that lignocaine has on the heart is beneficial as it helps to reduce cardiac arrhythmias.

I also think that under local anaesthesia it is wiser to use the smaller size 17 long-bevel side-hole needle as opposed to the size 16 short-bevel end-hole needle, as I believe this is less traumatic to the posterior abdominal wall and aorta.

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Relative activity of atenolol and metoprolol

SIR,—After reading the letter from Drs M Brian Comerford and E M M Besterman (23 July 1977, p 260) it occurred to us that while atenolol and metoprolol were equipotent 2 h after ingestion of the tablets, it may be that this might not be so for other time intervals—for example, 24 h after taking the drug, an observation which is becoming increasingly necessary with the advent of once-daily administration of beta-blocking drugs for therapy. Consequently we set up a within-volunteer (n=5), randomised, double-blind comparison of the effects of single oral doses of placebo, atenolol (100 mg), and of metoprolol (100 and 200 mg) on the heart rate response to exercise, monitoring this for up to 48 h. The results of this study are now available. The exercise was carried out on a bicycle ergometer, the load of which was adjusted for each individual to achieve a heart rate of at least 140 beats/min after 4 min of exercise when the volunteers were not taking the drugs. This load was kept constant for each individual throughout the study. The electrocardiogram was recorded for 0.5 min at 4 min of exercise and from this the heart rate was calculated. Measurements of heart rate response were made immediately before the drug was given and then at 3, 5, 7, 24, 26, 28, 30, and 48 h afterwards. Only one drug was given in any one week. The mean heart rates at each of these time points for each group are shown in the figure below.

The results clearly show that there is little difference between the effects of atenolol and the two doses of metoprolol at 3 h (all three being statistically significantly different from that of placebo), but at 24-30 h both 100 and 200 mg of metoprolol produced changes which are not significantly different from placebo while atenolol (100 mg) produced statistically

significantly lower heart rates than placebo ($P < 0.05$ for all time points), 68% of the blockade which was present at 3 h remaining at 24 h for atenolol and 22-24% for metoprolol 100 mg and 200 mg.

The conclusion from this study is that in volunteers atenolol (100 mg) and metoprolol (100 and 200 mg) are equipotent beta-blocking agents on beta-receptors in the sinuatrial node 3 h after ingestion but that they are clearly not equipotent at 24-30 h. Further, if blockade of beta-receptors is required for therapy with beta-blocking drugs (which it probably is for angina pectoris), then it follows that metoprolol (100 mg and 200 mg or even 300 mg¹) would not be suitable for once-daily therapy but atenolol (100 mg) should be and indeed is.²

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¹ Reybrouck, T, *et al*, *British Medical Journal*, 1978, 1, 1386.

² Jackson, G, *et al*, *British Heart Journal*. In press.

Paediatric surgery in West Germany

SIR,—With reference to Professor P P Rickham's article on paediatric surgery in Europe (13 May, p 1262) I am glad to report that the situation of German paediatric surgery has recently much improved. In West Germany all professional questions are decided by the professional unions of practising medical men (Berufsverbände). It has recently been decided that paediatric surgery will be a recognised subspecialty of general surgery and will be able to be represented inside and outside the country by the elected representatives of the German Association of Paediatric Surgeons. We have thus become eligible to be members of the Union of European Medical Specialists in Brussels as a specialty of our own and we are no longer represented by the general surgeons.

This is only a first step because our aim is to be recognised as a completely separate specialty, but already we have a recognised training programme for paediatric surgeons in Western Germany.

W A MAIER
Chairman,
German Association of
Paediatric Surgeons

Karlsruhe, W Germany

Effects of atenolol and metoprolol on the heart-rate response to exercise. Each point is the mean for the group. SEM indicated for placebo group.

Future of British anaesthetics

SIR,—I am sorry that Dr D C Hogg (17 June, p 1626) has added to the shortage of anaesthetists, particularly as he found routine anaesthesia so simple, but perhaps it is just as well.

Anaesthetists are well aware that it is not necessary to be a consultant to give a routine anaesthetic, but to suggest that it is quite so simple is to court disaster. Dr Hogg should have said that the routine anaesthetic can be *fatally* easy to give.

Dr Hogg recommends the use of general practitioners or nurses to overcome the shortage of anaesthetists. Where are they to be found? General practitioners are already overworked in many areas, and theatres and wards are closed from shortage of nurses. In addition, the design of many hospitals is such that they could not be supervised even if they were available. This is a short-sighted policy.

We must aim to overcome the shortage of anaesthetists by encouraging young doctors into the specialty who are prepared to devote their careers to the subject and maintain the standard of British anaesthesia.

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SIR,—While accepting the points made by Dr Adrian Padfield (24 June, p 1701), I had two reasons for dismissing the idea of a special premium for anaesthetists. The first is that, with the existing financial climate, no government in the foreseeable future will be prepared to consider it. The second is that the payment of a special premium supports the view that anaesthetics is an unattractive specialty. Once this is accepted there is likely to be an increasing proportion of recruits entering because of the extra money but with no particular interest in the specialty. I would rather alter the potential scope of the specialty to make it more attractive and thereby encourage the entry of the sort of person who enjoys the work and is therefore likely to contribute to the future development of British anaesthetics.

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Ballot of consultants and registrars

SIR,—I did not get a ballot paper. By the time it occurred to me to say so it was too late. Partly my fault, therefore. Entirely my fault apparently in the eyes of an Assistant Secretary of the BMA who wrote me a courteous letter containing no expression of regret.

He enclosed a copy of Linkman Letter No 7. This has a sort of postscript on the back headed "Conduct of Ballot" which itemises the "great difficulties" presented by "the conduct of a ballot directed to all doctors in specific kinds of employment." One appreciates of course the size of the problem of keeping track of doctors who move or have been recently appointed or do not belong to the BMA. The letter lists the steps taken to overcome these difficulties. "About 18 000" is the number of doctors it believes were eligible to vote "and this figure corresponds closely with the number of ballot forms issued." The gross number of papers returned was 12 339, according to the controller of