Dr Kay is probably correct in saying that equipotency ratios for analgesia should not be compared with the effects of a single dose on respiration. However, most patients receive multiple doses of analgesics, so that the practical question is whether a range of different prescribed doses could have effects on ventilation akin to the agonists pethidine and morphine. This seems at least possible.

Dr Kay alleges that comparing potency by a patient demand technique is generally unreliable. However, determinations of equivalent potency for buprenorphine and pentazocine (Slattery et al., 1983) pethidine and meptazinol (Slattery et al., 1981) and now morphine, pethidine and nalbuphine (Bahar, Rosen and Vickers, 1984), fall within generally accepted ranges. The consistency shown does not support the view that estimates based on self-administered regimens are "full of pit-falls". It is possible that meptazinol is the exception and some of the problems may lie in its lack of efficacy. In a small study of 10 mothers in labour, using self-administration by the i.m. route, meptazinol was 1.5 times less potent than pethidine, and three of five mothers receiving meptazinol asked for an extradural block in future: none of the five receiving pethidine did so.

REFERENCES

B. KAY

Manchester

Dr Kay maintains that relative potency should be related to a single dose, or level of response, but it is incorrect to use the method of Harmer and co-workers (1983), who related doses of morphine, buprenorphine and meptazinol to pethidine 100 mg. As these relationships were obtained by division of 24-h dosage, they may bear no resemblance to those obtaining at the level of response to pethidine 100 mg. These relative potencies should, like others, only be used in the context in which they were obtained.

REFERENCES


Dr Kay is probably correct in saying that equipotency ratios for analgesia should not be compared with the effects of a single dose on respiration. However, most patients receive multiple doses of analgesics, so that the practical question is whether a range of different prescribed doses could have effects on ventilation akin to the agonists pethidine and morphine. This seems at least possible.

Sir,—The case of bronchospasm and hypotension following cardiopulmonary bypass reported by Drs Durant and Joucken (1984) raises several interesting points.

The authors describe the rarity of this phenomenon, with a reported incidence of four cases worldwide. In the recent experience of this hospital there have been three cases of sudden massive increase of airway pressure (>40 cm H2O) in a series of 90 bypass procedures. None of these patients had a history of allergy or asthma. This incidence of 1 in 30 would imply that perhaps the condition is not all that rare.

The description of this increased airway pressure as bronchospasm would imply an underlying bronchomotor abnormality. This issue is clouded by the use of drugs such as aminophylline and adrenaline, which have profound cardiovascular and bronchomotor effects. So many factors are changing at the end of cardiopulmonary bypass that a simple cause may be hard to find. This was particularly true of our second patient, in whom no cause was found, the "bronchospasm" improving gradually with aminophylline and adrenaline. However, in our other two patients a specific cause was found or implied. In the first, the...