The previous birth weights were 1968, 36 weeks—2466 g; 1970, 40 weeks—3005 g; 1974, 42 weeks—3530 g; 36 weeks—2466 g; 1970, 40 weeks—3005 g; 1974, 42 weeks—3530 g. The patient was adamant that the date of her last menstrual period was 27 July 1979, giving the expected date of delivery as 4 May 1980, and that there had been no previous menstrual irregularity.

The progress of the pregnancy as assessed by biparietal diameters followed very closely that expected by dates. Postnatal examination was consistent with a gestation of 29 weeks. The weight and occipitofrontal head circumference were both between the 50th and the 75th centiles for 29 weeks.

A recent report¹ of 121 pregnancies with 116 live births in 89 women with a variety of renal disease and grades of impairment showed that the proportion of premature (20%) and small-for-dates (24.3%) babies was substantially higher than that of the normal population. None of the women with successful pregnancies had renal function as severely impaired as in the reported case.

R A COWARD
PETER MALLICK

Department of Renal Medicine,
Manchester Royal Infirmary,
Manchester M13 9WL

¹ Katz, AI, Davison JM, Hayslett JP, Singson E, Lindheimer MD. *Kidney Int* 1980;18:192-206.

Nurses and the medical termination of pregnancy

SIR,—The recent judicial decision to declare that extra-amniotic injections of prostaglandin solution cannot legally be given by nurses will make the use of this method to produce abortion very difficult in most gynaecological units. Junior doctors will be hard pressed to give hourly injections over the course of upwards of 24 hours in most cases.

We have used continuous infusion Prostin E solution (100 µg/ml) to bring about mid-trimester abortions in 15 cases during the past year. A heparin line (Avon Medical Heparin Line) is connected to a cervical catheter by a three-way adaptor. An infusion pump (Sage Instruments—Model 240) is then used to deliver the Prostin solution at a rate of 2 ml/h, after the doctor has ensured that the heparin line and Foley catheter are filled with the Prostin solution. Bolus injections of Prostin E solution can be given at the convenience of the medical officer to accelerate uterine contractions.

This method has proved successful without undue prolongation of the time required to achieve emptying of the uterus.

N MAHALINGAM
D A AIKEN

Department of Obstetrics and
Gynaecology,
HM Stanley Hospital,
St Asaph, Clwyd, LL17 0RS

SIR,—We would like to comment on the recent decision by Lord Denning, Lord Justice Brightman, and Sir George Baker in the Appeal Court on 7 November that nurses who assisted with prostaglandin abortions could be breaking the law, and the statements from the Royal College of Nursing (RCN) that it would advise nurses not to take part in any prostaglandin abortion, from the BMA that this will have a serious effect

on the availability of abortions in this country, and from the president of the Royal College of Obstetricians and Gynaecologists that this will create difficulties for doctors who use nurses as part of a team carrying out abortions (reported in the *Daily Telegraph* of 8 November and covered in the *BMJ* of 15 November, p 1361, and 22 November, p 1432).

As a group of 600 doctors campaigning for a law which gives the woman the right to make her own decision about abortion, we deplore any move which will make it even more difficult for women to obtain safe legal abortions. However, we feel that the 1967 Act clearly states that abortion should be carried out by a registered medical practitioner, and that it is our duty as doctors to perform abortions and not to delegate these procedures to nurses. There is no need for nurses to "top up" the extra-amniotic catheter if this method is used, as the prostaglandin can be given as a continuous low-dose infusion using a pump. Many doctors think that the intra-amniotic method when prostaglandin is combined with urea is preferable, and this must be done by a doctor. Recent work from the United States suggests that dilatation and evacuation are safer up to 20 weeks than the intra-amniotic methods. We believe that nurses who have not been trained in midwifery should not be left to deliver a woman who has a late termination and that the medical staff should take on this responsibility. In 1978 there were 6536 prostaglandin abortions—that is, 125 per week in England and Wales, hardly an excessive load for individual gynaecological units to manage. About one-third of these would be done on the grounds of fetal abnormality, a situation where medical confirmation of the diagnosis is vital to the woman's peace of mind.

