Postoperative infection in shunts for hydrocephalus

SIR,—I read the report by Mr B P Gardner and Mr O S Gordon (26 June, p 1914) with some concern as the authors do not make it clear what they regard as "infection in shunts." They do not make it clear whether, on the one hand, they are discussing colonisation of ventriculoatrial, peritoneal, or pleural shunts or, on the other hand, infection of the wounds after their insertion. Secondly, they make no attempt to differentiate between infection in ventriculoatrial, ventriculoperitoneal, and pleural shunts. Thirdly, if they are discussing colonisation of shunts they do not tell us how they establish that this infection is present or what evidence they have that their infection rate is not higher. It would be of considerable importance to know that the diagnosis was established on blood culture, culture of cerebrospinal fluid after ventricular valve taps, and culture of valves or catheters removed at subsequent operations. There is no mention of staphylococcal antibody titres.

Even taking all this into account, reinfections in 200 consecutive cases provided an incidence of 1.5%. Without the above information it would seem likely that the incidence was much higher.

J O N LAWSON

St Thomas's Hospital,
London SE1 7EH

*.We sent this letter to Mr Gardner, who replies below.—ED, *BMJ*.

SIR,—I would like to make the following points in reply to Mr Lawson's comments. Firstly, both shunt colonisation and wound infection are included in our definition of shunt infection. Secondly, our article points out that two of the infections occurred in ventriculoperitoneal shunts out of a total of 132 ventriculoperitoneal shunt operations and one occurred in a ventriculoatrial shunt out of a total of 55 ventriculoatrial shunt operations performed. There were no ventriculopleural shunts in our series. Thirdly, we do not routinely carry out blood cultures, cultures of cerebrospinal fluid, or valve taps on patients unless there is a clinical indication to do so. We consider that if a patient is clinically well and has good shunt function valve tapping is contraindicated as infection may be introduced. When shunts are inserted or revised cerebrospinal fluid is sent for bacteriological analysis. When a valve or catheter is removed at operation and shunt colonisation is suspected then the valve is also sent for bacteriological analysis. We do not routinely carry out staphylococcal antibody titres. Positive titres do not confirm, nor do negative titres exclude, shunt infection.

It is not clear to me what Mr Lawson means by his final paragraph. None of our three reported cases became reinfected during the review period—that is, until January 1982, and no other shunt inserted or revised during this period became infected within six weeks of operation. Mr Lawson states that "It would seem likely that the incidence is much higher." There is no basis for this statement unless he is supposing that there are several patients in the series who harboured shunt infection despite being clinically well with functioning shunts. Since we do not interfere with shunts or investigate patients unless there is clinical indication to do so, such possible infections

would be missed. Such cases would be rare and of no importance if causing no harm to the patient. The main point we made is that a very low shunt infection rate can be achieved by careful surgical technique alone and without recourse to prophylactic antibiotics.

B P GARDNER

Regional Spinal Injuries Centre,
Promenade Hospital,
Southport PR9 0HY

After-exercise thermography

SIR,—One of the common hazards of clinical research is that other workers claim to repeat a clinical trial but in fact radically alter the study in either the method or the patients. They arrive at a different result and then suggest that the original work was fallacious.

Much as I respect the quality of the work of Dr A Lindhagen and others (19 June, p 1825) I believe that this is what they have done in their study of the prognostic value of after-exercise thermography. The type of patient, the age of the patients, the incidence of positive after-exercise thermography, and the type of surgery performed were not obviously significantly different in their study and our own. They, however, gave all their patients prophylaxis against deep vein thrombosis. This reduced the incidence of deep vein thrombosis overall to approximately 12%. The incidence of deep vein thrombosis in our patients (who received no prophylaxis) was 39%. Thus their study can in no way be considered comparable.

They claim in their penultimate paragraph that, "It seems improbable that the thromboses so prevented were those that might be predicted by after-exercise thermography." I would suggest that it is highly probable that after-exercise thermography does detect the legs in which prophylaxis is effective. The fact that the incidence of patients with normal thermograms who developed deep vein thrombosis was approximately the same (10-15%) in both Lindhagen's and our study supports this hypothesis. These patients may suffer deep vein thrombosis for pathophysiological reasons unrelated to the patterns detected by thermography. The purpose of our trial was to test whether after-exercise thermography can detect patients who would benefit from prophylaxis. To test the technique on patients who are necessarily going to receive prophylaxis defeats this object and the conclusion that the after-exercise thrombosis is of no value is groundless.

