CORRESPONDENCE


POSTDURAL PUNCTURE HEADACHE

Sir,—We read with interest the article by Lynch and colleagues [1] comparing the incidence of postdural puncture headaches (PDPH) associated with 22-gauge and 25-gauge Whitacre needles. As mentioned in the accompanying editorial, a significant factor affecting the incidence of PDPH is age. Lynch's group examined patients over a wide age range (15-81 yr). We feel that to include within the same group patients with such a well recognized difference in the incidence of PDPH, is inappropriate.

Lynch and colleagues attempted to subdivide their patient groups further, but considering the previously demonstrated incidence of PDPH of less than 4% (as stated by the authors) in younger patients [2, 3], the need to demonstrate a significant difference (P < 0.05) in PDPH, even in this susceptible group, would have to be much greater. We feel that it is important to stress that the stated result that there was "no significant difference between groups" does not mean that the 22-gauge and 25-gauge Whitacre needles have clinically equivalent incidences of PDPH. Knowing the number of patients studied and the expected incidence of PDPH, there is a greater than 50% chance of finding no difference between the two needles if, in fact, this is not the true situation.

On examination of the published data, we were unable to reconcile the stated incidence of 0.9% for PDPH in females older than 45 yr with the detailed patient characteristics shown in table III. Clarification would be helpful.

It is important and clinically relevant to discover if a 25-gauge Whitacre needle has significant advantages over a 22-gauge and we hope that Dr Lynch and his colleagues are continuing their study so that this question may be answered.

C. M. COONEY
J. TARPEY
Dublin


3. Sami HM, Skaredorf MN. In hospital incidence of post lumbar puncture headache in Caesarean section patients associated with the 22 G Whitacre needle. Regional Anesthesia 1989; 14: 44.

Sir,—Thank you for the opportunity to respond to the letter from Drs Cooney and Tarpey. As the authors stated, the age factor in the aetiology of postdural puncture headache (PDPH) is indeed important, but as our study was designed also to look at the handling characteristics of the 25-gauge Whitacre needle, we feel that the inclusion of all age groups in the study was justified.

Younger patients were still well represented in the study, however, as some 66% of the patients in both groups were younger than 40 yr (M:F = 2:1).

We agree with Drs Cooney and Tarpey on the importance of enrolling sufficient numbers of patients to assess statistical significance. As the incidence of PDPH becomes less (1-2%), only the prospective evaluation of PDPH in a large series of patients of matched sex, age and medical background, using matched techniques for matched surgical procedures will resolve these questions [1, 2]. The design of large multicentre studies with appropriate patient numbers, although beset with difficulties for a variety of logistical and historical reasons, may be one possible solution to this problem. We are exploring these possibilities at present, while still continuing our studies with Whitacre needles.

We agree also that the lack of a statistically significant difference in the incidence of PDPH between the groups does not necessarily mean that they will have a clinically equivalent incidence of PDPH. Preliminary reports from other authors using a Whitacre 25-gauge needle in large groups of patients have confirmed their ability significantly to reduce the incidence of PDPH without compromising the ease of administration of spinal anaesthesia [3].

The incidence of 0.9% refers to the incidence of PDPH in young males and not older female patients as the authors mistakenly assume.

J. LYNN
Seattle


ADEQUACY OF PREOPERATIVE SAFETY CHECKS OF THE BAIN BREATHING SYSTEM

Sir,—Recently, we discovered a large crack in the fresh gas supply to a Bain breathing system—a well known, but infrequently encountered, complication. The leak was discovered by a simple occlusion test of the inner (fresh gas flow) tube—a test which should be known to, and used by, all anaesthetists.

Following a visual check, the circuit was pressurized, the bag inspected for leaks and the expiratory valve opened and checked. The oxygen flush was activated; the reservoir bag failed to deflate. A 6-litre min⁻¹ fresh gas flow was commenced and the inner tube occluded using a finger (a 2-ml syringe plunger may be used). The flowmeter bobbin failed to descend, indicating a leak from this part of the circuit. Close visual inspection revealed no obvious fault, but when the system was dismantled, the inner mount of the co-axial manifold was found to be sheared.

Reliance on the Venturi test does not necessarily detect leaks that occur in the distal part of the circuit. The only reliable test is to occlude the inner tube and to observe if the transmitted back pressure causes the flowmeter bobbin to descend. Reliance on pulse oximetry, or on end-tidal carbon dioxide monitoring, would provide a late indication of impending disaster.

We surveyed all the 30 full-time anaesthetists working at our group of hospitals. This included 16 consultants, two senior registrars, six registrars, and six house officers. Staff grades and clinical assistants were excluded from the survey. Of the 30 anaesthetists surveyed, only 14 (47%) knew of the correct test and, of these, only nine (30%) used it. The reason for this was that they relied on sophisticated monitoring to detect apparatus failure.

The results of this survey suggest the teaching of safety checks of the Bain system may be deficient, and that anaesthetists are lulled into a false sense of security by sophisticated monitoring techniques. Furthermore, this deficiency was not confined to junior grades.

Although this small survey is not representative of the profession as a whole, it is representative of anaesthetists at our group of hospitals, and may well apply to other institutions.

A. R. WILLIAMS
G. VAN HASSEL
Poole, Dorset