Until we have simpler methods of abortion, such as the synthetic prostaglandin pessary, we see no need to change the law to allow nurses, pharmacists, or other trained personnel to administer the drugs which initiate or continue the abortion process.

Since the anti-abortion lobby failed to change the law in Parliament we have seen an increase in bureaucratic controls by the DHSS, and the RCN appear to have unwittingly helped the Department by seeking a clarification of the law. We must not forget that this lobby seeks to ban all abortions, and as doctors concerned with the health of women must guard against any restriction of the 1967 Act.

WENDY SAVAGE
on behalf of Doctors for a Woman's Choice
on Abortion

Department of Obstetrics and Gynaecology,
London Hospital (Mile End),
London E1

¹ Centre for Disease Control. *Abortion surveillance*. Atlanta, Georgia: Centre for Disease Control, 1974.

Vasectomy under local anaesthesia

SIR,—I would agree with Dr J J Hobbs (15 November, p 1352) that vasectomy may be performed in the majority of men using a local anaesthetic without undue discomfort or difficulty. The risks of general anaesthesia have always to be borne in mind and one patient is reported to have died this year having had a general anaesthetic for a vasectomy.¹

However, my experience in training practitioners to carry out vasectomy using a local anaesthetic indicates that it certainly is not an operation for "clumsy" hands. Some trainees

have not been able to become sufficiently adept to allow them or their patients to feel comfortable with the procedure.

A few men express a strong preference for general anaesthesia and in a minority the operation is probably best performed under a general anaesthetic for technical reasons. It is in these circumstances that the supervised trainee vasectomist may gain experience without detriment to the patient.

D N L RALPHS

Margaret Pyke Centre of Study
and Training in
Family Planning,
London W1V 5TW

¹ *The Times* 1980;25 September.

Day case surgery, or putting the clocks back

SIR,—I have just been listening to the excellent little cassette, prepared by Duncan Flockhart and Co, describing the day surgery unit at Kingston Hospital.

When I was a house surgeon before the war, in the majority of hospitals in this country main operating lists were covered by "honorarys," who were all hard-working GPs. For all other anaesthetics one had to rely on the co-operation of the house physicians. Very few hospitals appointed resident anaesthetists. Why? For the very simple reason that they had no money. We were all forced, therefore, to become reasonably competent at single-handed anaesthetics—spinals, caudals, regionals, and so on.

In 1948 the Health Service arrived, and the main change was supposed to be that hospitals would at last be free of their constant financial worries. Resident anaesthetists appeared in every hospital, anaesthetic equipment became more and more sophisticated, working hours were progressively reduced so that more and more staff were needed, anaesthetic nurses and anaesthetic technicians were demanded. The end result is a highly efficient service, but one which probably costs the country twice as much as the overall cost of the surgery for which the anaesthetics are given. We suddenly find ourselves to be a poor country that cannot afford this service and the clocks may have to be put back to 1938. The odd thing is that, while there has been more progress in general anaesthesia than in almost any other branch of medicine, other forms of anaesthesia have remained virtually unchanged for the last half century, for the very simple reason that in a non-cost-conscious medical atmosphere there has been no demand. Now if the clever people who have made such staggering advances in general anaesthesia were to turn their minds to other forms of anaesthesia, perhaps "generals" would soon become the exception rather than the rule, with the enormous savings which the Kingston experiment has demonstrated. What would we do with all the surplus equipment and staff? Perhaps export it to the oil-producing countries.

ROBIN BURKITT

Ashford Hospital,
Ashford, Middx

Diagnosis of brain death

SIR,—Dr Julius Korein's letter (15 November, p 1424) gives us the chance, at last, to discuss

the one element of the *Panorama* programme "Transplants: are the donors really dead?" worthy of serious discussion.

