TEST DOES IN EXTRADURAL ANALGESIA

Sir,—Dr D. B. Scott, in answer to Dr Boys’ (1977) criticism of the avoidance of a test dose when administering an extradural block for labour, says that “5 min of extra pain does not sound very much unless you happen to be the patient”. Were Dr Scott the patient would he exchange 5 minutes of extra pain for an emergency intubation and artificial ventilation for nearly 2 h.

Some years ago, an extradural block was administered by a consultant anaesthetist to the wife of one of the surgeons in this hospital. He inserted an extradural catheter, and after a test dose, injected a standard dose of local anaesthetic for relief of labour pain. The pain was abolished completely 10–15 min later for about 2 h. Because the first injection produced a good extradural block, when the patient was ready for delivery and required a second dose, the anaesthetist did not repeat the test dose, but gave the full dose over about 1 min. Three minutes later, the patient showed all the signs of a high spinal block, and required endotracheal intubation and ventilation for 2 h.

Dr Scott says he “has to admit to not doing so [using a test dose] because a positive result from a test dose is so infrequent”. One would hope that injection of local anaesthetic into the spinal canal (when administering an extradural block) would be infrequent, and it is for this reason that I believe in the use of the test dose every time an injection is made into the extradural space. There have been a few reports of catheters finding their way into the dural canal (when administering an extradural block) because a positive result from a test dose is so infrequent, and it is for this reason that I believe in the use of the test dose every time an injection is made into the extradural space. There have been a few reports of catheters finding their way into the dural canal after the first dose (Moore, 1965). I agree with Dr Scott that they are “so infrequent” (Bonica, 1967), but surely this is what we are trained to do—to anticipate and prevent the uncommon complications. I agree wholeheartedly with Dr Boys that 5 minutes delay is a small price to pay.

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REFERENCES

Sir,—Thank you for the opportunity of replying to Dr Galloon’s letter. His little homily would have been better taken if, in the case he describes, the test dose had not failed singularly to predict a subarachnoid injection. He is suggesting that a test dose be given before every injection including “top-ups”. I can assure him that this is not the practice in any hospital that I know in this country. Indeed, if it were to be introduced, the whole practice of midwives “topping-up” would have to be abandoned; as it is clearly unfair to expect nurses to decide if the test dose has been injected into the subarachnoid space.

An important principle is to determine how much time and effort (and patient discomfort) should be expended in the prevention of untoward results of our actions. Many years ago it was customary to give a test dose of tubocurarine before giving a large dose, to eliminate the possibility of the patient having latent myasthenia gravis. In such patients, endotracheal intubation and ventilation were required, not for 2 h but for many days. Patients with latent myasthenia gravis are still encountered, but presumably anaesthetists have decided, albeit tacitly, that such patients present so infrequently that it is perfectly acceptable to treat them after the event rather than give test doses to every single patient requiring a non-depolarizing neuromuscular blocking drug. I have made a similar decision in regard to extradural block and Dr Galloon is free to adopt the opposite view. I have no wish to impose my view on other anaesthetists and I accept the consequences that may follow it.

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VENTURI VENTILATION FOR BRONCHOGRAPHY

Sir,—The procedure of bronchography in children is accompanied by problems for both the radiologist and anaesthetist. The patients subjected to this procedure usually have impaired respiratory function and this is worsened by the introduction of an oily medium into the bronchial tree. In addition, the procedure takes place in a darkened room and involves continuous alteration of the patient’s position; it is difficult, therefore, to monitor the adequacy of respiratory and cardiovascular function.

The following technique, based on the venturi principle, is helpful in overcoming some of these difficulties.

An adaptor is utilized, and this consists of a serrated, slightly tapered male connector (fig. 1). The internal diameter of the “Rambam” adaptor is not less than that of the tracheal tube to which it is inserted. A venturi needle, approximately 3 cm in length, is welded to the rim of the adaptor but does not encroach on its lumen. The size of the needle varies with the size of the adaptor, and these are all altered to suit the size of the tracheal tube. By means of the Luer lock fitting of the venturi needle, oxygen is injected through the needle at a pressure of 300 kPa in children and 400–500 kPa in adults (Gregoretti, 1976). The inspiratory/expiratory time ratio is controlled by means of an automatic device.