right thigh with discoloration and bruising. The superficial epithelium had sloughed off. Her lungs, spleen, and liver were congested. *Str pyogenes* was isolated from her skin and subcutaneous tissue, but not from her heart blood or spleen. Her right hip showed no underlying abnormality.

This is another example of a patient with *Str pyogenes* infection who did not have a classical presentation. This case also emphasises the fulminating nature of the infection, as she died despite having been on appropriate high doses of benzylpenicillin for 20 hours.

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Comparison of neonatal management methods for very low birthweight babies

SIR,—Dr E S Steiner and others (8 November, p 1237) have offered a very succinct paper examining the outcome of very low birthweight infants who did not require "special or intensive" care. I am unable to agree with their conclusions and am saddened by their hostility towards intensive perinatal care.

Clearly none of their infants required intensive care intervention and those that did died. Thus a population of "well babies" remained, of whom only 52% were normal at school age. Surely these results are disastrous and must indicate that more intensive care facilities are required at this unit.

A more useful comparison would be a similar population at University College Hospital or Hammersmith Hospital—that is, very low birthweight infants who did not require intensive therapy after birth and who were managed by minimal handling only. The figures quoted from these other units included babies ventilated for hyaline membrane disease. I would be very interested to learn whether Dr Pamela Davies at Hammersmith Hospital has been able to differentiate non-ventilated very low birthweight infants in her follow-up studies.

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*.*We sent this letter to Dr Davies, who replies below.—ED, BMJ.

SIR,—Thank you for giving me the opportunity to reply to Dr Reynolds's query about the outcome for non-ventilated very low birthweight infants. In the 15-year (1961-75) survey of infants weighing ≤ 1500 g at their birth in Hammersmith Hospital¹ to which Dr E S Steiner and his colleagues refer (8 November, p 1237) 148 of the total of 357 were ventilated, and 94% of them died. The fate of the 209 non-ventilated infants was as follows: 70 (33.5%) died in the neonatal period, 5 (2.4%) later, 5 (2.4%) were untraced, 17 (8.1%) had major and 20 (9.6%) minor handicap as defined,¹ and 92 (44.0%) were apparently normal. The figures for major and minor handicap reported by Dr Steiner and his colleagues were 5.5% and 12.3% respectively.

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¹ Jones RAK, Cummins M, Davies PA. *Lancet* 1979; i:1332-5.

Intrinsic hazard of breech presentation

SIR,—The management of breech delivery continues to be widely debated. Caesarean section is increasingly used to deliver mature breech babies. Some obstetricians advocate abdominal delivery for those between 32 and 37 weeks while others include very small prematures—that is, those between 26 and 32 weeks. Presumably the operation referred to has always been the lower-segment one.

Mr John P Calvert (15 November, p 1319) now suggests that ill, small breech babies should be delivered by classical section because the fetal head might be delivered more quickly for resuscitation. Surely the risks of such a policy must far outweigh the advantages. The uterine wound is often larger with the classical procedure and when the placenta is anterior the blood loss at operation will often demand transfusion. Paralytic ileus, generalised peritonitis, and occasionally acute small bowel obstruction are complications to be reckoned with in the puerperium.¹ But the over-riding argument against the use of classical section for a small compromised breech is that the scar can and does rupture in any subsequent pregnancy with the risk of maternal death and a fetal mortality rate of approximately 75%.² The results quoted by Dr Calvert suggest that if a breech baby has to be delivered by section then a colleague skilled in resuscitation must be in the theatre. Perhaps the operation should be performed under epidural block using all methods to prevent the supine hypotensive syndrome. Certainly all obstetric anaesthetic skills are essential. The abdomen should be opened by a mid-line incision and the fetus delivered through an adequate transverse incision in the lower segment.

Perinatal statistics have become too important. It is wiser to deliver a young teenager of a 35-week breech vaginally using an epidural block than to seriously prejudice her obstetric career let alone her life by performing a classical section. Similarly, if the cord prolapses during the labour of a small premature breech baby it is often sensible not to operate. A stillborn 30-week fetus with the uterus left intact is preferable in a young woman than to leave her with a scarred upper segment and a brain-damaged baby.