Dr Korein states that he mentioned 14 patients in the *Panorama* programme "who, on initial examination, were comatose, apnoeic, and cerebrally unresponsive, with absent cephalic reflexes, and who subsequently survived." These cases were highlighted in the programme as having "matched the British criteria of brain-stem death." They were clearly presented as evidence against the criteria. Twelve of these 14 patients were in drug-induced comas. The British criteria very specifically exclude such comas. Either the *Panorama* team knew this—or they did not: in either case, to put it mildly, there is cause for serious concern.

The two remaining cases¹ are critically important. Had they been meticulously documented, they might, in Thomas Huxley's words, have ensured "the slaying of a beautiful theory by a single ugly fact." Sadly, they were not. Dr Korein, for whose help I am grateful, told me that neither of these cases, seen in 1971-73, fulfilled the very strict British criteria in relation to the definition of apnoea. I believe there are further, specific reasons for rejecting each of them.

The first patient had a cardiac arrest lasting several minutes (Korein, personal communication) and went into an apnoeic coma. Cardiac arrest and its treatment may both produce serious metabolic disturbances. "Brain death" should never be diagnosed in such cases until all possible metabolic contributions to the coma have been excluded. The biochemical work-up of this 80-year-old woman was very incomplete. She therefore did not meet one of the essential prerequisites for a diagnosis of brain death. The British code² recommends, moreover, that there should be adequate periods of observation in patients who have suffered from cerebral anoxia. Within 12 hours Dr Korein's patient had recovered her brain-stem reflexes. This case does not invalidate the British criteria: it, in fact, corroborates their clinical sophistication.

Dr Korein's second patient had "probable brain-stem vascular insufficiency." He lapsed into an apnoeic coma and lost all his brain-stem reflexes—it was thought as a result of his vertebrobasilar disease. The implied diagnosis (massive brain-stem infarction from basilar occlusion) is clearly unacceptable: the patient apparently walked out of the hospital "in a neurologically normal state." What then was the most probable diagnosis in this case? We are told that within 12 hours there was a "return of cephalic reflexes and respiratory activity." Could this patient have been among the 50% (sic) in the collaborative study³ in whom—despite protocol requirements—"the blood was never analysed for intoxicants"? Be that as it may, there was clearly no verified, positive diagnosis (such as trauma or intracranial haemorrhage) to account for the coma.

These two cases should never have been used as evidence against the British criteria. Dr Korein started by quoting Hippocrates. May I end by misquoting Horace? The mountains (of the collaborative study) went into labour . . . and produced two ridiculous mice.

I hope Dr Korein will agree. He informs me that, despite promises, he was not given a chance to see the final version of the *Panorama* programme in which he had been interviewed

and had little idea of the polemical use to which it would be put.

C PALLIS

Department of Medicine (Neurology),
Royal Postgraduate Medical School,
Hammersmith Hospital,
London W12 0HS

¹ Korein J, Braunstein P, Kricheff I, Lieberman A, Chase R. *Circulation* 1975;51:924-39. (The relevant cases are referred to in column 3 of the table on p 928.)

² Working Party on behalf of the Health Departments of Great Britain and Northern Ireland. *The removal of cadaveric organs for transplantation: a code of practice*. London: HMSO, 1979.

³ Collaborative Study for Cerebral Survival. *JAMA* 1977;237:982-6.

Consent to mastectomy

SIR,—Dr H J Thompson and his colleagues are to be congratulated on their attempts to reduce the number of patients with benign breast disease consenting to mastectomy, (25 October, p 1097). It is unfortunate, however, that with their methods 15/47 (33%) patients still consented to mastectomy.

It has been the aim of this breast clinic to work towards obtaining consent for mastectomy only in patients who have been proved to have carcinoma of the breast by outpatient aspiration cytology, "Tru-cut" needle biopsy, or excision biopsy and urgent paraffin-section histology.

In the year 1 September 1979 to 31 August 1980 only 7/121 (5.8%) of patients with benign breast lumps were asked to consent to mastectomy. One-quarter of the solid breast lumps in women referred to this breast clinic are malignant. In the same period 6/23 (26%) of mastectomies were preceded by frozen section. Since 1 January, however, only 2/16 (12.5%) mastectomies have been preceded by frozen section and no frozen sections have been used in the past nine months (0/14 cases). The small number of mastectomies being performed is due to alternative primary treatment being offered to certain patients.

