and a shortened lifespan of the catheter, but none was found.

Recent studies have shown benefit from infusional chemotherapy,³ and its use is likely to increase. There could be a strong argument for rationalising use of the percutaneous technique of inserting central venous catheters: occasional operators are more likely to encounter difficulties, so specialist centres that insert over 200 a year are desirable and should incorporate a comprehensive education programme for both patients and staff.

The background of the operator is not critical provided that he or she has been trained and is capable of treating complications, monitoring patients, and recovering them safely. The anaesthetists at the Royal Marsden Hospitals provide this service and endeavour to refine the subtleties of the technique.

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Line should not enter the heart

EDITOR,—We are concerned by Andy Adam's statement that the correct position for the tip of long term central venous catheters is in the right atrium.¹ Cardiac tamponade secondary to erosion or perforation of the tips of catheters is a rare but well recognised and potentially fatal complication of central venous catheterisation. Several recent reviews have drawn attention to this and recommended that the tip of a central venous catheter should lie in the superior vena cava, typically judged as being at the angle of the trachea and right main bronchus.^{2,4}

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Operating theatre is better back up than venography

EDITOR,—Andy Adam asserts that interventional radiologists are the most appropriate specialists to insert long term venous catheters.¹ He does not, however, provide any evidence that such a practice would benefit patients or provide an improved service. As a surgeon responsible for over 400 procedures to gain central venous access annually,

I remain unconvinced of the benefits that Adam maintains accompany venography to provide "initial diagnostic information." Rather than simplifying the insertion of central venous catheters, this must surely constitute an additional complicating step.

In my practice over 95% of Hickman catheters are introduced by the percutaneous technique, with puncture of the subclavian vein performed blind. The anatomy of the subclavian vein in relation to the mid-third of the clavicle is remarkably constant, and I have been aware of inadvertent arterial puncture on only three occasions, with no subsequent morbidity. The use of an image intensifier to confirm placement of the guidewire and Hickman catheter is routine and allows for immediate correction in cases of misplacement (with the tip in the internal jugular or opposite subclavian vein).

In adults, over 80% of Hickman catheters are inserted under local anaesthesia. The advantage of performing the procedure in the operating theatre (as opposed to the angiography suite) is that this allows surgical cutdown of the jugular or saphenous vein to be performed in those few patients in whom a percutaneous approach to the subclavian vein is not feasible (for example, those with bilateral axillary vein thrombosis) and also allows for general anaesthesia. With these options available, the success rate in achieving long term central venous access is virtually 100% without resort to percutaneous puncture of the inferior vena cava, as Adam describes.

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Surgical cutdown technique should not be abandoned

EDITOR,—Andy Adam dismisses the surgical cutdown technique for gaining access to the subclavian vein to insert a long term central venous catheter.¹ We have used an open approach to the internal jugular vein for the past 10 years. This method does not suffer from the low success rate quoted by Adam, has an operating time of between 15 and 45 minutes, and rarely compromises the vein for future use. It avoids not only the major complications associated with blind puncture of the subclavian vein but also what Adam terms "the one real problem" with the radiologically guided percutaneous method—namely, that most x ray departments can barely cope with the demand for conventional imaging without the placement of venous catheters being added to their repertoire.

We do not doubt the value of blind or radiologically guided percutaneous placement techniques in the hands of experts and look forward to the day when the choice of techniques is widely, freely, and promptly available. Until then, open surgical placement in the internal jugular vein should be recognised as a safe, easily taught, effective, and readily available alternative. Adam's conclusion that the surgical cutdown technique should be abandoned does a disservice to the large number of patients whose quality of life can be transformed by long term indwelling venous access.

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Author's reply

EDITOR,—It is apparent that some of my statements have been misinterpreted: although interventional radiologists are best placed to insert permanent central venous catheters, there is no reason why other people should not be trained in this procedure. Nevertheless, it is important to acquire the appropriate skills in manipulating catheters: however "ingeniously designed," catheters cannot find their own way.

Used with the imaging guided technique, coaxial systems that use 21-22 gauge needles to introduce catheters provide a greater margin of safety than the larger, traditional needles: this is important, because coagulopathies are not always fully correctable.