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¹ Myerscough, P. *Munro Kerr's operative obstetrics*. 8th edn. London: Ballière Tindall, 1977:511.

² Dewhurst CJ. *Journal of Obstetrics and Gynaecology of the British Empire* 1957;64:113-8.

Kidney biopsy

SIR,—The juxtaposition of two letters (4 October, p 945) containing similar statistics, but supporting two different techniques for kidney localisation prior to biopsy, will not help those trying to decide which method they should use. Our letter from Nottingham was not written with the knowledge that it would be adjacent to the vigorous advocacy for urographic localisation put forward in the Bristol letter. It is clear that both techniques are satisfactory when used by experienced staff, and a choice between the two cannot be made on the basis that one is more likely to be successful, or is less prone to complications.

The merits of ultrasound are in part logistic; it is quicker to establish the position

of the kidney than with urography. The technique is especially useful when it is uncertain if urography will demonstrate the kidney. It provides the operator with the distance of the kidney capsule from the skin. In our opinion the role of biopsy with urography will be for the few failures under ultrasound, when the depth of the kidney will already be known.

It seems certain that very occasional severe renal haemorrhage will occur with all methods. It is surprising that neither the original article nor the correspondence comments on the treatment of this complication by selective embolisation of the bleeding kidney. We hesitated to be advocates of this technique with only two severe haemorrhages to report. The first followed a "blind" biopsy in acute renal failure before the era of selective embolisation and nephrectomy was performed after 10 days of bleeding. In the second patient, with chronic renal failure and before the use of ultrasound, a selective embolisation stopped prolonged and severe bleeding with no detectable impairment of renal function. It is important that those performing renal biopsy should be aware of the technique, as it appears much preferable to nephrectomy. Its availability has reduced to some extent the caution with which we recommend renal biopsy.

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Renal aneurysms in rejected renal transplants

SIR,—The finding of multiple small intrarenal aneurysms by Dr J F Walker and others (8 November, p 1251) prompted us to review the renal arteriograms performed in our unit during the past seven years with a view to determining the incidence of such aneurysms, both in general and in our own transplant series.

In this period 918 renal arterial studies were performed with selective renal arteriography, flush aortography, or a combination of both techniques, depending on the clinical indication for the study. In some examinations (for example, transplanted kidneys) just one kidney was examined but in most others both kidneys. Indications for the procedure included suspected tumour (262 kidneys), suspected rejection or arterial stenosis in a renal transplant (136 kidneys), suspected polyarteritis nodosa (102 kidneys), the assessment of prospective renal donors (162 kidneys), and miscellaneous pathology (hypertension, abnormal urogram, haematuria, etc, 256 kidneys). In the total series of 918 organs studied, multiple small intraparenchymal aneurysms were demonstrated in 24 kidneys (14 patients); four of these kidneys (four patients) were rejected transplants and the other 20 (10 patients) were in cases of polyarteritis nodosa. Aneurysms were also seen in association with hypertension, stenosis, and atherosclerosis and following renal biopsy, renal surgery, or renal trauma. These aneurysms all affected the larger intrarenal arteries or the extrarenal arteries, and were usually solitary; their appearance was quite distinct from the multiple small lesions of polyarteritis or transplant rejection. Bizarre aneurysmal vessels were also seen in the pathological circulation of renal tumours; the lesions in these cases were confined to the region of the tumour.

It has been noted that aneurysms were demonstrated in four out of 136 transplanted kidneys examined arteriographically (3%). A further

seven kidneys (5%), however, showed severe arterial beading of the type previously reported in rejection^{1,2}; and in another nine kidneys (7%) there were irregularities in the small renal arteries ranging from minor variations in vessel calibre and course to obvious segments of constriction or dilatation with abrupt terminations to the vessels. All the transplanted kidneys demonstrating these vascular abnormalities were undergoing rejection. One of the patients in whom aneurysms were demonstrated had arteriography of the transplanted kidney performed on two occasions; the first arteriogram showed normal intrarenal vessels, the second study one year later showed multiple small aneurysms which had developed during the course of rejection of the kidney.