Psychological studies being carried out in conjunction with our management plan suggest that women not only prefer to have a pre-mastectomy diagnosis but that it enables them to make a better subsequent recovery and adjustment.

R G WILSON

Breast Clinic,
Newcastle General Hospital,
Newcastle upon Tyne NE4 6BE

SIR,—In their excellent article on consent for mastectomy (25 October, p 1097) Dr H J Thompson and others showed that in their hands mammography and clinical examination can correctly diagnose carcinoma in the vast majority of patients. However, both palpation and mammography have a high false-positive rate.¹ On the other hand, fine-needle aspiration cytology has a low false-positive rate.²

All three methods depend on the skill and enthusiasm of the personnel, but it seems to us that where there is a first-class cytology service (as in Aberdeen), fine needle aspiration cytology should be part of the "work-up" of any patient presenting with a breast lump.

If mammography is not used then cytology can also greatly reduce the number of women consenting to mastectomy unnecessarily, and it can also help to pick up the unsuspected cancer in the 20-30 age group. We had two such patients with clinically benign lumps

which had malignant or highly suspicious cells on cytology, and which proved to be malignant.

B M HOGBIN

Department of Surgery

D H MELCHER

Department of Cytology,
Brighton General Hospital,
Brighton BN2 3EW

¹ Russ JE, Winchester BP, Scanlon EF, Christ MA. *Surg Gynaecol Obstet* 1978;146:407-11.

² Gardecki TIM, Hogbin BM, Melcher DH, Smith RS. *Lancet* 1980;ii:790-2.

SIR,—We read with interest the paper by Dr H J Thomson and others (25 October, p 1097) and sympathise with their aim to reduce the need for prior consent for mastectomy in patients with benign disease. However, it fails to take into account three fundamental advances that have been made in the management of patients with breast cancer in recent years: firstly, the value of needle biopsy techniques; secondly, the recognition of the need for a full physical and psychological assessment of patients prior to mastectomy; and, thirdly, the development of immediate prosthetic reconstruction.

Our policy is to define the diagnosis accurately in patients with breast cancer before mastectomy so that truly "informed" consent can be gained and a full assessment of the patient be made.¹ Lumps thought to be benign are excised, under either local or general anaesthesia, without any question of proceeding directly to mastectomy.

We have recently assessed the role of diagnostic methods used at our clinic during 1978 and 1979. These are clinical examination, mammography, fine-needle cytology, and Trucut needle biopsy. Each of these tests has a different function: clinical examination to detect palpable lumps; mammography to examine both breasts completely for lesions which are not necessarily palpable; needle aspiration to determine whether a lump is solid or cystic and if solid to yield a smear for cytology; Trucut biopsy to confirm malignancy where a high degree of clinical, mammographic, or cytological suspicion exists.

During the period of study 220 patients had a mastectomy for breast cancer. In 131 (60%) patients an unequivocal diagnosis of cancer was made prior to mastectomy. This was by Trucut biopsy in 116 and a combination of clinical, mammographic, and cytological examination in 15. Frozen section was used in 34 (15%) patients with clinically obvious carcinomas in whom needle biopsy had proved unsatisfactory. These patients were all fully prepared for mastectomy and had been left in no doubt of their diagnosis before operation. Fifty-five (25%) patients had an excision biopsy before mastectomy. In 15 there was no palpable abnormality, the lesion being detected by mammography, and in eight of these the tumour was non-invasive. The remaining 40 patients had lumps thought clinically to be benign and seven had non-invasive tumours. In general, these patients were younger than average for breast cancer and had small lumps. With a high incidence of in-situ tumours we prefer paraffin sections and careful assessment of such tissues. During the same period 813 biopsies were performed for benign disease. In only eight was a frozen section performed in a patient prepared for mastectomy because of a strong belief that the lump was cancer. They represent less than 1% of our patients with benign lumps.