anorectal abscess and a fistula in ano. The latter condition, because it communicates with the anal canal, clearly is not suitable for primary closure; but the former condition responds extremely well to this treatment. However, we accept that this diagnostic distinction is not always easy. When reporting the late results of 100 patients treated for anorectal abscess we discovered that seven patients were subsequently found to have a fistula.¹ We suspect that this was due to errors in the original diagnoses rather than to late complications of the abscess. This same study showed that 15 patients had a recurrent abscess within the succeeding two years and, more important, 78% of patients had no recurrence or complication.

More recently we have described the details of the operative technique when reporting its efficacy in treating a consecutive series of 150 patients.² We have also published the results of a randomised trial involving 219 patients with anorectal abscesses.³ This latter study showed that treatment by incision, curettage, and primary sutures was preferable to the conventional treatment as judged by the patient's comfort, healing time, time off work, and the incidence of recurrence. We continue to use it and recommend it for anorectal abscesses and for all other acute pyogenic abscesses.

D H WILSON

Accident and Emergency Department,
General Infirmary,
Leeds LS1 3EX

¹ Wilson DH. *Br J Surg* 1964;**51**:828-31.

² Jones NAG, Wilson DH. *Br J Surg* 1976;**63**:499-501.

³ Leaper DJ, Page RE, Rosenberg IL, Wilson DH, Goligher JC. *Dis Colon Rectum* 1976;**19**:46-50.

Hazards of surgical glove powders

SIR,—Your leading article (4 October, p 892) indicates that the risk of granuloma formation from glove powder is small, but there is now sufficient evidence to refute the anecdotes of many surgeons that the phenomenon does not occur "in their hands." I am among those who unwittingly have inflicted this iatrogenic problem on a patient and am stimulated to recommend a method which I believe reduces substantially the amount of powder left on surgical gloves.

When the gloves have been put on the hands I continue cleansing the gloves with povidone-iodine surgical scrub cleanser (Betadine) for a further minute. This agent contains non-ionic surfactants, which mobilise loose material on the rubber, and iodine, which combines with the starch to form blue-black starch iodide. The starch iodide acts as a visible indicator, is water soluble, and is washed off easily under running sterile water. The gloves feel tacky after this procedure—which, I believe, indicates that the lubricating powder has been substantially removed. I would be interested to hear if this simple method has been put to the elaborate scientific tests¹⁻⁴ that surround this subject.

IAN FRASER

University of Southampton
and Department of Surgery,
Royal Hampshire County Hospital,
Winchester

¹ Jagelman DG, Ellis H. *Br J Surg* 1973;**60**:111-4.

² Kent SJS, Burnand KG, Owen D. *Ann R Coll Surg Engl* 1975;**57**:212-4.

³ Henderson WJ, Melville-Jones C, Barr WT, Griffiths K. *Br J Surg* 1975;**62**:941-4.

⁴ Grant JBF, Davies JD, Jones JV. *Br J Surg* 1976;**63**:867-9.

Breast cancer trials—a new initiative

SIR,—Patients selected for inclusion in the trial of adjuvant systemic therapy proposed by Professor Michael Baum and others (13 September, p 742) would presumably have received conventional local treatment. Yet much of the controversy surrounding the management of early breast cancer revolves around the extent of the primary surgical procedure. Surely it is of crucial importance both to the clinician and, not least, to the patient to determine whether breast conservation is a reasonable alternative to mastectomy.

A randomised, prospective trial of adjuvant systemic therapy in patients treated with surgical techniques that conserve the breast would answer both questions posed by these investigators. Such a study would not only provide an assessment of the risks of recurrence but also determine the impact of adjuvant therapy on patients treated by less radical procedures. This alternative proposal deserves consideration and might commend itself to those clinicians reluctant to participate in recent clinical trials.

