with patients being followed up who would be just as well managed by their general practitioners—who are responsible for their care for the rest of the time anyway. And, who knows, if the consultant returned to true consulting practice the standards of treatment of rheumatoid arthritis in his GP colleagues' practices might just possibly improve.

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¹ Hodgkin K. *Towards earlier diagnosis*. Edinburgh: Churchill Livingstone, 1958.

² Mowat AG, Nichols PJR, Hollings EM, Haworth RJ, Aitken LC. *Ann Rheum Dis* 1980;39:12-7.

Perinatal and neonatal mortality

SIR,—I would like to congratulate Mr R Garry and A F J Atkins (23 August, p 562) on the organisation of the maternity services in their area. The basic principles of hospital delivery and immediate return home where there were no clinical or social contraindications were laid down by Dr Sarah Walker and myself in 1956.¹ Although this received wide publicity at the time, such is our innate resistance to new ideas that it took Professor Duncan over seven years to establish such a unit in Cardiff. This was followed a few years later by Salford, and no doubt similar facilities exist elsewhere.

I have subsequently developed my ideas and now feel that it can no longer be argued that midwifery is part of ordinary general practice. I would like to have the obstetric list restricted to a relatively few dedicated general practitioner obstetricians, who with the midwives, district or hospital, would be part of the maternity team under the consultant of their choice. They would be GPs for, say, three days a week and general practitioner obstetricians for the other days. All deliveries would be in hospital with immediate discharge home where suitable. All antenatal care would be given in the health centre by this same team, the consultant coming out on special sessions in difficult cases to assess the risk. Transport of the mother in labour would be relatively easy in most of this country, but in very remote areas what is wrong with using helicopters?

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¹ Sluglett J, Walker S. *Lancet* 1956;i:684-6.

Anastomotic integrity after operations for large-bowel cancer

SIR,—The figures on anastomotic leakage given by Mr L P Fielding and others (9 August, p 411) are interesting and important. However, it would be a pity if surgeons were to interpret a leakage rate of 25% for tumour resection performed in the presence of obstruction when there was a protecting colostomy, compared with only 14% where this was not employed, as a condemnation of a relieving colostomy in this situation.

Two factors may account for these rather surprising figures. Firstly, we are not told how many resections in the unprotected group were obstructions due to right-sided cancers, where a relieving colostomy would not, in any case, be indicated. Secondly, we are not informed of the severity of the obstruction; a surgeon might resect a minimally obstructed "easy" case without a colostomy but might protect a really nasty occlusion by this means

and not be too surprised if the leakage rate was higher in the second category.

Until there is more news, I shall continue to protect left-sided anastomoses performed in obstructed cases of colonic cancer by means of a transverse colostomy.

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* * * We sent this letter to Mr Fielding, who replies below.—ED, *BMJ*.

SIR,—Thank you for asking me to reply to Professor Ellis's letter. In the group of patients undergoing anastomoses with stoma (127 patients), 32 had tumours up to the splenic flexure (right-sided lesions), of whom five (15.6%) died in the postoperative period. Thus the remainder of this group (95 patients) had obstructed lesions of, or distal to, the splenic flexure, of whom 14 (14.7%) died. In the other two comparative groups the figures were: anastomoses with transverse colostomy—28 patients, of whom six died (21%) and delayed anastomoses—29 patients, of whom one died (3%). I note that Professor Ellis makes no mention of this last group—the data suggest that it is this policy which might be achieving the best results—but I agree with him that we need information about the comparability of patients in these three groups for the degree of obstruction and severity of illness.

Sadly, there are no yardsticks by which these factors can be measured. In the past I have attempted to provide some information by using a clinical score and recording the delay from admission to surgery.¹ It seems that a choice of a transverse loop colostomy to accompany a left-sided obstructive resection after an anastomosis has been constructed is one of personal clinical bias—as indeed it seems to be for Professor Ellis—but that a decision to delay an anastomosis is different. Here it seems that clinical severity is greater than in the other two groups, and that surgeons, accepting the principle of immediate tumour resection, have been unwilling to risk an anastomosis. Taken in this context, the outcome for this group is interestingly good. In summary then, my overall clinical view depends on two levels of assessment by the surgeon—firstly, of his own ability to construct a secure anastomosis and, secondly, of the degree of the patient's sickness.

Thus, on the assumption that a fully trained surgeon is present for all of these operations, a resectable tumour should be resected after bowel decompression.¹ Then, if the patient is relatively unfit or has "significant" systemic effects from the obstruction or if the bowel wall is friable, an anastomosis should be delayed and the ends brought out as stomas. I believe that this policy should be used for both left and right-sided lesions (in the case of a distal tumour in which a mucous fistula is not possible then the end can be oversewn—a Hartmann procedure). Alternatively, if conditions are more favourable and if the surgeon is certain that he has a low rate for anastomotic leakage, then reconstruction should be considered: an ileocolic anastomosis for lesions up to and including the splenic flexure (or even beyond) and a colorectal anastomosis for tumours of the sigmoid after "on-table" orthograde colonic and distal rectal irrigations.² The combination of which allows reconstruction between clean and empty segments of gut. Neither of the policies just described includes the construction of a transverse loop colostomy.