There was considerable overlap between the different types of arteriographic abnormality seen in rejecting transplant kidneys; the 20 kidneys comprising the three groups described above demonstrated a spectrum of vascular changes ranging from mild variations in vessel calibre at one extreme to multiple aneurysms at the other. In summary, multiple intrarenal aneurysms or severe preaneurysmal beading were demonstrated in 8% of 136 arteriograms performed on malfunctioning transplanted kidneys. In a total series of 918 renal arteriograms rejection of a transplant was second only to polyarteritis nodosa as a cause of this type of aneurysm. Many causes of renal aneurysm are known,³ but the aneurysms seen in transplant rejection are most similar in their arteriographic appearance to those occurring in polyarteritis nodosa³ or drug abuse.⁴

Our findings support the contention of Dr Walker and his colleagues that transplant rejection can be a cause of intrarenal aneurysms, and we believe that such aneurysms represent one extreme of the wide spectrum of arteriopathic changes that can be demonstrated by arteriography during transplant rejection.⁵

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¹ Vinik M, Smellie WAB, Freed TA, Hume DM, Weidner WA. *Radiology* 1969;**92**:873.

² Raphael MJ, Steiner RE. In: *Recent advances in radiology*. Fifth edn. Lodge T, Steiner RE, eds. Edinburgh: Churchill Livingstone, 1975:159.

³ Travers RL, Allison DJ, Brettle RP, Hughes GRV. *Semin Arthritis Rheum* 1979;**8**:184.

⁴ Halpern M, Citron P. *Am J Roentgenol* 1971;**iii**:663.

⁵ Raphael MJ, Steiner RE, Stockman R, Ware RG. *Br J Radiol* 1969;**42**:873.

Elemental diets in treatment of acute Crohn's disease

SIR,—The difficulties in conducting controlled trials in Crohn's disease do not diminish the need for cautious interpretation of uncontrolled data such as those provided by Dr C O'Morain and colleagues (1 November, p 1173). The induction of remission claimed for the elemental diet may equally have been the result of bed rest or due to the drugs that 16 out of the 24 patients were taking.

Whether any beneficial effect of elemental diets is attributable to the characteristics peculiar to these formulations is similarly in doubt, and the much cheaper whole-protein low-residue liquid diets may be equally efficacious. Recently a trial of bowel rest in Crohn's disease using parenteral nutrition alone showed no significant improvement over results obtained using parenteral nutrition plus oral food (H Lochs *et al*, abstract PF7, European Congress of Parenteral and Enteral Nutrition, Newcastle, 1980). Both methods reduced the Crohn's disease activity index, which was attributed to improvement in nutritional status. But the property of having

no or low residue, with resultant bowel rest, may be important in the healing of local perianal lesions when nutritional deficiency is not a feature.¹

Elemental diets are not without hazards,² and before they are accepted as useful therapy in Crohn's disease controlled data on their efficacy must be obtained³ and comparisons with the cheaper whole-protein liquid diets undertaken.

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¹ Russell RI, Hall MJ. *Scot Med J* 1979;**24**:291-5.

² Hall MJ. In: Russell RI, ed. *Elemental Diets*. Cleveland Ohio: Chemical Rubber Company (in press).

³ Koretz RL, Meyer JH. *Gastroenterology* 1980;**78**:393-410.

Psychiatric morbidity and physical toxicity associated with adjuvant chemotherapy

SIR,—We were most interested in the report by Dr G P Maguire and others (1 November, p 1179) of a study of psychiatric morbidity associated with adjuvant chemotherapy following mastectomy, which is similar to the investigation already reported by us.¹ However, we should like to draw attention to an ambiguity which occurs in the first sentence. The wording and the grouping together of the first two references^{1,2} suggest that both papers make the claim that adjuvant combination chemotherapy causes little physical toxicity and psychiatric morbidity in patients with breast cancer.

