Intravenous volume replacement

Mr EJAZ M NABI (Southend Hospital, Westcliff on Sea, Essex SS0 0RY) writes: Mr G Ramsay (21 May, p 1422) states that in Britain the cost of intravenous albumin solutions is met by the transfusion service rather than hospital pharmacy budgets. This is not the case. Until recently the transfusion service supplied each hospital pharmacy with a quota of free albumin solutions and a further quota of half price solutions. Since July 1987, however, because of the shortage of blood products the quota of free albumin solutions for Southend health authority has been cut from 40×40 ml each month to 18 each month. The provision to obtain half price solutions has also been removed, and, as a result, an increased expenditure of about £30 000 each year has been realised. The situation may vary, but my impression is that most districts are in a similar predicament.

Dr W P TORMEY (Department of Chemical Pathology, Beaumont Hospital, Dublin 9) writes: Mr G Ramsay (21 May, p 1422) states that "the type of fluid loss does not influence the choice of which fluid to use for initial replacement." This ignores diabetes insipidus. Cranial diabetes insipidus is a common and usually transient occurrence after pituitary or suprasellar surgery and may present with seizures and coma from severe hypernatraemia.¹ This almost pure water loss should be replaced initially with dextrose or water, and treatment with desmopressin acetate should be started. A target rate of correction of hypernatraemia of 2 mmol/l/h is reasonable. Circulatory shock is not a problem because water is lost from all fluid compartments, unlike with blood loss or diarrhoea. The fluid balance chart is a good guide to post-operative fluid balance, though incontinence can be understated easily, thus emphasising the importance of the serum sodium concentration as a monitor. Nephrogenic diabetes insipidus, also requiring water repletion, may be a feature of lower urinary tract obstruction.²

- 1 Arief AI. Central nervous system manifestations of disordered sodium metabolism. *Clin Endocrinol Metab* 1984;13:269-94.
- 2 Peterson JC, Drylie DM, Mars DR, Fuller TJ. Severe hypernatremia complicating urinary tract obstruction. *Urology* 1980; 15:505-7.

Patients wanted with colorectal liver metastases

Dr SYLVAIN DURRLEMAN (National Institute of Health, Bethesda, Maryland 20892) writes: A recent news item (30 April, p 1266) announced the possibility for patients to participate in a multicentre trial of 5-fluoro-2'-deoxyuridine (FUDR). A major restriction was applied: the announcement called only for patients aged less than 70 years. Although the toxicity of FUDR in intrahepatic infusion is of concern, there is no basis, either scientific or ethical, to deny older people an investigational treatment. Denying participation in clinical trials to a large percentage of patients with cancer increases the delay in answering important medical questions and may expose many patients to suboptimal treatments. In many cases it is appropriate to specify a lower age limit, but no upper limit should be used in the inclusion criteria of clinical trials. The protocol should provide rules based on organ function and performance.

Which patients should have laparoscopy?

Mr PAUL BYRNE (Dudley Road Hospital, Birmingham B18) writes: Mr S Paterson-Brown and colleagues (14 May, p 1363) described a relatively new role for diagnostic laparoscopy in the assessment of patients with lower abdominal pain, in particular when acute appendicitis is suspected. During the past two decades laparoscopy has become a routine procedure in many gynaecological units and has a low complication rate, particularly when used as a diagnostic rather than a therapeutic procedure.¹ An important role is in the assessment of women with pelvic pain, particularly in those with a suspected ectopic pregnancy. The use of laparoscopy has reduced the

incidence of delayed diagnosis and tubal rupture.^{2,3} It seems incomprehensible that a procedure which is commonplace in gynaecological practice should be a little evaluated technique in general surgery. This underuse of laparoscopy by general surgeons reflects the lack of communication which exists between closely related specialists. How many similar examples exist where a comparison of diagnostic techniques and surgical procedures would be mutually beneficial to gynaecologist and general surgeon?

- 1 Chamberlain G, Brown JC. *Gynaecological laparoscopy. The report of the working party of the confidential enquiry into gynaecological laparoscopy*. London: Royal College of Obstetricians and Gynaecologists, 1978.
- 2 Helvacioğlu A, Long EM, Yang S-L. Ectopic pregnancy: an eight year review. *J Reprod Med* 1979;22:87-90.
- 3 Samuelson S, Sjøvall A. Laparoscopy in suspected ectopic pregnancy. *Acta Obstet Gynecol Scand* 1972;51:31-3.

Early detection of visual defects in infancy

DRS JEANETTE ATKINSON, O J BRADDICK, and SUE ATKINSON (Visual Development Unit, Cambridge CB2 1QA) write: Dr M Pollak (7 May, p 1328) suggests that children's refractive errors can rarely be diagnosed before 2 or 3 years and that amblyopia rather than refractive error is the important target of screening. Refractive errors can now be detected in early infancy by photorefractometry or videorefractometry, and this has been proved in a large screening programme of 6-9 month old children.^{1,2} Children with important refractive errors at 6 months, if untreated, are about seven times more likely to show amblyopia or strabismus by 4 years than children with normal refraction.³ Early diagnosis can permit effective preventive measures. In children who wore appropriate spectacle corrections the incidence of amblyopia or strabismus was reduced from 68% to 27%.

- 1 Atkinson J, Braddick OJ, Durden K, Watson PG, Atkinson S. Screening for refractive errors in 6-9 month old infants by photorefractometry. *Br J Ophthalmol* 1984;68:105-12.
- 2 Atkinson J, Braddick O. Population vision screening and individual visual assessment. *Doc Ophthalmol* 1986;45:376-91.
- 3 Atkinson J, Braddick O, Wattam-Bell J, et al. Photorefractive screening of infants and effects of refractive correction. *Investigative Ophthalmology and Visual Science* 1987;28:399.

