literature who has developed pseudomembranous colitis after having metronidazole alone.

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Iatrogenic collapse

SIR,—Your leading article on iatrogenic collapse (18 August, p 408) pointed out that the Joint Committee on Contraception recommended that at the insertion of intrauterine contraceptive devices an artificial airway such as the Brook should be close at hand. The wisdom of this advice must be questioned.

A vasovagal attack in someone already lying on her back with her legs raised is very unlikely to lead to respiratory arrest. Where this does occur the most probable cause is ventricular asystole. Atropine given *before* the procedure would help to protect the heart from such a catastrophe. On the other hand, a transient hypotensive loss of consciousness does occasionally occur when the patient stands or sits up too soon. Anyone without anaesthetic experience who tries just before recovery to insert a Guedel or "doctor version" Brook airway will at best give the patient an unpleasant experience or at worst cause vomiting, laryngeal spasm, and iatrogenic death. At a recent meeting of the Gloucestershire anaesthetic division it was unanimously agreed that IUCDs and Brook airways should be kept well apart.

In any case, patients who require an IUCD form a rather selected group. Almost by definition they do not have the rotten teeth or alcoholic halitosis which reinforce a doctor's or nurse's social inhibitions about mouth-to-mouth resuscitation. For those who feel an artificial airway to be indispensable, the shorter first-aid version of the Brook or a simple face mask would be safer than the longer Brook—and just as effective, because under the age of 45 cervical arthrosis and toothlessness are relatively rare. There are not many other conditions seen in a coil clinic which would give the longer Brook or the Guedel airway a decisive advantage over the face mask.

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SIR,—Your leading article (18 August, p 408) refers to the "iatrogenic faint" that may follow minor manipulative procedures such as the insertion of intrauterine contraceptive devices.

I would suggest that a number of these are due to acapnia. The nervous patient who is anticipating an unpleasant experience, perhaps over a long waiting period, involuntarily overbreathes; the effect may be compounded by additional factors such as a hot, stuffy room and the nervousness may result in a fasting patient—causing a lowered blood glucose with attendant increased irritability of the central nervous system. The attack is precipitated by a sudden increase in hyperventilation following the painful stimulus of an injection or the insertion of the IUCD.

There are several features that help to distinguish this from other "faints." The loss of consciousness is accompanied first by tonic (carpopedal spasm due to the accompanying hypocalcaemia) and then clonic contractions. The recovery is rapid following the head

down and feet up manoeuvre, although the patient may complain for several minutes about cramp-like pains in the arms and legs.

The differential diagnosis is important. It occurs in an otherwise healthy patient. No treatment, other than simple first-aid, is required. The bradycardia is not due to vagal inhibition caused by dilatation of the cervix. Lastly, a mistaken diagnosis of covert epilepsy may be made.

The prophylactic remedy may be to "beware the pale, sweaty patient with the dilated pupils."

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Prevention of pulmonary embolism

SIR,—Like Professor Charles Wells (14 July, p 129), we have prevented deep-vein thrombosis (DVT) and pulmonary embolism (PE) in a ward which previously had a high incidence; hence there is no doubt that it can be done.¹ The critical part of Professor Wells's letter, other than his determination to succeed, is: "... supported by dedicated sisters and nurses."

DVT and PE are most uncommon in home surroundings, and the issue is not complex, as Dr R H Fell states in his letter (14 July, p 129). The medical profession still confuses the difficulty of obtaining a result with its value. We do not see DVT and PE in children's hospitals because children will not "lie to attention" for inspection by matron or anyone else. Our problem is to make adults behave like children, or as they do at home, on admission to hospital. We found that when adults were told to behave in this way only about half did so. Doctors must believe that any case of DVT or PE is a failure on their part. However dedicated the doctor may be, he is helpless without the support of a dedicated nursing staff; nurses are the only skilled observers present all the time.

Patients have either a low or a high risk of DVT and PE. For low-risk cases the administration of anticoagulants of any kind is evidence of ignorance. We failed to eliminate DVT and PE completely because doctors failed to play their part with high-risk cases: while they are taught at medical school that the subject is difficult, this will continue.

The human is the only animal able to lie like a log in bed with the weight of the leg compressing the veins in the leg muscles. Whenever I have visited a friend in any hospital I have observed him or her lying like this and found on questioning that the danger was quite unknown.

The Royal College of Obstetricians and Gynaecologists held a scientific meeting on the problem of DVT and PE in 1964. When opening the meeting the president stated that, with the mastery of the problem of deaths from puerperal sepsis and toxæmia, the previously uncommon causes of maternal deaths were now the common ones; notable among these is PE, which then caused 14% of the deaths. Later a visitor from Singapore stated that he had never seen a death from PE; the need for beds in the hospital was so great that the mother was not put into bed until shortly before the baby was born, and she was discharged as soon as all was in order.

