respond to the first course of treatment or the presence of urological abnormalities. Short courses of antibiotics are significantly less effective in maintaining freedom from bacteriuria for the duration of pregnancy than is continuous antimicrobial prophylaxis for the remainder of gestation.³ The rates of subsequent pyelonephritis do not differ provided that short course treatment is followed by close surveillance to detect recurrent bacteriuria.^{3,4} This does not seem to have been the policy at Northwick Park, patients being followed up only until they gave their first clear urine sample two to four weeks after treatment.

Dr Campbell-Brown and coworkers regard an outlay of £6000 as excessive to prevent just six cases out of an expected total of 30. (It is not clear why the actual number of cases among abacteriuric women could not be stated; instead a figure of 19 was extrapolated from one case in 226 controls.) If the research techniques employed are excluded I estimate that less than £3000 was needed for dipslide screening, confirmation of bacteriuria in a second urine sample, and treatment. Longitudinal studies have shown that prevention of pyelonephritis may be achieved by paying attention to follow up without elaborate microbiological back up.^{5,6} Even the need for a confirmatory urine culture has been questioned on clinical grounds as well as because of expense.⁶

The credit side of the cost equation was largely ignored. Women presenting with severe abdominal pain and fever late in pregnancy often require admission to and investigation in hospital as well as intravenous treatment with antibiotics. The expense of looking after a premature infant also needs to be considered, quite apart from the human costs that Dr Campbell-Brown and colleagues themselves alluded to. The negative attitude to screening remains to be justified, even when the prevalence of bacteriuria is low and even if unavoidable failures of treatment occur. Finally, I wonder if screening has in fact been abandoned at Northwick Park?

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AUTHORS' REPLY.—We apologise for the fact that our methods section did not describe the follow up of the patients with proved bacteriuria who were treated. The first 51 produced a fresh midstream urine specimen at each visit to the antenatal clinic after they were found to be free of infection; the mean number of these specimens examined was 8.3. To save clinic time and work midstream urine samples were thereafter examined at 20, 28, and 34 weeks of pregnancy or when there was proteinuria or another indication for culture of the urine; the mean number of these specimens was 5.7. If any specimen contained more than 10⁷ colony forming units/l a specimen obtained by suprapubic aspiration or catheter was examined.

We are also sorry that the diagram was not more

informative. The five mothers who developed pyelonephritis had all been examined by suprapubic aspiration and found to have truly infected urine. That the incidence of pyelonephritis in our treated patients was greater than that in other series is readily explained. In the other series the diagnosis was made from a midstream urine sample. As Dr Smith notes, such samples have an appreciable false positive rate, and thus a lower rate of pyelonephritis would be expected as many of those treated would never have been infected. Dr Smith also inquires about the four patients who were treated but later developed overt urinary tract infection. Two of these were cleared by the initial treatment but were again infected by *Escherichia coli* four and 16 weeks later; the two others were also infected by *E. coli*, but this was not cleared from the urine by antibiotics. The suggestion that urological abnormalities might have been investigated is reasonable, but we did not find this to be valuable, even in patients with recurrent infections, in a previous investigation.¹ The expected total number of cases of pyelonephritis was extrapolated from the 226 control (culture negative) patients because their obstetric notes were scrutinised by two of us and we were certain that 225 had not developed pyelonephritis.

We were interested to read that Dr M E Foley and coworkers (25 July, p 270) found seven cases of pyelonephritis in 100 treated mothers and eight in 120 patients with bacteriuria who had not been treated initially. This rate of 6.7% is even lower than our own of 12.5%, which was similar to that found in Aberdeen, where 11.8% of untreated patients with bacteriuria, shown by midstream urine samples, developed pyelonephritis.² All three centres found a lower incidence than the 33% expected,¹ but, while the clinical course may not have changed, the criteria for diagnosing pyelonephritis may be now more stringent. There might also be an ethnic effect, although it seems just as likely that the condition is related to social class.

We evaluated our data on the efficacy of screening for bacteriuria in pregnancy as well as the cost of routine clinics and bacteriology and have stopped routine screening at Northwick Park. Though symptomatic urinary tract infection is four to six times more common in patients with bacteriuria in Dublin, Aberdeen, and Harrow than in those without bacteriuria, screening and antibiotic treatment to prevent a few cases (four per year in our population) needs to be justified. When more cases of symptomatic infection occur overall in women who yield negative results on screening at booking than in those who yield positive results such a policy is unnecessary unless there is a high local incidence of confirmed bacteriuria or of its complications.