Cyclists and helmets

Dr ANDREW BAMJI (Brook General Hospital, London SE18 4LW) writes: I agree with Dr M McCarthy and others (14 May, p 1397) that preventing accidents to cyclists is clearly better than limiting the damage done in a collision, but cyclists must do more than wear helmets and bright clothing. They must take out accident insurance. A client of my younger disabled unit was knocked from his bicycle by a lorry and sustained a high cervical cord unilateral brachial plexus lesion; he is currently very disabled and subject to recurrent respiratory tract infections, which have not infrequently necessitated long spells in intensive care. The situation in his family is highly charged and usually not far from complete breakdown. Although the circumstances of the accident were such that it seemed impossible for it to have been his fault, the evidence of witnesses pointed to this so he received no compensation; he was not insured. A large reward would have made an enormous difference to the family's ability to cope in providing capital for adaptations to the home, appropriate transport, and extra help. He has, however, only the resources of the state to rely on, and they are small and slow in coming. Accident insurance is not expensive. Catastrophe may not be averted but its consequences may be significantly reduced.

Who needs pulse oximetry?

Dr I H WILSON and others (Department of Surgery, University Teaching Hospital, PO Box 50110, Lusaka, Zambia) write: The leading article by Dr John S M Zorab (5 March, p 658) presented a strong case for using pulse oximetry in anaesthesia and intensive care in Britain. We write to point out the potential role of oximetry in the care of the critically ill in the tropics where resources are extremely limited. In our intensive care unit we ventilate 200 patients a year, but

analysis of blood gases is not available because servicing and the regular supply of reagents are difficult to maintain. As a result we must make decisions about mechanical ventilation on clinical criteria alone.¹ Recently we were donated a Novamatrix 500 pulse oximeter, which has proved to be most effective in guiding decisions about using oxygen treatment and mechanical ventilation. An objective measure of oxygen saturation is also helpful in managing patients who fight the ventilator and during weaning. Our unit has no resident medical staff at night so pulse oximetry combined with clinical observations is a simple and sensitive way for nurses to detect respiratory deterioration. Although an oximeter is comparatively expensive (£3000), it has virtually no running costs; therefore it represents a potentially sustainable form of oxygen monitoring in a tropical environment with limited resources and skills.

- 1 Sinclair JR, Watters DAK, Davison M. Outcome of mechanical ventilation in Central Africa. *Ann R Coll Surg Engl* 1988;70: 76-9.

Disposable gloves

Mr F J T BURKE and Professor N H F WILSON (Department of Conservative Dentistry, Turner Dental School, University of Manchester Dental Hospital, Manchester M15 6FM) write: The use of sterile gloves has been an accepted part of surgical technique since at least 1894; they protect patients from the resident flora of surgeons' hands and surgeons from pathogens carried by the patient and prevent cross infection among patients as bacteria may be trapped beneath fingernails for up to five days.¹ Disposable non-sterile examination gloves have been used in medicine and surgery for some time, but it is only recently that the use of such gloves has been advised for dentists carrying out routine dental procedures.^{2,3} Such advice has been taken by many dental practitioners, but a recent small survey indicated that fewer than half of general practitioners currently wear gloves routinely.⁴ The reluctance to wear gloves routinely may be due to worries about loss of tactile sensation and genuine difficulties in manipulating small instruments such as those used for the mechanical preparation of root canal systems—that is, endodontic reamers and files. We investigated the reasons for this loss of tactile awareness. Glove thickness did not seem, within certain limits, to play a part as the thinnest gloves were those that were least liked by the dentists who assessed them. These gloves, which were made of vinyl, also had a high stiffness value, which could be anticipated to cause restriction of movement (F J T Burke *et al*, unpublished observations). Indeed all the vinyl gloves that were tested had stiffness values of six to 10 times the mean value for latex gloves. We therefore suggest that non-sterile gloves made of latex rather than vinyl are indicated for procedures requiring unrestricted hand and finger movements. Finally, vinyl gloves, although least liked by dentists, were much preferred by patients for their lack of smell and taste,⁵ features that may be important to those carrying out orofacial examinations.

- 1 Allen AL, Organ RJ. Occult blood accumulation under the fingernails: a mechanism for the spread of blood-borne infection. *J Am Dent Assoc* 1982;105:455-9.
- 2 Dowell TB. The problems of cross-infection in dentistry. British Dental Association dental health and science committee workshop. *Br Med J* 1986;160:131-4.
- 3 British Dental Association. *Guide to blood-borne viruses and the control of cross-infection in dentistry*. London: BDA, 1987.
- 4 Matthews RW, Scully C, Dowell TB. Use of rubber gloves. *Br Dent J* 1987;163:6.
- 5 Burke FJT, Wilson NHF. Non-sterile gloves: evaluation of seven brands. *Dental Update* 1987;14:336-9.

Interferon

Dr J R HARPER (Northampton General Hospital, Northampton NN1 5BD) writes: I was surprised that Dr D Galvani and others (4 June, p 1554) did not refer to the use of interferon A in herpes simplex encephalitis. Interferon has been reported to give encouraging results in patients not responding to other forms of antiviral or conventional treatment¹; nine patients who were deteriorating on previous treatment were given interferon and six recovered.

- 1 Shanon A, Levin S. Interferon α therapy in herpes encephalitis. *Paediatric Reviews and Communications* 1987;1:45-53.