Currently these views may seem unconventional. However, over the last decade we have seen a shift in our approach to the management of patients with large gut obstruction, in that immediate tumour resection is far more widely practised than formerly,¹ when staged tumour

resection was the order of the day. We now need to turn our attention to the timing and methods of reconstruction in relation to the factors just listed, accepting two principles: firstly, that right hemicolectomy for bowel obstruction with immediate reconstruction is not the simple uncomplicated operation once thought^{1,3} and, secondly, that transverse loop colostomy is of unproved value to militate against the septic complications of a leaking left-sided anastomosis.

Clearly, these are not subjects suitable for an orthodox randomised trial⁴ and we will need to proceed slowly on the basis of discussion and reporting of results to establish the most effective treatments. In the meantime it would be helpful for us to stop using the words "protecting" or "relieving" to qualify the procedure of transverse loop colostomy until such time that this function has been established; my guess is that we will not be able to find such evidence. Even if these thoughts do not constitute the "news" sought by Professor Ellis, perhaps the small amount of evidence supplied will cause him to reconsider again the role of concomitant transverse loop colostomy.

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¹ Fielding LP, Stewart-Brown S, Blesovsky L. Large bowel obstruction caused by cancer: A prospective study. *Br Med J* 1979;ii:515-7.

² Anonymous. *Br Med J* 1980;280:882-3.

³ Fielding LP, Stewart-Brown S, Dudley HAF. *Lancet* 1978;ii:778-81.

⁴ Debas HT, Thompson FB. *Surg Gynecol Obstet* 1972;135:747-52.

Unprocessed bran in idiopathic hypercalciuria

SIR,—In their brief article on the effect of unprocessed bran on urinary calcium excretion in idiopathic hypercalciuria, Mr P J H Shah and others (9 August, p 426) identify three possible mechanisms: the binding of calcium to phytic acid; prevention of calcium absorption by bran; or decreased intestinal transit time reducing the time available for calcium absorption. A fourth possible mechanism merits discussion.

Vaughan and Filer¹ reported that lactose and certain other sugars increase calcium absorption from the gut; Hodgkinson and Heaton² showed that a carbohydrate meal increases calcium excretion without producing any change in plasma calcium level; and Leman *et al*³ found that subjects prone to develop stones in the renal tract tend to exhibit bursts of hypercalciuria after ingesting carbohydrate-rich foods. Many other papers in the scientific literature indicate that calcium is absorbed along with monosaccharides. If absorption of the latter is complete in the jejunum then little calcium is absorbed lower down the gastrointestinal tract, but if for any reason disaccharides or more complex carbohydrates are not broken down to absorbable monosaccharides until food reaches the ileum or large bowel, absorption of calcium may take place over a much longer stretch of the intestinal tract and consequently overall calcium absorption may be excessive. In the rat it is easy to produce various forms of nephrocalcinosis by feeding lactose in high concentration (V J Feron, personal communication). In young growing animals enhancement of calcium absorption by lactose in milk is doubtless advantageous.⁴

Lower consumption of carbohydrates that

are degradable in the gut to monosaccharides might have been a factor—perhaps the most important factor—leading to reduced absorption of calcium in the bran-fed subjects studied by Mr Shah and others.

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¹ Vaughan OW, Filer LJ. *J Nutr* 1960;71:10-4.

² Hodgkinson A, Heaton FW. *Clin Chim Acta* 1965; 11:354-62.

³ Leman J, Piering WF, Lennon EJ. *J Clin Invest* 1968;47:60A.

⁴ Fournier P. *Path Biol* 1965;13:143-51.

Proctoscopy and sigmoidoscopy

SIR,—I was very pleased to see (23 August, p 561) the letter from my friend Mr C Patrick Sames regarding his "two-finger test." A constricted outlet is frequently associated with anal pathology.

The pathology most commonly associated with anal constriction is congestion of the vascular pads, described by Thomson,¹ which when congested become haemorrhoids with their well-known symptoms of bleeding, prolapse, pain, and thrombosis. Constriction can also be associated with papillitis, fissure, pruritis, and even fistula.

I would agree entirely with Mr Sames that if the two-finger test demonstrates constriction in the presence of anal pathology and symptoms dilatation is almost certainly indicated. I would, however, express a word of caution: in the female patient with a descending perineum that constriction, although perhaps abnormal, may be contributing to continence; and it need hardly be said that dilatation is never indicated in the absence of symptoms. With these minor reservations I would hope that the two-finger test, as described by Mr Sames, receives wide recognition and becomes part of the routine assessment of the patient with an anal problem.