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Domiciliary obstetrics

SIR,—I found the reminiscences of Professor J K Russell (11 August, p 377) on his experience with the Newcastle obstetric flying squad pleasantly nostalgic, as they must have been to many other senior obstetricians. Our organisation in Birmingham differed slightly, in that we did not take an anaesthetist and we seldom travelled intentionally to second stage problems, although the occasional undiagnosed second twin was removed manually with the placenta and usually proved to be unexpectedly well.

We learnt an important obstetric lesson which may be forgotten in these days of sophisticated institutional midwifery. By far the commonest life-saving procedure on the flying squad in those days was the manual removal of the placenta from a shocked and exsanguinated woman. I had been instructed, when I came into obstetrics at the end of the war, to resuscitate with transfusion before removing the placenta. I soon discovered, as many others must have done, that that represented a waste of blood and time, so that we adopted the policy of removal before transfusion. In some desperate cases this had been forced on me by the slow rate of flow of the blood drip, even when a vein had been exposed and a cannula tied in. (There were no nice needle cannulas in those days.) I soon learnt, what astonished me when first it happened, that blood which dripped slowly and reluctantly into the arm of the shocked woman would accelerate into a rapid flow within seconds of the placenta being removed. This led to the dictum: "No woman is too ill for manual removal and no one must die with the placenta inside."

I do not know whether the severe shock suffered by many of these patients with an "hour-glass" constriction of the uterus and a placenta half in and half out was due to humoral or neurogenic factors, but it was not caused solely by loss of blood. Nor do I know for certain why it is so rare today. The old habit of expressing the placenta and reluctance to use oxytocics at the end of the second stage were probably responsible. It led to two principles of which only one is still valid. We taught that no patient should ever be moved with her placenta retained, something that modern experience has shown to be no longer true in all cases. But we also taught that every obstetrician should be able in an emergency to remove a placenta without waiting for an anaesthetist and that is as true today as ever it was, although in Britain the occasion may not so often arise.

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Induction of labour using prostaglandin E₂ pessaries

SIR,—I read with interest both Mr A W Banks's and Mr C J Hutchins's useful remarks (4 August, p 332) concerning induction of labour using prostaglandin (PGE₂) pessaries.¹ Ultrasound examination has been shown to be the most accurate method of "dating" a pregnancy² and this is a routine procedure at 16 weeks' gestation at Queen Charlotte's Hospital. In our reported series many patients were scanned serially both before and after this time, depending on their obstetric problem. With this information a small proportion of

patients continue to exhibit an unfavourable cervix resistant to induction post term and most of these benefit from local prostaglandins.

With careful adjustment, the highly sophisticated cardiotocographic monitors available today allow very satisfactory recordings to be made. Perhaps in our critical age induction with a PGE₂ pessary should constitute the only permissible form of "stress test." After all, if a potentially compromised fetus shows distress at this early stage, then expedited delivery by the most appropriate route would obviously be in the best interests of the fetus.

In the future, different doses of PGE₂ pessaries will be available, depending on the requirements of the individual patient. It may be that 1 mg, 3 mg, and 5 mg pessaries will prove necessary, and perhaps when the drug companies concerned are more interested in the commercial aspect of their production this will be possible. Each pessary costs approximately £6, but surely this, or \$14, is not a large sum when compared with the potential benefits gained, especially if caesarean section and its attendant price are avoided, as our reported series showed possible. Given the choice, patients prefer this method of "non-invasive" induction, and if they had to most would be willing to pay for it. At present, in many centres in America, the caesarean section rate is much higher than that in Great Britain. There are many reasons for this, but quite definitely, if the United States Food and Drug Administration were to recognise the tremendous potential and advantages of locally administered prostaglandins, then prolonged inductions ending in failure and inevitable caesarean section could be avoided in the USA too. This would be especially important in a country where the maxim "Once a section, always a section" is very widely applied.

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¹ Shepherd, J H, Pearce, J M F, and Sims, C D, *British Medical Journal*, 1979, 2, 108.

² Campbell, S, *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1970, 77, 1057.

Postpartum haemolytic uraemic syndrome

SIR,—It may be worth while thinking of the haemolytic uraemic syndrome (21 July, p 179) on the assumption that it derives from loss of equilibrium within the interlinked system¹ of proteolytic control.

Each condition predisposing to or precipitating the syndrome (HUS) has within it an element of proteolytic stress: postpartum HUS may be related to the intense involutional proteolysis of the puerperium²; HUS in young women on oestrogen-containing oral contraceptives may be related to protease-dependent acute-phase effects of hyperoestrogenism³; HUS after an endotoxic condition⁴ may be related to activation of coagulation and complement systems plus release of tissue proteases from damaged cells; the HUS of severe preclampsia may have a similar basis.⁵ The allied aspects of the Schwartzman reaction, mentioned by Dr Gwyn Williams, are also likely to have their basis in the upset of proteolytic equilibrium in endotoxic shock.⁶

If the loss of control is overwhelming several proteolytic cascades may be released from control and become hyperactive, including the kallikrein, renin, complement, and coagulation cascades. The exact pattern will vary in different patients but on this basis it may not be so surprising if the HUS is heralded first by permeability (kallikrein) or hypertensive (renin) upsets rather than by complement or coagulation changes.

