after its removal. However, if a laryngeal mask had been used, then only one of 80 (1.3%) patients became desaturated before its removal and nine of 80 (11.3%) after removal.

Thus 12.5% of patients with a laryngeal mask desaturated during recovery, compared with 26.7% with a nasopharyngeal airway and 20% with no airway. These findings support the conclusion that airway obstruction is a cause of desaturation during recovery from dental anaesthesia, and that this may be reduced by the use of the laryngeal mask airway.

The finding that the incidence of desaturation was not significantly decreased by the use of supplementary oxygen should not lead to any recommendation that oxygen therapy is unnecessary. Dr Lanigan showed that minimum SpO₂ was significantly less breathing air. Although supplementary oxygen is not a remedy for airway obstruction, it provides an increased margin of safety when obstruction occurs.

B. J. WOODOCK
T. M. YOUNG
Manchester


USE OF DRUGS IN CHILDREN

Sir,—The problems of introducing new and potentially beneficial, but unlicensed, drugs into paediatric practice is underlined by the dearth of published studies in this field [1]. Many drugs in regular use in adult practice are not licensed for use in children, and physicians face an ethical and possibly medicolegal dilemma if they wish to exploit the special benefits advertised for these agents in children in their care. This problem has existed for many years [2], and has not been described recently in your Journal [3]. It seems that, after an agent has received its general licence, the hitherto overwhelming interest in developmental projects shown by the manufacturer dissipates rapidly, and requests for assistance with new clinical applications are met by a polite refusal, usually on the grounds that newer compounds are taking precedence, or that paediatric research is ethically more difficult.

Surely, if a company believes its product is superior to its predecessors, then it should be duty bound to undertake adequate investigation to make this product available to all patients and physicians. Perhaps if licences were granted only to drugs which have been investigated across the age ranges, some of the apparent "ethical" difficulties could be overcome.

J. STEVENS
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HYPOXIA AFTER DENTAL ANAESTHESIA

Sir,—We were interested in the study by Dr Lanigan on oxygen desaturation after dental anaesthesia [1] and agree that hypoxia is a frequent occurrence after short outpatient dental procedures. He found also that the use of supplementary oxygen during recovery did not affect the incidence of desaturation. Dr Lanigan suggests that failure to recognize airway obstruction may be an important factor in the aetiology of these desaturations. We would agree that airway maintenance is essential to the avoidance of hypoxia at this time and we present further data to confirm this.

A study of the use of the laryngeal mask for dental outpatient anaesthesia has been published previously, but monitoring of oxygen saturation ceased at the end of the surgical procedure and no comment was made on the quality of recovery [2]. At the Dental Hospital in Manchester we have measured oxygen saturation during paediatric dental outpatient anaesthesia and have found that desaturation to less than 90% is a common occurrence during recovery, when no supplementary oxygen is given. In 30 patients without an artificial airway in situ, six (20%) became hypoxic. If a nasopharyngeal airway was used, one of 30 (3.3%) became hypoxic before it was removed and seven (23.3%) after its removal.

MATERNAL AND FETAL HAEMODYNAMIC EFFECTS OF SPINAL AND EXTRADURAL ANAESTHESIA FOR ELECTIVE CAESAREAN SECTION

Sir,—We read with interest the article by Robson and colleagues [1]. Close analysis of the spinal group shows that, before any intervention, the average cardiac outputs were 6.73, 6.75 and 7.36 litre min⁻¹ at 5, 10 and 15 min, respectively. There was no significant difference between basal and postspinal cardiac output, and at 15 min cardiac output was on average 400 ml greater. This questions why mothers who have the same average cardiac output before and after spinal anaesthesia gave birth to babies whose average umbilical pH at birth was as low as 7.22. One possible reason for this is that aorta-caval compression was still present in this group of patients.

Evidence to support this hypothesis is present if a comparison is made of total peripheral resistance (TPR) between the extradural and spinal groups: basal TPR was 1087 and 1031 dyne s cm⁻⁵, respectively. However, after the institution of regional anaesthesia, the spinal group had consistently greater TPR. In fact, at 10 min (by which time one would expect full sympathetic block to be present in the spinal group but not in the extradural group) the TPR was 15% greater in the spinal group. In addition, although skin incision-delivery times were recorded, uterine incision-delivery (U-D) time is a more sensitive measurement. With such small groups, prolonged U-D times in as few as two patients might adversely affect the average umbilical artery pH. Furthermore, it is not evident from the methods whether or not any of these patients received oxygen after institution of regional