HUGH HENDERSON

Leicester Royal Infirmary,
Leicester LE1 5WW

Laser photoradiation for lung cancer

SIR,—Dr Ian W B Grant's leading article (31 July, p 323) on laser photoradiation for lung cancer may create the impression that no progress is being made in this field in Britain. Like Dr Hugh-Jones (1 May, p 1324), we have experienced difficulties in setting up and maintaining our project, but readers may be reassured to hear that after a pilot study in 1980-1¹ the DHSS has been supporting us in the development of the use of a British Neodymium YAG laser system in the palliative treatment of bronchial carcinoma.

Many of the foreign reports quoted lack

objective assessment to determine which patients really benefit from laser treatment. Our current project assesses response by respiratory function tests, exercise tests, chest radiographs, and symptom questionnaires and shows that careful patient selection is crucial. Laser irradiation can destroy only small amounts of tumour tissue. Best results are therefore achieved in tracheal or main bronchial obstruction, in which small changes in airway calibre produce impressive improvement in airflow.

While we are also interested in photosensitisation techniques with haematoporphyrin derivatives, we submit that the potential of the thermal effects of the YAG laser has not yet been fully realised. The optical fibres used to transmit the laser beam need further development to withstand the very high energies needed for tumour destruction—in contrast to the treatment of gastrointestinal haemorrhage, for which these machines were originally designed. Regrettably, manufacturers are slow to improve them, so that several treatments are needed and the palliative value of laser therapy is therefore reduced. This is, however, a very safe technique. The beam penetrates only a few millimetres and the very small risk of perforation of a major blood vessel is largely irrelevant to these desperate patients. There are no side effects after treatment under local anaesthesia. Photosensitisation with haematoporphyrin, however, can increase airways obstruction from subsequent exudation from the tumour, and skin photosensitivity persists for several weeks.²

We believe laser therapy has a future place in the treatment of lung cancer. It is also valuable in some rare non-malignant conditions.³ While it may help only a minority of patients, its capital cost compares favourably with radiotherapy, and treatment sessions should prove cheaper than chemotherapy.

M R HETZEL

Whittington and
University College Hospitals,
London

E M NANSON
F J C MILLARD

St James's Hospital,
London

¹ Hetzel MR, Millard FJC, Williams IP, Bridges C. *Thorax* 1981;36:235.

² Kato H, et al. *Proceedings of the 4th Congress of the International Society for Laser Therapy*. Japan: Inter Group Corporation, 1981:14-5, 14-8.

³ Williams IP, Radcliffe G, Hetzel M, Millard J. *Thorax* (in press).

Psychological impairment and low-dose benzodiazepine treatment

SIR,—We were interested to read the short paper by Dr A N Nicholson and Mr M B Spencer (10 July, p 99) showing a strong practice effect in normal subjects for the digit symbol substitution test and thus throwing doubt on our suggestion¹ that long-term benzodiazepine users show psychometric impairment. We have also found a pronounced practice effect with this test. However, in comparing 22 long-term users of benzodiazepines in normal doses with controls, we found both digit symbol substitution and symbol copying to be impaired in the patients; reaction time, tapping rate, and a cancellation task were normal. This pattern of impairment resembles that following the acute administration of benzodiazepines^{2,3} and supports

the possibility that such deficits persist on long-term use. Further studies are urgently needed, which we hope we will be able to undertake.

H PETURSSON
M H LADER

Institute of Psychiatry,
London SE5 8AF

- ¹ Petursson H, Lader MH. *Br Med J* 1981;283:643-5.
² Wittenborn JR. *Br J Clin Pharmacol* 1979;7:61S.
³ Johnson LC, Chernik DA. *Psychopharmacology* 1982;76:101.

Healthier children

SIR,—*Healthier Children: Thinking Prevention*, the report of a working party appointed by the Council of the Royal College of General Practitioners (17 July, p 224) seems likely to attract much interest and discussion. Among the wide-ranging recommendations and conclusions reached, the report contains several different developmental surveillance schedules. Without intending to trivialise this important report at this early stage, I nevertheless feel some concern that the development screen given prominence in the text (adapted from Eggertsen, Schneeweiss, and Bergman) uses "matches in box" for 4½-year-olds. I am reminded of a report in the *Pharmaceutical Journal*¹ of an inquest on an 18-month-old boy who died after accidentally taking a drug overdose, whose mother claimed her son had been shown how to get a sweet out of a tablet bottle by a health visitor using the Denver developmental screening test.