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¹ Heimbürger, N, Haupt, H, and Schwick, H G, in *Proceedings of the International Research Conference on Proteinase Inhibitors*. Berlin, Walter de Gruyter, 1971.

² Schoolwerth, A C, et al, *Archives of Internal Medicine*, 1976, 136, 1978.

³ Laurell, C B, and Skanse, B, *Journal of Clinical Endocrinology and Metabolism*, 1963, 23, 214.

⁴ Baker, N M, et al, *British Medical Journal*, 1974, 2, 84.

⁵ Stark, J M, *Lancet*, 1978, 1, 417.

⁶ Stark, J M, et al, *Journal of Clinical Pathology*, 1978, 31, 1177.

Neonatal care

SIR,—The impressive work of Dr Malcolm L Chiswick and others for the babies of Lancashire (28 July, p 247) is difficult to assess on the figures given. Superficially the first-week mortality of about 7 per 1000 at St Mary's Hospital, Manchester, in 1978 does not differ much from the 1978 perinatal figure of 15.4 for England,¹ over half of which is likely to be due to stillbirth. However, the overall neonatal rate for individual hospitals is bedevilled by fluctuations in the distribution of babies by weight and by differences in reporting habits for very small babies. Babies born dead before 28 weeks are not reported; those alive should be, no matter how small. Thus in one hospital in 1975 of 18 deaths in the first week six were in infants weighing 450 to 470 g, and their omission would have lowered the mortality from 10 to 6.7.

Perhaps the time has come for editors to insist that, as a minimum, figures on small babies are reported by the number born and the number dying at each weight. Only so can we compare—and perhaps dispute.

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¹ Macfarlane, A, *Lancet*, 1979, 2, 255.

Breast or bottle

SIR,—I greatly enjoyed Dr Paula H Bolton-Maggs's paper "Breast or bottle" (11 August, p 371) and agree entirely with her that, as a nation, we appear to consider breast-feeding unusual and maybe even socially rather unacceptable. Perhaps, women doctors, knowing the undeniable medical advantages of breast-feeding, should themselves be given special encouragement to breast-feed so that they may in turn be better qualified to advise others.

Unfortunately, the medical mother wishing to breast feed may find herself faced with two major areas of difficulty. Firstly, as Dr Bolton-Maggs suggests, attending staff often seem to assume that doctor patients "know it all." Indeed, in some instances, this may be reinforced by the doctor mother's reticence to admit what she may consider her own inadequacies. No matter how well medically qualified a woman is, motherhood is at first

strange and stressful and the doctor mother is not immune to the problems associated with establishing breast-feeding. At this critical stage she needs to be actively offered the help and advice she may feel reluctant to seek for herself.

Secondly, a medical mother wishing to pursue her career in what is a male-dominated profession may feel under pressure to "put the baby on the bottle" as soon as possible so that she can return to work early and thus minimise the inconvenience to her male colleagues and subsequent adverse comment from them.

Of course, neither of these problems is restricted to doctor mothers. But, given that they are likely to form a highly motivated and, hopefully, articulate group, should we not try to make breast-feeding easy and enjoyable for them, in the hope that we may produce within the profession a core of individuals experienced in breast feeding and enthusiastic about it to counteract the prevailing ambivalence which Dr Bolton-Maggs describes?

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SIR,—Like Dr Paula H Bolton-Maggs (11 August, p 371), I left medical school believing that determination was the vital factor in successful breast-feeding. I too was determined, and yet my hungry baby failed to thrive, and I eventually had to give in and give bottles.

Too late, I discovered Penny and Andrew Stanway's book *Breast is Best*,¹ with its refreshingly simple conclusion that to boost an inadequate milk supply one must increase the total sucking time. Obvious this may be, but it is far from being a widely taught truth. Instead one is advised to limit sucking time to "10 minutes a side" lest cracked nipples develop. Frequent feeding is discouraged, lest mother becomes tired—though it is far more tiring to pace the floor with a hungry, crying babe. Again, feeding one's infant more often than four hourly is considered to be evidence per se of an inadequate milk supply and an indication to start complementary feeds, when in reality it is just what the hungry babe needs. The weekly weighing often advised can induce such anxiety that relaxed feeding becomes impossible. The deficiencies of maternity units in failing to encourage early suckling, in proffering complements at the slightest excuse, and in separating mother and baby are but the beginnings of one's problems.

It is easy to make lack of maternal determination the scapegoat for all breast-feeding failures; but surely bad advice and unhelpful customs are often the real culprits?

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¹ Stanway, P, and Stanway, A, *Breast is Best: A Commonsense Approach to Breast-feeding*. London, Pan Books, 1978.

SIR,—I should like to put the other side of the coin in the discussion "Breast or bottle." Like Dr Paula H Bolton-Maggs (11 August, p 371) and Anne Chase (25 August, p 492) I also was determined to breast-feed my first baby. Unlike these two, however, I failed.

On being discharged from hospital after the birth, I was fully breast-feeding my infant, and he was gaining weight. On arriving home,