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- 1 McFadyen IR, Eykin SJ, Gardener NHN, et al. Bacteriuria in pregnancy. *Journal of Obstetrics and Gynaecology of the British Commonwealth* 1973;80:385-405.
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Influence of non-steroidal anti-inflammatory drugs in faecal occult blood tests

SIR.—Mr G Pye and colleagues suggests that a finding of occult faecal blood cannot be attributed to upper gastrointestinal tract bleeding caused by non-steroidal anti-inflammatory drugs (13 June, p 1510). Their finding contradicted what is commonly believed—that these drugs can produce occult blood in the absence of gastrointestinal disease.¹⁻⁴

We have just finished a study which confirms the conventional view, in contrast to that of Mr Pye and others and indeed our own previous opinion.⁴⁻⁸ In a colorectal cancer screening programme in upper Galilee, north Israel, 1797 participants aged over 40 performed the Haemoccult II test for faecal occult blood. Those screened were supposed to stop taking non-steroidal anti-inflammatory drugs while performing the test for occult blood, but when directly investigated 26 admitted not stopping the medication. The prevalence of drug treatment was 8.9 times higher among participants with a positive Haemoccult result than among those with a negative test result ($Z=6.108$, $p<0.0001$). Seven of the 26 who admitted taking non-steroidal anti-inflammatory drugs (27%) had positive results compared with 64 out of 1771 people who did not take these drugs (4%) ($Z=6.297$, $p<0.0001$).

Our results imply that we should follow Simon's advice¹ that those who give positive results on a test for occult faecal blood and are taking non-steroidal anti-inflammatory drugs should have the test repeated before colonic investigations are undertaken.

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Right atrial thrombus: a complication of total parenteral nutrition

SIR.—Like the patient described by Dr H Chamsi-Pasha and Professor Miles Irving (1 August, p 308), one of my patients also developed a right atrial thrombus as a complication of parenteral nutrition.

A 19 year old man with Crohn's disease was referred for home parenteral nutrition in 1983 because of intestinal failure and growth retardation. Treatment progressed uneventfully for four years, during which he gained 17 cm in height and was able to take up employment. Six months ago he was admitted with subacute intestinal obstruction, when he was noted to have developed a pansystolic tricuspid murmur. There was no evidence of infection or pulmonary embolism. A chest radiograph showed calcification in the region of the right atrium, and an echocardiogram showed a right atrial mass that was prolapsing into the ventricle. A thrombus was subsequently removed.

Thrombosis is probably the most important complication of prolonged central parenteral nutrition. In our experience, central vein thrombosis is associated with the use of high concentration dextrose solutions¹ (rather than three in one lipid mixes, which tend to block feeding catheters²) and occurs when the catheter tip lies in the superior vena cava rather than in the right atrium.³ The recently described development of atrial thrombi emphasises the need for research into thrombus

prevention. In the mean time, careful clinical assessment and echocardiographic examination of patients undergoing prolonged parenteral nutrition is needed.

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- 1 Pithie AD, Pennington CR. The incidence, aetiology and management of central vein thrombosis during prolonged parenteral nutrition. *Hum Nutr Clin Nutr* (in press).
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Extrapyramidal disturbances caused by inappropriate prescribing

SIR,—We agree with the emphasis that Drs H S Pall and A C William placed on the importance of the side effects of extrapyramidal drugs (4 July, p 30), but we would like to point out that drug induced Parkinson's disease, especially in the elderly, is not such a benign process as they suggested.

Firstly, the median period for the resolution of symptoms after drug treatment was stopped was seven weeks in the large study conducted by Stephen and Williamson, with a range of up to 36 weeks,¹ and Marsden suggests that features of drug induced Parkinson's disease may persist for up to 18 months after drug treatment is stopped.²

Secondly, on reviewing the 48 patients described by Stephen and Williamson, we found that of those alive at a mean of 41 months after presentation, 25% who had undergone remission of drug induced Parkinson's disease subsequently developed idiopathic Parkinson's disease.³

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Delivery after caesarean section

SIR,—With reference to the study by Dr B G Molloy and colleagues (27 June, p 1645) on vaginal delivery after one previous caesarean section, I would like to make these points.

Firstly, labour requiring acceleration with oxytocin was associated with an increased risk of repeat caesarean section, whereas labour induced with oxytocin (and simultaneous amniotomy) was not. The opposite might more reasonably have been expected unless the selection for induction was based ultimately on a previously beneficial obstetric experience—namely, progression beyond 4 cm cervical dilatation. The 22% oxytocin acceleration of spontaneous labour further implies this selection. Therefore, to say without qualification that the induction of labour does not increase the risk of repeat caesarean section disguises the process of judicious selection that seems to have taken place and denies the study's own findings.

