

# PostScript

## LETTERS

### Anaesthetic eye drops for children in casualty departments across south east England

It is a common practice to use topical anaesthetic drops to provide temporary relief and aid in the examination of the eyes when strong blepharospasm precludes thorough examination. Ophthalmology departments usually have several types of these—for example, amethocaine, oxybuprocaine (benoxinate), and proxymetacaine. The duration and degree of discomfort caused by amethocaine is significantly higher than proxymetacaine,<sup>1,2</sup> whilst the difference in the discomfort between amethocaine and oxybuprocaine is minimal.<sup>2</sup> When dealing with children, therefore, it is recommended to use proxymetacaine drops.<sup>1</sup>

It was my experience that Accident & Emergency (A&E) departments tend to have less choice of these drops. This survey was done to find out the availability of different anaesthetic drops, and the preference for paediatric use given a choice of the above three. Questionnaires were sent to 40 A&E departments across south east England. Thirty nine replied back, of which one department did not see any eye casualties. None of the 38 departments had proxymetacaine. Twenty units had amethocaine alone and 10 units had oxybuprocaine alone. For paediatric use, these units were happy to use whatever drops were available within the unit. Eight units stocked amethocaine and oxybuprocaine, four of these were happy to use either of them on children and four used only oxybuprocaine. One of the latter preferred proxymetacaine but had to contend with oxybuprocaine due to cost issues.

Children are apprehensive about the instillation of any eye drops. Hence, it is desirable to use the least discomforting drops like proxymetacaine. For eye casualties, in majority of District General Hospitals, A&E departments are the first port of call. Hence, A&E units need to be aware of the benefit of proxymetacaine and stock them for paediatric use.

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doi: 10.1136/emj.2003.010645

Accepted for publication 27 May 2004

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### Training in anaesthesia is also an issue for nurses

We read with interest the excellent review by Graham.<sup>1</sup> An important related issue is the training of the assistant to the emergency physician.

We wished to ascertain if use of an emergency nurse as an anaesthetic assistant is common practice. We conducted a short telephone survey of the 12 Scottish emergency departments with attendances of more than 50 000 patients per year. We interviewed the duty middle grade doctor about usual practice in that department. In three departments, emergency physicians will routinely perform rapid sequence intubation (RSI), the assistant being an emergency nurse in each case. In nine departments an anaesthetist will usually be involved or emergency physicians will only occasionally perform RSI. An emergency nurse will assist in seven of these departments.

The Royal College of Anaesthetists<sup>2</sup> have stated that anaesthesia should not proceed without a skilled, dedicated assistant. This also applies in the emergency department, where standards should be comparable to those in theatre.<sup>3</sup>

The training of nurses as anaesthetic assistants is variable and is the subject of a Scottish Executive report.<sup>4</sup> This consists of at least a supernumerary in-house program of 1 to 4 months. Continued professional development and at least 50% of working time devoted to anaesthetic assistance follow this.<sup>4</sup>

The Faculty of Emergency Nursing has recognised that anaesthetic assistance is a specific competency. We think that this represents an important progression. The curriculum is, however, still in its infancy and is not currently a requirement for emergency nurses (personal communication with L McBride, Royal College of Nursing). Their assessment of competence in anaesthetic assistance is portfolio based and not set against specified national standards (as has been suggested<sup>4</sup>). We are aware of one-day courses to familiarise nurses with anaesthesia (personal communication with J McGowan, Southern General Hospital). These are an important introduction, but are clearly incomparable to formal training schemes.

While Graham has previously demonstrated the safety of emergency physician anaesthesia,<sup>5</sup> we suggest that when anaesthesia does prove difficult, a skilled assistant is of paramount importance. Our small survey suggests that the use of emergency nurses as anaesthetic assistants is common practice. If, perhaps appropriately, RSI is to be increasingly performed by emergency physicians,<sup>5</sup> then the training of the assistant must be concomitant with that of the doctor. Continued care of the anaesthetised patient is also a training issue<sup>1</sup> and applies to nurses as well. Standards of anaesthetic care need to be independent of its location and provider.