PETER WALDEN

London W11 3NG

Parity and breast cancer

SIR,—Dr K L Woods and others (9 August, p 419) recently reported an inverse association between parity and age at presentation of breast cancer. The report prompted an examination of this relationship among 611 cases of breast cancer and 1826 patients hospitalised with other diseases (controls) in the county of Glamorgan in South Wales. These data were collected as part of a population-based case control study performed in seven areas of the world in the middle and late 1960s, the details of which have been reported.¹ Glamorgan provided the population most similar to that used by Woods *et al.*²

The women with breast cancer were interviewed within a few days of diagnosis and the controls at the time of their selection as controls. The mean ages at presentation of nulliparous and parous women were 58.86 years and 57.26 years respectively ($P(2) = 0.15$). Among parous women the mean age at presentation did not decrease with increasing parity, as shown in the table. In fact, the data suggest if anything an increase in average age with increasing parity; however a similar relationship was evident when the age at interview of hospitalised controls was stratified by parity level. Thus there is probably no meaning to the trend in the cases.

The relative risk of breast cancer associated with being parous, at successive ages at interview, was also examined. If, as suggested by Dr Woods and his colleagues, pregnancy accelerates tumour growth among women who had a malignant transformation at an early age, cases of breast cancer diagnosed among

young women should have occurred predominantly among the parous subgroup and the relative risk of breast cancer associated with parity should be greater than 1.0. In addition, the protective effect previously observed to be associated with parity would have been largely restricted to cases diagnosed at an older age. The table offers little confirmation of the proposed hypothesis in the age groups noted by Wood (χ^2 (linear) trend) = 0.07; $p > 0.90$). Subdivision into narrower intervals of age at presentation within the range 55-65 years did not reveal any trend in relative risk.

All these analyses were repeated in a comparable population-based set of data from Boston, comprising 580 cases and 1736 hospital controls.³ The results were very similar to those in the Glamorgan data and did not confirm the observation of Dr Woods and his colleagues.

EDWARD TRAPIDO

Department of Epidemiology,
Harvard School of Public Health,
Boston, Massachusetts

¹ MacMahon B, Lin TM, Lowe CR, *et al.* *Bull WHO* 1970;**42**:185-94.

² Lowe CR, MacMahon B. *Lancet* 1970;**ii**:153-6.

³ Salber EJ, Trichopoulos D, MacMahon B. *J Natl Cancer Inst* 1969;**43**:1013-24.

Mexiletine for supraventricular tachycardia

SIR,—The recent article by Dr Edward B Leahey and others on combined mexiletine and propranolol treatment of refractory ventricular tachycardia (2 August, p 357) prompts us to bring to your attention our experience with mexiletine in the management of resistant supraventricular tachycardia.¹

This concerns four patients in whom mexiletine corrected eight out of 10 episodes of supraventricular tachycardia. In five instances the prior administration of practolol with or without other drugs had been ineffective. In one a supraventricular tachycardia with aberrant conduction was mistaken for ventricular tachycardia and lignocaine was given without effect followed by mexiletine, which terminated it. This was our index case, which first led us to examine the effect of mexiletine on supraventricular tachycardias. In the remaining two instances mexiletine was the only drug used and successfully aborted the arrhythmia. In the two episodes in which mexiletine failed verapamil was also given in one and disopyramide in the other, but DC cardioversion was required in both.

Mexiletine until now has been advocated only for ventricular arrhythmias, but these results suggest a useful role also in supraventricular arrhythmias. It has a "class-1" anti-dysrhythmic effect on atrial as well as ventricular muscle, and has also been found in isolated rabbit atria to reduce the maximum driven frequency and the conduction velocity and to raise the electrical threshold.² It is also possible that in the five instances where practolol

Age and parity in breast cancer

Parity	..	..	1	2	3	4	5	>6					
Mean age at presentation	..	..	55.7	55.5	57.4	60.1	57.0	67.0					
No of cases	..	..	120	139	91	50	21	29					
Age at interview	..	<30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	>75	
Relative risk	..	2.0	0.7	1.6	0.6	0.4*	0.6	0.7	0.6	0.8	0.4*	0.6	
No of women (611 cases and 1826 controls)	..	..	11	37	194	306	291	334	339	323	276	186	140

* $p < 0.05$.

was given without obvious benefit there was synergism between mexiletine and practolol similar to the co-operative action between mexiletine and propranolol in refractory ventricular tachycardia proposed in your recent article. We found no adverse effects with the intravenous administration of mexiletine in these patients and the successful dose varied from 60 mg to 250 mg given at a rate of 30 mg/min.