Secondly, in the cases of uterine scar rupture (in particular those associated with oxytocin acceleration and epidural analgesia) was the duration of labour (in particular the duration of the

second stage), the cumulative dose of oxytocin, or instrumental vaginal delivery related to this outcome?

Finally, what was the rate of instrumental delivery in the study group compared with the hospital population?

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AUTHORS' REPLY—The rate of instrumental delivery was 11.6% in the study group and 8.0% in the hospital population. This difference is not surprising as it is our practice to limit the duration of the second stage of labour in women who have had a previous caesarean section. No correlation was found between the duration of labour, the cumulative dose of oxytocin, or the instrumental vaginal delivery rate and the incidence of uterine rupture; indeed, all the ruptures occurred during the first stage of labour so that there were no instrumental deliveries at all.

We are surprised that Dr Fitzpatrick compares the incidence of caesarean section in spontaneous labour requiring augmentation with that in induced labour. These groups are quite different, and a direct comparison is invalid. An increased incidence of caesarean section among spontaneous accelerated labours has previously been reported,^{1,2} and we ourselves have shown that no correlation existed between labour and the rate of caesarean section.³ Dr Fitzpatrick's suggestion that the opposite might more reasonably have been expected is quite incorrect.

In our paper we reported that 49 elective sections were performed because labour could not be induced. Previous progression beyond 4 cm dilatation was not the deciding factor in inducing labour. Furthermore, the 19.2% incidence of induced labour in the study group was similar to the 19.8% incidence in the hospital population at the time. We reiterate our opinion that "induction of labour, in the manner described, does not increase the risk of caesarean section or uterine rupture." Dr Fitzpatrick seems to have overlooked the qualification "in the manner described," which takes account of the 49 patients who were unsuitable for induction.

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Drinking and driving: success of random breath testing in Finland

SIR,—Experience of controlling the drink driving problem in Finland, as described by J A Dunbar and colleagues (11 July, p 101), provides yet another example of the effectiveness of high visibility random breath testing and the degree of public acceptability with which this is usually met.

This evidence, together with the results of evaluation studies in Australia and the United States, has convinced us that unless British road users' perception of the chance of being detected with excess alcohol in the bloodstream is increased substantially there is little hope of real progress in reducing our drinking and driving problem.

The comments made by the Minister of Roads and Traffic in the House of Commons recently about the importance of changing public attitudes

were well intentioned, but have we learnt nothing from the compulsory seat belt wearing experience? Surely, the lessons learnt from years of exhorting car occupants to don a seat belt, to little effect until they were forced to do so by law, should convince him of the benefits of legislation in reinforcing sympathetic public attitudes to safe practice.

An all party campaign for the introduction of random breath testing was launched formally with the tabling of an early day motion in the House of Commons in July. As with efforts to put seat belts on the statute book, the interest and support of the medical profession will be vital in securing the introduction of this proved means of reducing casualties.

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The wide range of chlamydial infection

SIR,—Perhaps because it was published 80 years ago, in German, and in a fairly inaccessible journal, the classic description by Halberstaedter and von Prowazek of chlamydial inclusions¹ is often misquoted; this is a pity because it is a little masterpiece of early microbiological observation. Some points in Dr D Reid's leading article (18 July, p 156) must therefore be corrected.

Halberstaedter and von Prowazek did not think that chlamydiae were protozoans, nor did they call them chlamydozoaceae. They said, in translation: "All the pathogens mentioned [that is, viruses and what we now call chlamydia] have nothing in common with the bacteria. . . . There is however no ground for classifying them with the protozoa. We therefore propose grouping them [chlamydiae] between both classes under the name Chlamydozoa."

Though the "zoa" component proved to be incorrect, the term chlamydia itself is not a misnomer, as stated by Dr Reid. From their description, it is clear that Halberstaedter and von Prowazek derived this part of their name from the Greek *chlamys*, a mantle, because of the blue staining material enveloping the elementary bodies (and not, as I have seen stated in another article on chlamydiae, because the origins of these infections are cloaked in obscurity).

It is noteworthy that the erroneous statements in the article by Dr Reid derive from those in an earlier paper by Ward, which is cited in the references.² With respect, I suggest that this example (and there are many others) illustrates the importance of consulting original texts.

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Correction

Doctors and the death penalty

In this letter from the Danish section of Amnesty International (27 June, p 1692) the authors invited correspondence from fellow health workers on the problems of the death penalty, but their full address was not given. Correspondence should be addressed to: Amnesty International, Danish Section Medical Groups, Frederiksborggade 1, DK-1360 Copenhagen K, Denmark.