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doi: 10.1136/emj.2004.016154

Accepted for publication 27 May 2004

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### Ultrasound Guidance for Central Venous Catheter Insertion

We read Dunning's BET report with great interest.<sup>1</sup> As Dunning himself acknowledges, most of the available literature concerns the insertion of central venous catheters (CVCs) by anaesthetists (and also electively). However, we have found that this data does not necessarily apply to the critically-ill emergency setting, as illustrated by the study looking at emergency medicine physicians<sup>2</sup> where the ultrasound did not reduce the complication rate.

The literature does not distinguish between potentially life-threatening complications and those with unwanted side-effects. An extra attempt or prolonged time for insertion, whilst unpleasant, has a minimal impact on the patient's eventual outcome. However, a pneumothorax could prove fatal to a patient with impending cardio-respiratory failure. Some techniques – for example, high internal jugular vein – have much lower rates of pneumothorax. Furthermore, some techniques use an arterial pulsation as a landmark. Such techniques can minimise the adverse effect of an arterial puncture as pressure can be applied directly to the artery.

We also share Dunning's doubt in the National Institute for Clinical Excellence (NICE) guidance's claim that the cost-per-use of an ultrasound could be as low as £10.<sup>3</sup> NICE's economic analysis model assumed that the device is used 15 times a week. This would mean sharing the device with another department, clearly unsatisfactory for most emergency situations. The cost per complication prevented would be even greater. (£500 in Miller's study, assuming 2 fewer complications per 100 insertions).

Finally, the NICE guidance is that "appropriate training to achieve competence" is

undertaken. We are sure that the authors would concur that the clinical scenario given would not be the appropriate occasion to "have a go" with a new device for the first time.

In conclusion, we believe that far more important than ultrasound-guided CVC insertion, is the correct choice of insertion site to avoid those significant risks, which the critically-ill patient would not tolerate.

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doi: 10.1136/emj.2004.015156

Accepted for publication 25 February 2004

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## Patients' attitudes toward medical photography in the emergency department

Advances in digital technology have made use of digital images increasingly common for the purposes of medical education.<sup>1</sup> The high turnover of patients in the emergency department, many of whom have striking visual signs makes this an ideal location for digital photography. These images may eventually be used for the purposes of medical education in presentations, and in book or journal format.<sup>2,3</sup> As a consequence patients' images may be seen by the general public on the internet, as many journals now have open access internet sites. From an ethical and legal standpoint it is vital that patients give informed consent for use of images in medical photography, and are aware that such images may be published on the world wide web.<sup>4</sup>

The aim of this pilot study was to investigate patient's attitudes toward medical photography as a guide to consent and usage of digital photography within the emergency department. A patient survey questionnaire was designed to answer whether patients would consent to their image being taken, which part(s) of their body they would consent to being photographed, and whether they would allow these images to be published in a medical book, journal, and/or on the internet.

All patients attending the minors section of an inner city emergency department between 1<sup>st</sup> January 2004 and 30<sup>th</sup> April 2004 were eligible for the study. Patients were included if aged over 18 and having a Glasgow coma score of 15. Patients were excluded if in moderate or untreated pain, needed urgent treatment, or were unable to read or understand the questionnaire. All patients were informed that the questionnaire was anonymous and would not affect their treatment.

Data was collected by emergency department Senior House Officers and Emergency Nurse Practitioners.

100 patients completed the questionnaire. The results are summarised below:

### Q1 Would you consent to a photograph being taken in the Emergency Department of you/part of your body for the purposes of medical education?

Yes 84%, No 16%

21% replied Yes to all forms of consent, 16% replied No to all forms of consent, while 63% replied Yes with reservations for particular forms of consent.

### Q2 Would you consent the following body part(s) to be photographed (head, chest, abdomen, limbs and/or genitalia)?

The majority of patients consented for all body areas to be photographed except for genitalia (41% Yes, 59% No) citing invasion of privacy and embarrassment.

### Q3 Would you consent to your photo being published in a medical journal, book or internet site?

The majority of patients gave consent for publication of images in a medical journal (71%), book (70%), but were more likely to refuse consent for use of images on internet medical sites (47% Yes, 53% No or unsure).

