treated by conservative means in the 1950s.¹⁰ Several of these patients had prolonged stays in hospital and lost their toes after several months. Such results would be quite unacceptable today.

There seems to be little evidence that any of the physical treatments offer benefit. A recent review could find no evidence that any drug treatment was effective,¹⁰ and Professor Ernst has not shown a lasting clinical response to haemodilution.¹¹ The fact that a carbon dioxide bath can cause transient cutaneous vasodilatation can hardly be described as a "rational basis" for its use in the treatment of claudication. Professor Ernst refers to a large unpublished clinical trial of such treatment for cardiovascular disease. Would it not be preferable to subject such data to peer review and public scrutiny before quoting it in an editorial?

We do not, as yet, have a perfect treatment for patients with peripheral vascular disease, but to publicise novel methods that are supported neither by experimental rationale nor by proved clinical efficacy is a disservice to this group of patients.

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- 1 Ernst E. Peripheral vascular disease. *Br Med J* 1989;299:873. (7 October.)
- 2 Michaels JA, Cross FW, Shaw P, et al. Laser angioplasty with a pulsed Nd-YAG laser: early clinical experience. *Br J Surg* 1989;76:921-4.
- 3 Sanborn TA, Cumberland DC, Greenfield AJ, Welsh CL, Guben JK. Percutaneous laser thermal angioplasty: initial results and 1-year follow-up in 129 femoropopliteal lesions. *Radiology* 1988;168:121-5.
- 4 Kensey K, Nash JE, Abrahams C, Zarins CK. Recanalization of obstructed arteries with a flexible, rotating tip catheter. *Radiology* 1987;165:387-9.
- 5 Hughson WG, Mann JI, Tibbs DJ, Woods HF, Walton I. Intermittent claudication: factors determining outcome. *Br Med J* 1978;i:1377-9.
- 6 Andriessen MPH, Barendsen GJ, Wouda AA, de Pater L. Changes of walking distance in patients with intermittent claudication during six months intensive physical training. *Vasa* 1989;18:63-8.
- 7 Lundgren F, Dahllöf A, Lundholm K, Scherstén T, Volkmann R. Intermittent claudication—surgical reconstruction or physical training? A prospective randomized trial of treatment efficiency. *Ann Surg* 1989;209:346-55.
- 8 Andriessen MPH, Barendsen GJ, Wouda AA, de Pater L. The effect of six months intensive physical training on the circulation in the legs of patients with intermittent claudication. *Vasa* 1989;18:56-62.
- 9 Foley WT. Treatment of gangrene of the feet and legs by walking. *Circulation* 1957;15:689-700.
- 10 Cameron HA, Waller PC, Ramsey LE. Drug treatment of intermittent claudication: a critical analysis of the methods and findings of published clinical trials, 1965-1985. *Br J Clin Pharmacol* 1988;26:569-76.
- 11 Ernst E, Matrai A, Kollar L. Placebo-controlled, double-blind trial of haemodilution in peripheral occlusive arterial disease. *Angiology* 1989;40:479-83.

AUTHOR'S REPLY,—Clearly, the purpose of the editorial was to summarise the evidence on effectiveness of physical treatments. Thus it seems forgivable to neglect stopping smoking or angioplasty, which are, of course, of paramount importance but are not physical treatments. Even though there are studies to the contrary, exercise is (on balance of all published data) the most effective conservative treatment for intermittent claudication.¹

Carbon dioxide baths were discussed in the editorial because they ameliorate blood flow and improve microcirculatory function, not (as Dr Lawrence and his colleagues state) because they cause transient cutaneous vasodilatation. In this context I mentioned unpublished results that

support published ones referred to in the editorial: this does not mean that I avoid the peer review process, as was implied. Dr Lawrence and colleagues also choose to disregard the evidence I put forward in favour of transcutaneous electrical nerve stimulation but raise the controversial (and again not physical) point of drug treatment. In summary, they are mistaken to state that there is no evidence for benefit from physical treatments. In my view the *BMJ* rightly and courageously took up the much neglected subject of physical therapy. If the word "disservice" had to be used it might better apply to the misinterpretations that Dr Lawrence and colleagues decided to introduce.