In fact, our results, based on a series of 39 patients, showed that in those free from recurrent disease psychiatric morbidity, particularly depression, was significantly greater in patients completing a one-year course of chemotherapy than in those who had radiotherapy alone. Furthermore, data from a longer follow-up study involving 52 patients indicate that the psychiatric morbidity associated with chemotherapy persists for at least 12 months following the cessation of treatment.³ In the paper by Dr Maguire and his colleagues it is not clear when the differences in morbidity between the groups became evident, whether patients were still having chemotherapy at the time of the 12-18 month assessment, or whether they were free from recurrent disease. It is possible that part of the psychiatric morbidity observed by them could be related to the physical symptoms arising from recurrence of disease as well as those associated with drug toxicity.

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¹ Cooper AF, McArdle CS, Russell AR, Smith DC. *Br J Surg* 1979;**66**:362.

² Bonnadonna G, Brusamolino E, Valagussa P, *et al*. *N Engl J Med* 1976;**294**:405-10.

³ Hughson AVMH, Cooper AF, McArdle CS, Russell AR, Smith DC. *Br J Surg* 1980;**67**:370.

* * * We sent this letter to the authors, whose reply is printed below.—ED, *BMJ*.

SIR,—We welcome the letter from Dr Cooper and his colleagues for it enables us to cover points which were not included in our short report.

Our investigation was part of a larger study, which aimed to determine whether counselling by a specialist nurse reduced the psychiatric morbidity associated with the treatment of breast cancer.¹ Women about to undergo mastectomy were randomised to routine care or routine care plus counselling. Those whose lymph nodes had been invaded by cancer were further randomised to treatment with cyclophosphamide, methotrexate, and 5-fluorouracil (CMF), melphalan or no therapy.

Counselling failed to prevent psychiatric morbidity. So we considered that our findings accurately reflected the incidence of such morbidity in patients on adjuvant chemotherapy. The high morbidity in patients on CMF was not attributable to recurrence of disease since this had occurred in 4/18 (22%) of those on no treatment, 1/14 (7%) of patients on melphalan, and 1/26 (4%) of those given CMF. Regular monitoring by the specialist nurse led her to detect and refer for help most of those in the counselled group who needed psychiatric treatment. In view of this the questions posed about the duration of psychiatric morbidity in patients on CMF can be answered only by considering what happened in the non-counselled group.

The mood disturbance generally became evident two to three months after starting the 12-month course of CMF. It reached a peak six to eight months after starting treatment. The course thereafter was variable. The extent to which it persisted once treatment was completed is shown in the accompanying table. This persisting psychiatric morbidity has to be judged against the incidence in the "no treatment" group of patients, who suffered a greater incidence of recurrence (two patients within the follow-up period and one shortly after, compared with no patients in the CMF or melphalan groups).

Presence or absence of psychiatric morbidity at the end of the follow-up period. Figures in parenthesis give percentage of treatment group showing morbidity

Treatment group	Anxiety		Depression	
	+	-	+	-
Mastectomy alone	5 (50)	5	5 (50)	5
Mastectomy and melphalan	1 (14)	6	1 (14)	6
Mastectomy and CMF	7 (47)	8	5 (33)	10

CMF = Cyclophosphamide, methotrexate, and 5-fluorouracil.

Thus we believe that, while patients given CMF pay a considerable price for the possibility of improved survival, this is offset to a considerable extent by the problems they would have encountered through recurrence had they been given no further treatment. Further, more extensive studies are needed to confirm that this is so.

Finally we would like to correct an error which appeared in the table. The figures for the incidence of depression in the "mastectomy alone" group should have read:

+ - + -
9 (50) 9 and not 9 (32) 19

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¹ Maguire P, Tait A, Brooke M, Thomas C, Sellwood R. *Br Med J* 1980;**281**:1454-6.

Heart rate variations in the Guillain-Barré syndrome

SIR,—Dr Shirley A Smith and Professor S E Smith (11 October, p 1009) writing about our paper (6 September, p 649) say that "the difference in the size of the standard deviation between the two groups studied [patients