In determining the attitudes of patients presenting in an inner city London emergency department regarding the usage of photography, we found that the majority of patients were amenable to having their images used for the purposes of medical education. The exceptions to this were the picturing of genitalia and the usage of any images on internet medical sites/journals.

The findings of this pilot study are limited to data collection in a single emergency department in central London. A particular flaw of this survey is the lack of correlation between age, sex, ethnicity, and consent for photography. Further study is ongoing to investigate this.

There have been no studies published about patients' opinions regarding medical photography to date. The importance of obtaining consent for publication of patient images and concealment of identifying features has been stressed previously.<sup>5</sup> This questionnaire study emphasises the need to investigate patients' beliefs and concerns prior to consent.

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doi: 10.1136/emj.2004.019893

Accepted for publication 12 October 2004

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## Unnecessary Tetanus boosters in the ED

It is recommended that five doses of tetanus toxoid provide lifelong immunity and 10 yearly doses are not required beyond this.<sup>1</sup> National immunisation against tetanus began in 1961, providing five doses (three in infancy, one preschool and one on leaving school).<sup>2</sup> Coverage is high, with uptake over 90% since 1990.<sup>2</sup> Therefore, the majority of the population under the age of 40 are fully immunised against tetanus.

Td (tetanus toxoid/low dose diphtheria) vaccine is often administered in the Emergency Department (ED) following a wound or burn based upon the patient's recollection of their immunisation history. Many patients and staff may believe that doses should still be given every 10 years.

During summer 2004, an audit of tetanus immunisation was carried out at our department. The records of 103 patients who had received Td in the ED were scrutinised and a questionnaire was sent to the patient's GP requesting information about the patient's tetanus immunisation history before the dose given in the ED. Information was received in 99 patients (96% response). In 34/99 primary care records showed the patient was fully immunised before the dose given in the ED. One patient had received eight doses before the ED dose and two patients had been immunised less than 1 year before the ED dose. In 35/99 records suggested that the patient was not fully immunised. However, in this group few records were held before the early 1990's and it is possible some may have had five previous doses. In 30/99 there were no tetanus immunisation records. In 80/99 no features suggesting the wound was tetanus prone were recorded.

These findings have caused us to feel that some doses of Td are unnecessary. Patient's recollections of their immunisation history may be unreliable. We have recommended that during working hours, the patient's general practice should be contacted to check immunisation records. Out of hours, if the patient is under the age of 40 and the wound is not tetanus prone (as defined in DoH Guidance<sup>1</sup>), the general practice should be contacted as soon as possible and the immunisation history checked before administering Td.

However, we would like to emphasize that wound management is paramount, and that where tetanus is a risk in a patient who is not fully immunised, a tetanus booster will not provide effective protection against tetanus. In these instances, tetanus immunoglobulin (TIG) also needs to be considered (and is essential for tetanus prone wounds). In the elderly and other high-risk groups—for example, intravenous drug abusers—the

need for a primary course of immunisation against tetanus should be considered not just a single dose and follow up with the general practice is therefore needed.

The poor state of many primary care immunisation records is a concern and this may argue in favour of centralised immunisation records or a patient electronic record to protect patients against unnecessary immunisations as well as tetanus.

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doi: 10.1136/emj.2004.021121

Accepted for publication 20 October 2004

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## BOOK REVIEWS

### Environmental Health in Emergencies and Disasters: A Practical Guide

Edited by B Wisner, J Adams. World Health Organization, 2003, £40.00, pp 252. ISBN 9241545410

I have the greatest admiration for doctors who dedicate themselves to disaster preparedness and intervention. For most doctors there will, thank god, rarely be any personal involvement in environmental emergencies and disasters. For the others who are involved, the application of this branch of medicine must be some form of "virtual" game of medicine, lacking in visible, tangible gains for the majority of their efforts.

Reading this World Health Organization publication however has changed my perception of the importance of emergency planners, administrators, and environmental technical staff. I am an emergency physician, blinkered by measuring the response of interventions in real time; is the peak flow better after the nebuliser? Is the pain less with intravenous morphine? But if truth be known it is the involvement of public health doctors and emergency planners that makes the biggest impact in saving lives worldwide, as with doctors involved in public health medicine.

