fully expected but it is inappropriate, for the following reasons:

Considerably less halothane is given when a caudal block is performed than during a general anaesthetic alone. After the blocking procedure, just sufficient general anaesthetic was given to prevent the child from disturbing the surgeon. For this purpose nitrous oxide in oxygen was sufficient in the majority of patients. It does not interfere with the advantages of caudal anaesthesia quoted by Dr McGown: “calm and pain-free emergence”. In fact, the medical and nursing personnel on the paediatric ward in our hospital assure us that, without looking at the anaesthetic record, they could make a clear distinction between the patients who had undergone nerve block with light general anaesthesia and those who had a general anaesthesia alone. The latter were more susceptible to vomiting and restlessness and they were able to take fluids and food only several hours later than the former patients, in whom earlier ambulation and playfulness were usual.

Pinprick testing can be reliable only when repeated several times and by several observers. Additional observers reduce bias. Masing of the individual measuring points in our study about the obtained regression lines in all three groups with different agents proved beyond doubt that careful testing gave very consistent results.

The fact that age is a more reliable determinant of dosage than body weight in an average sample of European children is borne out by a correlation coefficient of 0.94. For weight, the correlation coefficient was 0.89, which is still high, but lower than the former. Analysis of children less than 1 year of age, as quoted by Dr McGown, cannot be compared with one encompassing the first 12 years of life and a statement regarding dose relationship can hardly be justified. There will be few correlations on account of much reduced variables and this explains the low correlation coefficients given. We have no experience with African children and we did not examine the effect of nutrition.

We did not claim that the intervertebral foramina are more patent in the very young than in older children. Obliteration of the intervertebral foramina takes place only in later adult life. However, it was suggested that the juvenile extradural fat (loose and sponge-like) offers less resistance to a local spread of local anaesthetic than the more firmly packed adult type of fat. This may be one explanation for the increased predictability in the younger age group.

Lack of extradural fat in the malnourished child may be one reason for less spread of anaesthetic in the extradural space with a consequent need for larger doses of local anaesthetic.

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SCAVENGING OF ANAESTHETIC GASES USING THE DOUBLE T-PIECE SYSTEM

Sir,—Pollution of the operating theatre increases during the use of semi-open circuits such as the T-piece system, which requires a high fresh gas flow to eliminate rebreathing.

Baraka and colleagues (1969) have recommended the use of a double T-piece system to minimize the fresh gas flow required to eliminate rebreathing. The system performs as a “Mapleson D” system if the fresh gas flow is delivered via the proximal inlet near the patient, while the distal

T-piece near the reservoir bag provides an exhalation outlet. On the other hand, the system performs like a “Mapleson A” system if the fresh gas flow is delivered via the distal T-piece, while the proximal T-piece provides an outlet for exhalation. To minimize rebreathing, the double T-piece set is arranged as “A” during spontaneous breathing, and as a “D” during controlled ventilation.

The double T-piece system can simplify scavenging of anaesthetic gases also. The outlet T can be readily attached by a tubing of 8 mm i.d. to a 500-ml capacity reservoir hose, connected to a source of suction on one side and open to allow free air entrainment on the other side (fig. 1). During controlled ventilation, the outflow can be adjusted either by a screw clamp (fig. 1) or by intermittent manual compression of the outflow line. To facilitate the latter, a 10-cm extension of flexible and compressible latex rubber tubing can be used to connect the outlet T-piece with the outflow line going to the scavenging device.

The double T-piece has the virtues of existing systems, together with flexibility in use which permits the use of low anaesthetic gas flows, and facilitates their effective disposal.

REFERENCES


APOMORPHINE

Sir,—I was interested to read Dr Pitt’s letter (1977) on the difficulties in obtaining apomorphine. I sympathize with her.

I am trying to determine the current demand for apomorphine, and would be grateful if other anaesthetists who wish to use this drug would write to me at The Anaesthetic Department, Staincliffe General Hospital, Dewsbury.

J. D. HOLDSWORTH
Dewsbury

REFERENCES