S D SLATER

Division of Clinical Medicine,
Victoria Infirmary,
Glasgow G42 9TY

W SIMMONS
J G MCCALL

Glasgow

¹ Slater SD, Simmons W, McCall JG, Zmily SM.
Br J Clin Pract 1980;**34**:247-50.

² Singh BN, Vaughan Williams EM. *Br J Pharmacol* 1972;**44**:1-9.

Risks of coronary arteriography

SIR,—The leading article entitled "Risks of coronary arteriography" (6 September, p 627) rightly recognises the safety of coronary arteriography. However, the analysis of the results of the CASS study¹ is highly misleading. Analysis of that study raises the following points.

(1) You are critical of the two British publications showing the high risks associated with small numbers and the "learning curve."^{1,2} It is claimed that these reports no longer bear any relation to modern practice. However, in the Collaborative Study of Coronary Artery Surgery (the CASS study),³ of the nine centres using the brachial approach seven were performing fewer than 200 such angiograms a year; indeed, six were undertaking fewer than 100 by this technique (this excludes the four centres which did not use this approach at all). In contrast, of the 12 centres using the femoral approach, only three did fewer than 100 procedures a year. Only three of the nine centres using the brachial approach performed more than 80% of the procedures by this method; whereas eight of the 12 centres using the femoral approach undertook more than 80% by the percutaneous technique. It is clear from these figures that in at least six centres the learning curve for the brachial approach has not yet been completed.

(2) The importance of congestive heart failure and left main stem stenosis has been confirmed by the CASS study. However, of the seven patients who died after the femoral technique, only one had heart failure and one had left main coronary artery stenosis of greater than 70%. In the brachial group four had congestive heart failure, three had severe left main stem stenosis, and one had a 60% stenosis. There is therefore a marked bias of high-risk cases in the brachial death group. It is not possible to assess whether patients with an anticipated higher risk were being preferentially selected for brachial catheterisation.

(3) Some data are available in the CASS paper to suggest that high-risk cases were, however, selectively included in the brachial approach group. In those centres undertaking both methods there were two deaths in 3770 patients having femoral angiograms and six deaths in 533 patients having brachial angiograms. In the centres only using the femoral route there were seven deaths out of 2453 cases. This marked increase in the number of deaths by the femoral approach when the brachial approach was either not used or not available suggests that those centres using both techniques were indeed selecting high-risk cases for the brachial method.

Until a detailed analysis of the types of patients selected for each technique are available from the CASS study it is both premature and misleading to suggest that

either of the two approaches has an advantage in terms of mortality. At the London Chest Hospital, where over 80% of the procedures are performed by the classical Sones technique, there have been two deaths in the last 1000 patients having angiograms. This series includes patients at high risk such as those with cardiogenic shock, who were excluded from the CASS study.

Coronary arteriography is a safe procedure. As with all other practical procedures, the results in terms of both mortality and morbidity are a function of the skill and experience of the operators.

CLIVE A LAYTON

London Chest Hospital,
London E2 9JX

¹ Petch MC, Sutton R, Jefferson KE. *Br Heart J* 1973;**35**:377-80.

² Emmanuel R. *Br Heart J* 1975;**37**:229-30.

³ Davis K, Kennedy JW, Kemp HG, Judkins MP, Gosselin AJ, Killip T. *Circulation* 1979;**59**:1105-11.