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1 Housley E. Treating claudication in five words. *Br Med J* 1988;296:1483.

Gall bladder lithotripsy

SIR,—Dr Gillian Matthews's editorial on gall bladder lithotripsy misses its targets almost completely.¹ The NHS does not have "a poor track record for resisting the pressure from manufacturers and politicians to invest in new technology." We are way behind other countries such as the United States, Japan, Germany, and Switzerland in adopting important medical advances. For instance, there should be a computed tomography scanner in every British health district with a district general hospital, and this would still be a modest provision in comparison with elsewhere.

The prevalence of gall stones is indeed high, but the given prevalence of "around 9% of the British population aged over 60" is imaginary. For men aged 60-69 the prevalence of gall bladder disease is 15.5%; aged 70-79, 22.8%; aged 80-89, 26.1%; and over 90, 39%. The figures for women are 31.5%, 33.6%, 42.6%, and 42.7% respectively.² A minority of "untreated patients may suffer much pain and illness," but fortunately most of these stones never cause symptoms, and this is surely worthy of a mention.

I do not suggest that there should be a wholesale purchase of lithotripters just for gall stones but that modern dual purpose machines used mainly for urolithiasis should be freely available. It is reasonable to suggest that every health region should have such equipment. Though gall stone lithotripsy (which very importantly includes treatment of choledocholithiasis as well as cholecystolithiasis) may perhaps always be a junior partner in the treatment of gall stones, its true place will never be established if access to the hardware is unacceptably difficult.

All doctors applaud randomised controlled trials to assess usefulness of treatment, but lithotripsy has been shown to work for many patients, who should not be denied it purely on the grounds of parsimony.

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1 Matthews G. Gall bladder lithotripsy. *Br Med J* 1989;299:1060-1. (28 October.)

2 Bateson MC. Gall bladder disease and cholecystectomy rate are independently variable. *Lancet* 1984;ii:621-4.

The destruction of a welfare service

SIR,—Your editorial on "The heart of the white paper controversy" was encouragingly political.¹ Doctors must recognise that the white paper is not a strategy for improving an organisation but the product of a government vehemently opposed to the concept of welfare. Its problem is how to sink the NHS without seeming to do so.

Regulation of the flow of money to the NHS is

and was ever the principal vehicle of government policy. In consequence the NHS is a patchwork of highly variable quality. Much of the service is provided from outdated buildings littered over ugly and crowded sites providing a miserable ambience, which, noticeably, is the first thing that private hospitals eliminate. The unconcern for the working environment is one aspect of the NHS's deteriorating record in man management.

Indeed, so lamentable is the record and so excoriating the hectoring which accompanies the white paper that the process has to be understood as a deliberate exercise in undermining the corporate sense of continuity which marks out a profession and distinguishes a professional from an entrepreneurial career. If we declare ourselves demoralised by the processes used by the administration over several years we shall be castigated for it. But how else, other than deliberately, can a government spend more money than ever on a service which experiences it as nothing but an attrition?

The process of squeezing budgets actually does set doctor against doctor as each squabbles to maintain the integrity of his or her own service to patients. The pressure on funds not only curtails services, it disrupts established clinical teams; it precludes forward planning; and, by declaring the need for less work to be done by certain doctors, it devalues their sense of professional achievement. Each successful attempt to readjust is simply followed by further cuts. Strong doctors who favour an entrepreneurial system, who practise specialties that command public support, whose patients could pay for their services, who work in districts which command majorities of government supporters might see some advantages in what is proposed. Most of the profession's representative bodies have treated the white paper as if it were a well intentioned but wrong headed basis for improvement.