This book served to demonstrate to me my ignorance on matters of disaster responsiveness. But can 252 pages of General Aspects

and Technical Aspects be comprehensive with regards to disaster planning? Can it provide me with what I need to know? I was confused by the end of my involvement with this book or perhaps overwhelmed by the enormity of the importance of non-medical requirements such as engineering and technical expertise in planning for and managing environmental catastrophes.

Who is this book for? I am still not sure. The everyday emergency physician? I think not. It serves a purpose to be educational about what is required, in a generic sort of way, when planning disasters. Would I have turned to it last year during the SARS outbreak? No. When I feared a bio-terrorism threat? No. When I watched helplessly the victims of the latest Iranian earthquake? No. To have done so would have been to participate in some form of voyeurism on other people's misery. Better to embrace the needs of those victims of environmental disasters in some tangible way than rush to the book shelf to brush up on some aspect of care which is so remote for the majority of us in emergency medicine.

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### Neurological Emergencies: A Symptom Orientated Approach

Edited by G L Henry, A Jagoda, N E Little, et al. McGraw-Hill Education, 2003, £43.99, pp 346. ISBN 0071402926

The authors set out with very laudable intentions. They wanted to get the "maximum value out of both professional time and expensive testing modalities". I therefore picked up this book with great expectations—the prospect of learning a better and more memorable way of dealing with neurological cases in the emergency department.

The chapter headings (14 in number) seemed to identify the key points I needed to know and the size of the book (346 pages) indicated that it was possible to read.

Unfortunately things did not start well. The initial chapter on basic neuroanatomy mainly used diagrams from other books. The end result was areas of confusion where the text did not entirely marry up with the diagrams. The second chapter dealing with evaluating the neurological complaint was better and had some useful tips. However the format provided a clue as to how the rest of the book was to take shape—mainly text and lists.

The content of this book was reasonably up to date and if you like learning neurology by reading text and memorising lists then this is the book for you. Personally I would not buy it. I felt it was a rehash of a standard neurology textbook and missed a golden opportunity of being a comprehensible text on emergency neurology, written by emergency practitioners for emergency practitioners.

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### Emergency medicine procedures

E Reichmann, R Simon. New York: McGraw-Hill, 2003, £120, pp 1563. ISBN 0-07-136032-8.

This book has 173 chapters, allowing each chapter to be devoted to a single procedure, which, coupled with a clear table of contents, makes finding a particular procedure easy. This will be appreciated mostly by the emergency doctor on duty needing a rapid "refresher" for infrequently performed skills.

"A picture is worth a thousand words" was never so true as when attempting to describe invasive procedures. The strength of this book lies in the clarity of its illustrations, which number over 1700 in total. The text is concise but comprehensive. Anatomy, pathophysiology, indications and contraindications, equipment needed, technicalities, and complications are discussed in a standardised fashion for each chapter. The authors, predominantly US emergency physicians, mostly succeed in refraining from quoting the "best method" and provide balanced views of alternative techniques. This is well illustrated by the shoulder reduction chapter, which pictorially demonstrates 12 different ways of reducing an anterior dislocation. In fact, the only notable absentee is the locally preferred Spaso technique.

The book covers every procedure that one would consider in the emergency department and many that one would not. Fish hook removal, zipper injury, contact lens removal, and emergency thoracotomy are all explained with equal clarity. The sections on soft tissue procedures, arthrocentesis, and regional analgesia are superb. In fact, by the end of the book, I was confident that I could reduce any paraphimos, deliver a baby, and repair a cardiac wound. However, I still had nagging doubts about my ability to aspirate a subdural haematoma in an infant, repair the great vessels, or remove a rectal foreign body. Reading the preface again, I was relieved. The main authors acknowledge that some procedures are for "surgeons" only and are included solely to improve the understanding by "emergentologists" of procedures that may present with late complications. These chapters are unnecessary, while others would be better placed in a pre-hospital text. Thankfully, they are relatively few in number, with the vast majority of the book being directly relevant to emergency practice in the UK.

Weighing approximately 4 kg, this is undoubtedly a reference text. The price (£120) will deter some individuals but it should be considered an essential reference book for SHOs, middle grades, and consultants alike. Any emergency department would benefit from owning a copy.

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