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¹ Thomson WHF. *Br J Surg* 1975;62:542-52.

Percutaneous central venous cannulation

SIR,—We would endorse the comments of Mr J L Peters and colleagues (30 August, p 618) concerning the use of ultrasound for locating the subclavian vein. We have used a special ultrasound flow probe to aid cannulation of several other vessels and this equipment has proved especially useful in the obese or anatomically difficult patient.

Our design consists of a 10-MHz Doppler probe with the crystals mounted at an angle of 60° to the central axis of the handle (figure). A needle guide has been fitted to the probe parallel with the line of the focused ultrasound beam, the angled handle giving easy access for needle placement. Although 10 MHz has been used for our device, this is not critical and any frequency from 5 to 10 MHz is likely to be satisfactory. This special probe can be connected to most commercially available ultrasonic Doppler velocimeters.

In addition to its application for cannulating focal vessels, we have found the modified probe particularly useful in the field of anaesthesia, for local analgesia of the brachial plexus. We have gained experience with an anterior approach to the plexus, locating the cervico-axillary canal well below the clavicle by ultrasonic identification of the adjacent contained

subclavian artery and vein. With such accurate anatomical localisation of the plexus hazards of conventional approaches, such as pneumothorax, can be avoided. Our preliminary studies have shown it to be possible to produce successful blocks with lower volumes of analgesic agents.

Doppler probe with needle guide to aid cannulation.

Modern ultrasound devices are inexpensive and portable, and their general adoption for the type of indications discussed would appreciably reduce the unfortunate morbidity of some common procedures. Furthermore, the precision of anatomical localisation which this technique permits greatly reduces the time necessary to train anaesthetists in the techniques. We believe that such a device should be an essential part of the anaesthetist's armament.

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Unusual presentation of appendicitis

SIR,—Crepitant cellulitis of the right thigh due to ruptured retrocaecal appendix (16 August, p 495) is usually only diagnosed at necropsy. One 50-year-old man with the condition was in hospital for three weeks before the source of the pus was discovered. He died 16 days later.¹

Non-clostridial crepitant cellulitis is even more unusual, but two other cases are recorded. A 74-year-old man with a five-day history of pain in the right hip was admitted to an orthopaedic ward with a suspected intertrochanteric fracture.² Subsequently subcutaneous emphysema down to the knee was noted. Culture of pus aspirated from an air pocket grew *Escherichia coli*, *Aerobacter aerogenes*, and α -haemolytic streptococcus. Retroperitoneal rupture of the appendix with abscess formation was found at necropsy.

A 55-year-old diabetic woman was luckier.³ During incision and drainage of her right thigh pus was noted oozing through the femoral canal, and this prompted abdominal exploration. Her abscess was therefore drained promptly, and she survived. No clostridial bacteria were grown here either.

In all three cases abdominal symptoms and signs were notable by their absence.

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¹ Sampson LH, Pegg SP. *Med J Aust* 1977;1:406-8.

² Pierleoni EE, Johnson LC. *Gastroenterology* 1955; 29:308.

³ Nicell P, Tabrisky J, Lindstrom R, Peter M. *Surgery* 1975;78:555-9.

The prepregnancy clinic

SIR,—I am most interested in the comment from Dr Judith M Lumley and others (30 August, p 619) on the prepregnancy counselling service in Melbourne.

In my practice women have requested "pregnancy check-ups" since 1969. In the main these have been patients from social classes I and II where both husband and wife, when they choose to start a family, are concerned to achieve a high-quality baby. The most important feature of these consultations is taking an unhurried, detailed medical, genetic, social, and sexual history.

I feel that this service can now be considered an essential part of medical gynaecology and I look forward to the time when real family planning occurs at all family planning clinics, in hospital, in general practice, and in the community.

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Bone-marrow aspiration and trephine biopsy

SIR,—I wish to point out an omission from the articles on bone-marrow aspiration and trephine biopsy (19 July, p 204; 26 July, p 280).

Marrow biopsy is often indicated as part of reassessment of a patient who has been treated for Hodgkin's disease or non-Hodgkin's lymphoma. Where radiotherapy has formed part of the treatment it is important for the marrow biopsy to be taken from a part of the skeleton which has not been irradiated, otherwise a dry tap is likely to be the result. Erythropoietic marrow is likely to be absent from irradiated areas for at least several months and often much longer than that. If the irradiation has been to the "upper mantle" area the sternum should not be used; if it has been to an inverted "Y" field the posterior superior iliac spine should be avoided as this is likely to lie within the field.

In my experience haematologists are not infrequently caught out by this and the patient has to suffer a repeat of the procedure. I admit that the referring oncologist is often at fault by failing to mention that the patient has previously had radiotherapy.

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Is the emergency ambulance service abused?

SIR,—I would like to comment on your recent article on the abuse of the British ambulance service in the Birmingham area (12 July, p 121) and on the NHS review of the service.