It must be seen by individual doctors as the first major battle in the war of attrition against a welfare service. The word "national" is pointedly lost in the white paper on the health service. The purpose of its chaotic content is less to promote debate than to ferment disillusion, division, and demoralisation in the hope in the longer term of foisting a divided service on a divided profession, wherein the welfare component of health care is abrogated to local governments.

Already in those services which excite least public sympathy—those for the mentally handicapped, mentally ill, chronic sick, and elderly—erstwhile forward looking policies are used to relocate patients "in the community" but with devastation of their funding, management, and organisation. The move by stealth of the disadvantaged into the community is betrayed in the cardboard hovels on our city streets. Most doctors now practising were trained by a welfare system for a welfare service. That service has provided some of the best value for money in the world. It deserves better government.

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Mental Health Act 1983: guardianship order and definition of mental impairment

SIR,—The recent case of Beverley Lewis in Gloucester¹ shows a glaring deficiency in the Mental Health Act 1983 in its legal criteria of definition of mental impairment and severe mental impairment.² For the local authority social services to use the guardianship order the mentally handi-

capped adult has to be mentally impaired or severely mentally impaired—which means such a person should also be of "abnormally aggressive or seriously irresponsible conduct." It is by any means a stretch of the imagination (and semantics) to apply this definition to severely and profoundly handicapped adults like Beverley Lewis who do not fit these criteria. I am not sure how much an issue the protection by guardianship order was in this case, but surely there must have been and still are a considerable number of such cases falling through the safety net. Ironically, one of the objectives of the Mental Health Act 1983 was to protect and safeguard the rights of mentally handicapped patients. Six years after the act's implementation there is an urgent need to review and rectify some of these serious deficiencies without further delay.

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1 Sapskad D. Beverley: 'natural death.' *The Times* 1989 Nov 2:1 (col 4).

2 Singh TH. Mental Health Act: definition of severe mental impairment and mental impairment. *Br Med J* 1984;288:149-50.

Overprescribing

SIR,—During one of the hottest days in July this year my 16 year old daughter, who was on holiday near Lyons in France, was overcome by heat and fainted. A doctor was called and he told her that she had a low blood pressure and he prescribed some capsules to be taken six times a day. The proprietary preparation was called Tensophoril. This compound contains dopamine hydrochloride 15 mg, boric acid 15 mg, amylobarbitone 15 mg, and ascorbic acid 250 mg.

The effectiveness of dopamine hydrochloride when given by mouth is not well documented but *Martindale: The Extra Pharmacopoeia* states that the drug is inactive when given by mouth.¹ It is rapidly degraded by gastric acid but it might, in theory, cause some gastric vasoconstriction. Boric acid has now been discontinued for local use in most countries because it is toxic to tissue. Boric acid poisoning leads to vomiting, diarrhoea, rash, and meningeal irritation. *Martindale* states that this drug "should not be used internally." It has weak bacteriostatic and fungistatic properties but has been "superseded by more effective and less toxic disinfectants." Amylobarbitone is a long acting barbiturate and the total daily dose in six Tensophoril tablets would amount to 90 mg. Finally, the amount of ascorbic acid in each of the capsules amounts to that found in five average oranges. My daughter opted not to take any of the capsules and later that day felt entirely well.

As in the case of Professor J G Scadding's grandchildren,² this treatment was unnecessary.³ Hypotension is not a syndrome commonly recognised in the United Kingdom.⁴ The general view is that, with very few exceptions, it is not possible to have too low blood pressure. The British, however, have their own pet diagnoses—often related to colonic function. When treating strange national variants in disease it is perhaps best to avoid drugs that are potentially pharmacologically dangerous. In that respect, aperients may be less harmful than antihypertensive drugs.

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1 Reynolds JEF, ed. *Martindale: the extra pharmacopoeia*. 28th ed. London: Pharmaceutical Press, 1982:9.

2 Scadding JG. Overprescribing. *Br Med J* 1989;299:853. (30 September.)

3 Pemberton J. Constitution hypotension: does it exist? *Br Med J* 1989;298:660-1.