CORRESPONDENCE

ALCOHOL WITHDRAWAL TREATMENT WITH CLONIDINE

Sir,—We were interested to read about the two patients reported by Drs Ip Yarn, Forbes and Kox [1] regarding the apparent effectiveness of clonidine in the treatment of alcohol withdrawal syndrome (AWS) in an intensive care unit. The authors indicated that additional agents may be required; however, we feel that this has not been sufficiently appreciated. The most important problems of AWS are delirium tremens and seizures. Seizures occur usually in the early phase (within 48 h of ceasing alcohol) and herald the development of severe AWS. In the two patients reported, it would be appropriate to recognize the use of adjunctive anticonvulsant treatment, as both were sedated initially for 36 and 48 h with isoﬂurane, which has recognized anticonvulsant properties [2].

We believe that the usefulness of clonidine in the treatment of severe AWS is debatable. Most studies have used open trials, compared clonidine with placebo or used adjunctive anticonvulsants and hypnotics. These methods do not allow adequate comparison or assessment of the clinical efficacy of drugs to be made in the treatment of AWS [3]. Our experience with clonidine in the treatment of AWS is that seizures occur in patients with no previous history of AWS-induced seizures [4]. This suggests that clonidine may lower the threshold for AWS-induced seizures in some patients and is consistent with the results of animal studies [5]. In addition, other patients treated with clonidine were withdrawn from our study because of hallucinations. This contrasts with the successful treatment of AWS-induced hallucinations with clonidine reported by Drs Ip Yarn, Forbes and Kox [1]. However, the successful suppression by clonidine of the sympathetic hyperactivity effects such as hypertension, tachycardia, sweating, tremor and anxiety may be expected.

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SPREAD OF SPINAL ANAESTHESIA

Sir,—Tuominen and colleagues [1] conclude that individual anatomical properties are more important than baricity in determining the spread of spinal anaesthetic solutions. This conclusion may be valid, but it was not supported by their data. They introduced several variables and failed to consider others of importance.

The lateral position is implied, but not stated, for the first injection in groups 1 and 2. After an initially lower (group 1) or higher (group 2) anaesthetic level, subsequent injection was performed at L3-4 with the patient in a sitting position in group 1, and in the lateral position in group 2. Bupivacaine 0.5% plain is considered to be isobaric but may be hypobaric, depending on temperature and speed of injection [2]. The authors rely on data from group 3 to argue that baricity plays a minor role, but the density of the solutions used was assumed rather than measured and baricity was assumed also. The difference between blocks in group 1 is strongly suggestive of a baricity effect. Needle placement alone may account for the differences seen in group 2. The authors did not report densities, but recent measurements of 0.5% bupivacaine in 8% glucose indicated a density of 1.024 at 24 °C and 1.023 at 37 °C [2]. No ranges were reported for any variation between samples and an average value would not indicate the high and low measurements that may have occurred.

Bupivacaine 0.75% in 8.25% glucose, as used in the United States, has been studied and the mean density varied within 0.025. Eight different aliquots of commercially manufactured bupivacaine revealed densities ranging from 0.9983 to 1.0294 [3]. If further variances introduced by temperature, CSF volume, CSF density and other physical factors are added, the assumption regarding baricity is not supported.

The role of the individual physical characteristics of subarachnoid anaesthetics needs to be re-evaluated in carefully controlled studies to confirm or refute the relative importance of each on the eventual distribution of a spinal anaesthetic.

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Sir,—We thank you for the opportunity to reply to Dr Adkisson’s letter. The densities of local anaesthetic solution were not measured in our study. We are surprised to learn that the density of 0.75% bupivacaine in 8.25% glucose can be less than 1.000. Dr Adkisson has referred to Nicol and Holdcroft [1] who stated that “the result for 0.5% bupivacaine in 8% glucose was equivalent to the specific gravity quoted in the manufacturer’s data sheet, when converted to density and measured temperature”, and that “the effect of baricity may be far from an initial effect on kinetics, many other factors thereafter controlling the spread of the active drug in the CSF”.

The aim of our study was to investigate the possibility of predicting the spread of spinal block on the basis of a previous block, when spinal anaesthesia is repeated. We used normal, commercially available solutions of plain and hyperbaric 0.5% bupivacaine and in our study each patient served as their own control. Certainly, we know that plain bupivacaine acts as a slightly hypobaric solution at body temperature and we have studied the effect of plain 0.5% and 0.75% bupivacaine in spinal anaesthesia in 1982 [2]. This fact was utilized to obtain a higher block in group 1. It has been shown also that the spread of the block is reduced when plain 0.5% bupivacaine is injected at the L4-5 interspace instead of L2-3 or L3-4 [3, 4]. The use of the L4-5 interspace for injection of the local anaesthetic in group 2 resulted in lower spread of analgesia. This may, indeed, be an effect of needle placement, as Dr Adkisson suggested, not baricity.

Although the prediction of the spread of repeated spinal anaesthesia with plain 0.5% bupivacaine was accurate on the basis of the previous spinal anaesthesia, the interindividual variation in the spread of the sensory block was large. Because the majority of the patients were in a lateral position during injection, baricity could not have accounted for the great variation. Individual properties seemed likely to be the reason for the variation. This was supported by the fact that a repeated block in an individual patient, using exactly the same method, resulted in a block similar to the first [5, 6]. Again, the variation between the patients was large.

Our conclusion was not based on our own studies alone. Stienstra and van Poorten [7] and Mitchell and colleagues [8] found no differences between spinal blocks with plain and...