The comments by Duncan Young and colleagues suggest unfamiliarity with the use of imaging modalities and misinterpretation of the literature: ultrasound scanning helps to avoid arterial puncture but cannot ensure correct placement of the catheter in the superior vena cava. Mansfield *et al* did not use real time ultrasound scanning; they simply marked the position of the vein using a preliminary scan, which is a much inferior method, and they themselves acknowledge that this may explain the problems they encountered.¹ Fluoroscopic guidance after the initial puncture ensures correct placement in virtually all cases. Fluoroscopy at the end of the procedure is better than nothing but is no substitute for guidance during placement, which eliminates misplacement and ensures that the catheter is the right length.

When discussing the imaging guided technique I did not recommend that the tip of the catheter should be in the right atrium, as Malcolm Hilton and colleagues mistakenly state. Their comment is based on unfamiliarity with the technique used: a long sheath is placed into the atrium, or even the inferior vena cava, but the catheter is cut to the correct length before placement, the necessary length having been measured during fluoroscopy. The catheter's tip is left at the junction of the superior vena cava and right atrium, and the sheath is then peeled away.

I agree with Jacqueline Filshie and colleagues that there are advantages to a centralised venous access service. Imaging guidance and modern methods that enable catheters to be inserted on an outpatient basis make it possible to rationalise the insertion of central venous catheters, improve training, and minimise trauma and inconvenience to patients.

Expert surgical teams can undoubtedly achieve satisfactory results with an inferior method, but this is no reason to deny progress; imaging guidance and modern catheters can do better.

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Treatment of gall stones

Non-surgical treatments should not be dismissed

EDITOR,—In their review on the treatment of gall stones N Tait and J M Little are unnecessarily dismissive of treatments other than surgery.¹ They are perhaps being deliberately provocative when suggesting that such treatments are for patients who are dissatisfied with the outcome of alternative (previously defined by the authors as "folk," herbal, or naturopathic) treatments.

We believe that the personal preference of the patient is an important consideration. Some

patients prefer the quick and definitive answer of an operation, whereas others are unable to accept the necessary time off work, are afraid of surgical treatment, or prefer to avoid a scar for cosmetic reasons. Many are grateful to have the option of safe, pain free oral treatment in the form of bile acids.

While the authors point out that treatment to dissolve gall stones has a failure rate of 50%, they fail to indicate that the efficacy is much higher when appropriate patients are selected. Maton *et al* achieved a dissolution rate of 80% by limiting treatment to those with gall stones of <15 mm in diameter and by using a dose of chenodeoxycholic acid that results in desaturation of gall bladder bile (>13 mg/kg) for 12 months.² The dissolution rate is higher if computed tomography is used to exclude patients with small amounts of calcification not detectable by conventional radiology. The time when bile acids are given and the type of bile acids used are also important. Giving bile acids at bedtime is more effective than giving them at mealtimes.³ A combination of chenodeoxycholic acid and ursodeoxycholic acid is more effective than monotherapy.⁴

We agree that the rate of recurrence of gall stones can be as high as 50%, but, using an actuarial method based on life table analysis, we have shown that recurrence plateaus from the fifth year.⁵ We believe that giving bile acids intermittently is probably the best long term strategy for preventing recurrence.

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Rate of surgery for gall stones is increasing

EDITOR,—In their review on the treatment of gall stones N Tait and J M Little suggest that the selection of patients for cholecystectomy has not been changed by the introduction of laparoscopic surgery.¹ Our work² and studies by others,^{3,4} however, have shown that the total cholecystectomy rate has increased by an average of 25% since the introduction of laparoscopic cholecystectomy.

The causes for this increased rate have not been studied prospectively. The underlying reasons are probably multifactorial. Some patients with mild symptoms, who may be reluctant to have open surgery, may consent to laparoscopic surgery because it inflicts less postoperative pain and entails a shorter period of disability. This is the "enlarged patient pool factor." Secondly, a change in the surgeons' perception of the ratio of risk to benefit may result in a change in the indications for cholecystectomy. This is the "lower surgical threshold factor." Thirdly, gastroenterologists may increase referrals because the benefits offered by laparoscopic cholecystectomy outweigh those offered by other non-surgical management such as dissolution treatment or extracorporeal shock wave lithotripsy. This is the "increased referral factor."

