Correspondence

Postoperative complications

To the Editor:

There are several points of general interest which Dr. Cohen and her colleagues do not tell us in their excellent report in the January issue of the Journal.[1]

It should be noted that an overall postoperative complication rate (undefined) of ten per cent is likely to represent considerable under-reporting since study of control groups in drug and therapeutic trials always reveals very much higher specific rates (sometimes more than 50 per cent). It is our experience in Cardiff (where we do not have the strategy of the billing link to help us) that the duration of stay in hospital after operation and the occurrence of death in hospital are items which are both worthy of study and, since they are recorded by clerical staff, reliable. Stay in hospital is too difficult to summarize here but, in 1985, amongst 23,936 anaesthetics (99.5 per cent were either followed by no complication or the complication was not ascertained) the hospital death rate was 1.36 per cent (1 in 73).

That complication rate is not believable but I am not yet convinced that the Winnipeg study is any more so. Where, for example, are the postoperative chest infections? A classification of complications to enable comparability between countries and even institutions which might be acceptable is:

- *Major* – permanent disability or disfigurement;
- *Intermediate* – serious distress and/or prolongation of hospital stay;
- *Minor* – moderate distress without prolongation of hospital stay or permanent sequelae.

Clarity of definition bedevils clinical studies and the Winnipeg group have gone a considerable distance towards that goal and it is to be hoped that this letter will stimulate them further.

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REFERENCE

1 *Cohen MM, Duncan PG, Pope WDB, Wolkenstein C.* A survey of 112,000 anaesthetics at one teaching hospital (1975–83). Can Anaesth Soc J 1986; 33: 22–31.

REPLY

We would like to thank Dr. Lunn for these comments. He raises several important points that are common concerns to all studies of the outcomes of anaesthesia and surgery.

1 *Underreporting of postoperative complications: it is likely that the postoperative complications were underreported in our study because the anaesthesia follow-up nurse made only one visit (within 24–48 hours) to each patient. Therefore some postoperative complications, such as respiratory infections, would not have developed by this time. However, complications of interest to anaesthetists were the focus of this postoperative visit, and it was felt that anaesthesia-related complications would be apparent within the time-frame of the visit. Second, complication rates in our study would be much lower than those reported in drug or therapeutic trials since those studies are generally of sick patients receiving therapy over a longer time (usually weeks) whereas our population included a large proportion of ASA physical status 1 and 2 patients undergoing minor surgery. Finally the incidence of chest infections (relative to the traditional view of this complication) may indeed be lower than commonly believed, as supported by a recent study from Boston.*[1]

2 *Operative mortality and length of stay: we agree with Dr. Lunn that length of hospital stay and operative mortality are reliable outcome measures. Length of stay may vary according to bed availability (particularly true in Canada) and hospital policy over time and between institutions, but would be reliable for a study conducted in one hospital over short periods of time. With regard to operative mortality, this will be a subject of a future report based on our study. Preliminary results have found that a substantial number of patients died after discharge from hospital. However, we will be able to record these deaths using vital statistics information.*

3 *Classification of complications: again we strongly agree with Dr. Lunn that an agreement is needed to enable comparability between countries and institutions with regard to definitions of complications and mortality due to anaesthesia as opposed to complications and mortality due to surgery or other factors.*