*.*Dr Layton in espousing the Sones technique is in a minority, as was shown in the CASS Study. All but three of the centres that had used the femoral approach as the method of choice had still carried out 100-200 procedures by the Sones technique; the numbers thus were large compared with the "small numbers" reported in the early British publications. The "learning curve" applies both to general and to individual experience. General experience now aids the novice, who can be told and shown wherein lie the hazards so that he can avoid them. This general experience was not available when the early reports were written. Moreover, general experience has taught that the novice should learn as an apprentice before he carries out procedures on his own, and centres carrying out large numbers of coronary angiograms each year should no longer show a high risk for the technique they use less often. The higher mortality and morbidity rates associated with the brachial approach would not appear to be explained by the bias towards higher-risk cases—the truth is that the femoral route has grown much safer while the brachial route has remained the same since the early years. The authors of the CASS paper were at pains to say that there was no significant difference in severity of illness between the patients investigated by the two techniques. Finally, Dr Layton quotes the current mortality rate associated with the classical Sones technique at the London Chest Hospital, but does not mention its higher morbidity rate.—ED, *BMJ*.

Confusion of filters: potential hazard from ultraviolet lamps

SIR,—We would like to draw attention to a potential hazard with the Kromeyer ultraviolet lamps widely used in physiotherapy, some geriatric, and dermatology departments.

The instruments are routinely switched on for a time to warm up before use, the arc lamp protected by a mica filter. Some instruments are also supplied with a Wood's filter for fungal identification. These filters can be almost identical in appearance yet pass 80% of the ultraviolet while filtering out all visible light. A patient seated in a chair beside the instrument could be at eye level with the lamp, with resulting hazard to the retina.

We suggest that any protecting filter which is dark in appearance should be checked either

with a suitable radiometer or against fluorescent material. The Wood's filter should be clearly marked and stored separately from the instrument.

E F J RING
R A HARRISON
K STOKES

Royal National Hospital for
Rheumatic Diseases,
Bath BA1 1RL

Driving after anaesthesia

SIR,—I see that the annual report of the Medical Defence Union for 1980 raises again the debatable problems of driving after anaesthesia; in the latest case the patient "passed out" after driving a few hundred yards following a vasectomy under local anaesthesia with no preoperative sedation. The MDU report states, "It would be wise to say to the patient that while it would probably be all right for him to drive home it would be safer to arrange to be driven."

May I draw the attention of doctors practising surgery under local anaesthesia to the article by Korttila?¹ He gives a table for the period of stay in hospital and a time when a patient is fit to drive for virtually all local and general anaesthetic agents in common use today. He recommends solutions with adrenaline as preferable for use in outpatient practice because of the reduced systemic toxicity; he points out that psychomotor performance was impaired for one to one and a half hours after 200 mg of plain lidocaine and that bupivacaine 1.3 mg/kg impairs psychomotor performance for at least two hours if adrenaline is not used. He points out that following dental treatment under local anaesthesia delayed vasovagal reactions may result from the stress of the procedure.

In my health district local practitioners have pointed out that patients having a vasectomy under local anaesthesia find this to be a very embarrassing and stressful procedure. It is extremely rare for a vasectomy to be undertaken under local anaesthesia in Lewisham Hospital for this reason.

It would be worth while to publicise Korttila's recommendations for all anaesthetic agents, and to note that in instances of local anaesthesia he recommends no driving for one hour for local dental anaesthesia; for one and a half hours after plain intramuscular lidocaine; and for two to four hours after plain intramuscular bupivacaine 1.3 mg/kg. Thus there is a sound theoretical basis for imposing some limitations on driving even after operations performed under local anaesthesia.

J CUNDY

Lewisham Hospital,
London SE13 6LH

¹ Korttila K. *Mod Prob Pharmacopsychiatry* 1976;**11**: 91-8.

A rare case of atypical angina

SIR,—The recent case report of atypical angina presenting as pain in the thenar eminence (20 September, p 782) leads us to record a similar case posing a diagnostic problem.

A previously healthy 47-year-old woman developed sudden onset of pain in the left wrist which persisted for five days. It was sharp, exacerbated by use of the hand, but not associated with any chest pain and unrelated to exercise. On the day of admission the pain radiated up the