On the other hand, whether this relative change

in the indications for cholecystectomy will benefit patients and society is unknown. For society, gross health care expenditure will increase with increasing numbers of cholecystectomies. The total expenditure on cholecystectomy has increased by 11.4% despite a 25.1% decrease in unit cost.³ Whether this increase in health care expenditure will be compensated for by the benefits obtained by the patients is, however, unknown. The possible benefits for the patients are immediate improvement or relief of symptoms and a reduction in the complications related to gall stones. While the risks of complications such as acute cholecystitis, ductal calculi, and cholangitis are easy to define, the risks of carcinomas of the gall bladder developing in patients with gall stones who do not have a cholecystectomy and of colorectal malignancies developing in those who have had a cholecystectomy are controversial. Therefore, prospective studies to investigate the indications for cholecystectomy in the era of laparoscopic surgery are needed. Furthermore, the cost effectiveness of laparoscopic cholecystectomy with the change of indications needs to be assessed.

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Qualitative thesis explored social dislocation and health

EDITOR,—Roland Petchey discusses J S Collings's report on general practice in England in 1950.¹ In 1939, a decade before Collings's survey, I wrote my MD thesis on the conditions of the lives of the working population in a new district in relation to health. It was a qualitative and in depth thesis that used statistics as only a supporting framework, and it criticised the lack of attention paid to medical social problems by primary care doctors.

I had started in practice in the middle of the 1930s, in a new dormitory suburb of Bristol that housed many previously unemployed tradesmen, recruited from all over Britain. The expanding Filton Aeroplane Works needed homes for the rapidly expanding workforce, and this forced builders to construct houses so quickly that they were often inhabited before they were properly finished: they were not properly insulated and were damp and leaking.

Most families moved to the district for purely financial reasons and had wrong expectations. They came from the slums of Bristol, rural west England, Welsh mining areas, Scotland, and Ireland. They found themselves isolated from family and friends in a swampy, poorly drained area with unfinished roads, inadequate street lighting, and no pavements. New neighbours had different backgrounds and religions and strange accents. There were no amenities such as public libraries or playgrounds for children, and there was no help from public agencies, organised health services, or trained individual helpers such as the

clergy or social workers. Home security had gone, nutrition was never taught, children were underdeveloped and anaemic, and the parents lacked education. Single men had to live unwanted with strangers, families needed advice on disturbances and marriage breakdowns, young men had no social facilities except the pub, and hooliganism was rife.

All these people came to the doctor they had learnt to trust, and emotional work overburdened me. I became a friend, supporter, and teacher; until then this had not been seen as a doctor's job, but it became more important than the traditional work I had been trained in. The desperate situation was not fully appreciated by the general community.

Since writing my thesis half a century ago I have come to believe that it is a doctor's job to take a much more active part in the education of the community. We can no longer sit on the sidelines and have little input into the new social and ethical problems that beset us. Commenting, criticising, and letting other people lead are not enough.

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Illness behaviour in the chronic fatigue syndrome and multiple sclerosis

Choice of multiple sclerosis as comparison condition was inappropriate

EDITOR,—Peter Trigwell and colleagues compared patients with the chronic fatigue syndrome with patients with multiple sclerosis and report similar responses on Pilowsky's illness behaviour questionnaire.¹ There is accumulating evidence that the chronic fatigue syndrome is a functional disorder, with psychological, social, and physical factors implicated in its cause, whereas in multiple sclerosis the primary cause is physical. Wood *et al* compared patients with the chronic fatigue syndrome with patients with various muscle diseases and found a threefold increase in psychiatric diagnoses in the group with the chronic fatigue syndrome.² Wessely *et al* describe an important prospective cohort study and conclude that common infections play little part in causing the chronic fatigue syndrome but that both previous psychological disorder and previous fatigue are associated with its development.³

We agree with Trigwell and colleagues that illness behaviour is highly relevant to the chronic fatigue syndrome, but we share their reservations about the particular method of assessing this. We also suggest that the choice of multiple sclerosis as a comparison condition was inappropriate. Multiple sclerosis, in contrast to muscle diseases, follows a relapsing and remitting course, often manifests sensory (subjective) rather than motor (objective) signs, and might therefore lead to illness behaviour that is abnormal, albeit for different reasons from those that might apply in the chronic fatigue syndrome.

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