

bioavailability of paracetamol.<sup>4</sup> The authors proposed that a dose of 7.5 mg kg<sup>-1</sup> of paracetamol be used in term neonates <10 days old based on observed plasma paracetamol concentrations. The problem of extending this recommendation up to a body weight of 10 kg has already been discussed in 2008.<sup>5</sup> More comprehensive data analyses have subsequently been undertaken that consider body size, clearance maturation, effect, and safety of i.v. paracetamol during the neonatal period.<sup>6–9</sup> On the basis of these studies, the dose of i.v. paracetamol in neonates and infants, when postmenstrual age is between 32 and 44 weeks, should be a loading dose of 20 mg kg<sup>-1</sup> (or 2 ml kg<sup>-1</sup>) followed with a maintenance dose of 10 mg kg<sup>-1</sup> (or 1 ml kg<sup>-1</sup>) every 6 h, which would achieve steady-state plasma concentrations associated with reasonable analgesia. In older infants and children, the dose should be 15 mg kg<sup>-1</sup> (or 1.5 ml kg<sup>-1</sup>) every 6 h. The interval between two maintenance doses should be increased up to 12 h if the neonate's postmenstrual age is between 28 and 31 weeks.

In order to avoid underdosage and insufficient pain-relieving effect, we strongly believe that the above-mentioned dosage be adopted in neonates and small infants.

## Declaration of interest

None declared.

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## Comparison of postoperative redness of eyes after sub-Tenon's block and topical anaesthesia following phacoemulsification cataract surgery

Editor—Sub-Tenon's block is an established simple, safe, and effective local anaesthetic technique for routine cataract surgery.<sup>1</sup> The technique involves insertion of a blunt cannula and injection of local anaesthetic agent under the Tenon's capsule after dissection with the help of scissors and forceps. The technique is inherently associated with intraoperative subconjunctival haemorrhage due to dissection and is reported to range from 25% to 100%.<sup>2–3</sup> Although subconjunctival haemorrhage is not known to hinder or influence the outcome of surgery,<sup>2</sup> most eyes intraoperatively appear red after sub-Tenon's block<sup>4</sup> compared with mostly white looking eyes after topical anaesthesia as there is no injection involved. This technique is popular in Australia,<sup>5</sup> New Zealand,<sup>6</sup> and the UK<sup>7</sup> but not so popular in many parts of the world probably due to unknown fear of postoperative red looking eyes.

Sub-Tenon's block was introduced in our hospital 2 yr ago. Both anaesthetists and ophthalmologists often commented that fear of postoperative red looking eyes deter them from using the sub-Tenon's block despite its safer profile.

We conducted a study aimed to compare postoperative appearance of eyes on the first day after phacoemulsification cataract surgery in patients who received sub-Tenon's block or topical anaesthesia. All applicable institutional and governmental regulations in Singapore concerning the ethics were followed during this research (NHG DSRB Ref: 2012/00128). One hundred and fourteen patients were randomized into two groups. All patients in the sub-Tenon's group received 4 ml of 2% lidocaine administered by a trained senior ophthalmic anaesthetist. The topical anaesthesia group received 1% tetracaine eye drops administered by the operating consultant ophthalmologists. Patients who received anticoagulants and antiplatelet agents were not included in the study. The operated eyes were photographed by digital camera on the first postoperative day. Ten consultant ophthalmologists from a different hospital, blinded to the type of anaesthetic modality used, were asked to assess and comment on the appearance based on photographs whether sub-Tenon's block or topical anaesthesia was used. They were also asked to grade the severity of subconjunctival haemorrhage if present as minor, moderate, or severe. Each consultant ophthalmologist therefore assessed 114

**Table 1** Demographic of patients and results

|                                | Sub-Tenon's group (n=57) | Topical group (n=57) |
|--------------------------------|--------------------------|----------------------|
| Average age (yr)               | 67.0 (10.6)              | 69.1 (9.6)           |
| Gender (male:female)           | 22:35                    | 21:36                |
| Photograph assessment accuracy | 326/570                  | 481/570              |
| Identification accuracy (%)    | 57.2 (40.4–68.4)         | 84.4 (63.2–93.5)     |

photographs, thus a total of 1140 observations. Frequencies of answers were collected and the Pearson  $\chi^2$  test was used to check for association between the answers and the actual technique used. Data analysis was carried out using IBM SPSS Statistics (version 19, IBM Corp., New York, NY, USA).

None of the eyes which appeared red was considered as moderate or severe subconjunctival haemorrhage. 57.2% (range 40.4% to 68.4%) photographs had persistent red appearance due to minor subconjunctival haemorrhage and were correctly identified as post sub-Tenon's block (Table 1). 84.4% (range 63.2% to 93.5%) photographs had white looking eyes and were correctly identified as post-topical anaesthesia. 42.8% eyes which received sub-Tenon's block had white looking eyes and were indistinguishable from topical anaesthesia. 15.6% eyes which had received topical anaesthesia although expected to have white looking eyes appeared red and were incorrectly identified as post sub-Tenon's block. This difference was statistically significant ( $P < 0.001$ ).

Our study confirms that 50% patients receiving sub-Tenon's block may develop red looking eyes on the first postoperative day. Although topical anaesthesia does not involve injection, a considerable number of patients also develop red looking eyes. The fear of postoperative red looking eyes should not deter clinicians from using the safer sub-Tenon's block. We suggest that all patients undergoing cataract surgery should receive appropriate preoperative warning about the possibilities of postoperative red looking eyes.

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## Evidence-based consensus on the insertion of central venous access devices

Editor—I read with interest the review article by Moreau and colleagues,<sup>1</sup> which attempts to define minimal requirements for training for the insertion of a central venous access device (CVAD). They note the difficulty of providing recommendations for training when there is a significant lack of evidence on which to base their conclusions.

I am however concerned with the authors' statement that, with respect to paediatric CVAD insertions, 'It is necessary to have minimal cannulation of 70 central vein punctures per year in order to maintain the skills and competence in these patients'. As a full-time paediatric anaesthetist with a primarily cardiac-based practice, I would only just manage numbers such as this and there would be few, if any, of my colleagues with whom I work who could achieve this experience.

The reference cited by the authors to support their recommendation<sup>2</sup> in fact merely states that 'Together (the two experienced anaesthetists in the study) used to perform ~70 internal jugular vein and subclavian vein punctures in children per year using the landmark technique', which not only says nothing about a standard for maintenance of competency but indeed infers that they would have had ~35 punctures per year each, which may, or may not be an appropriate number.

Although I recognize the limitations of the evidence available in the area of maintenance of competency, I am concerned that recommendations such as this will be taken uncritically and quoted as fact. I do not believe that figures such as 70 central cannulations per year are achievable in the real world for the vast majority of paediatric anaesthetists and if enforced will have the potential to severely limit the number of staff available to perform these tasks, without supporting evidence. Even though we might end up with such a recommendation in the future, appropriately supported, I am not sure that it can be made with any degree of confidence at this time.

## Declaration of interest

None declared.