C R HAINES

Peterborough Health Authority
School Health Service,
Peterborough PE1 1YF

- ¹ Anonymous. *Pharmaceutical Journal* 1982;228:April 10:422.

Claims about compression treatment for venous disease

SIR,—In the recent correspondence on compression in venous disease Mr A B D Chant (7 August, p 439) refers to the use of hydrostatic compression. Several years ago A J M Brodribb and I carried out some preliminary experiments on hydrostatic compression applied to venous problems in the leg. The results were certainly encouraging and indicated that this principle deserved more intensive investigation. It allows appropriate pressure to be exerted in a graduated fashion, immediately adjusting to the position of the limb, and can be applied continuously or as an intermittent pressure powered by body weight. It is perhaps not sufficiently known that Dr V Holan of Czechoslovakia has gone a long way towards the successful development of a practical hydrostatic device consisting of a shaped rubber bag which is applied to the inner aspect of the leg with a bandage and extended to the underside of the foot so that pressure is transferred intermittently to the ankle region with each step.¹ Dr Holan has reported good results over some years and his methods warrant thorough evaluation in Britain. He has kindly sent me a specimen of his hydrostatic support which I am very willing to show to any surgeon or manufacturer who is interested (Holan hydrostatic bag).

Surgery has no reliable method of reconstructing the damaged or defective musculo-

venous pump but in this technological age it should surely be possible to devise methods of intermittent external pressure to provide a substitute pumping action promoting venous return when the patient is upright. Sustained elastic compression does not fulfil this role satisfactorily, and hydrostatic pumping techniques should be explored.

DAVID J TIBBS

John Radcliffe Hospital,
Oxford OX3 9DU

- ¹ Holan V, Jiraskova M, Pankova R. *Vasa* 1976;5:355-9.

Paediatric surveillance

SIR,—The failure of the GMSC's negotiations to persuade the Review Body to price routine developmental examinations as an item of service has allowed welcome time for further discussion on this topic. There appears to be confusion over what actually constitutes an examination, and reported claims that it is easy to carry out 15 to 20 such examinations in a two and a quarter hour session make us wonder what sort of examination our negotiators had in mind. Our experience over many years and many thousands of routine examinations is that no more than 8-10 are really possible in a session of two and a quarter hours.

More important is that there appears to be a misunderstanding about what part a regular "physical" plays in surveillance examination. We believe that it forms only one part of child surveillance in general practice. Surveillance entails accurate identification of *all* the under-5 population in any practice. Once this has been done, immunisation; nutritional guidance, including accurate regular weighing; health education; developmental guidance; and social support together with regular, meticulously carried out developmental examinations are all tasks that the general practice team of health visitors, midwife, nurse, and general practitioner should carry out as paediatric surveillance. Unless such a package of care is offered, which demands at the outset the closest interprofessional co-operation between the members of the team, paying for only one part of the package and hoping that everything else will happen is, we believe, overoptimistic.

In our opinion it is the non-functioning paediatric primary care team that is the greatest obstacle to progress; lack of commitment and lack of leadership are two reasons why the team does not function in many practices. Sadly, however, a lack of understanding about what preventive paediatric care can offer in general practice seems to be the main one. Child surveillance is time consuming and requires training and organisation, and the whole of the primary care team should be involved. Remuneration should reflect not just the doctor's time spent on offering services that attract an item of service payment but should be for accepting the responsibility for organisation and delivery of paediatric surveillance. For only when the true content of surveillance is appreciated and its effects felt and appropriately rewarded will the children of this country get the health care they deserve and, indeed, require.

P D HOOPER
G H CURTIS JENKINS

Ashford, Middlesex TW15 2TU

GMC finance

SIR,—Dr G W H Jardine writing on GMC finance (7 August, p 442) has misinterpreted the figures given in the Council's annual report. The cost of registration of overseas-qualified doctors, £324 545, was more than covered by the corresponding income—£113 390 for registration plus £43 885 for scrutiny fees and £206 350 for fees for limited registration, making a total of £363 625. Some contribution to the general expenditure of the Council was therefore derived both from the fees paid by British and Irish doctors and by overseas-qualified doctors.

The expenditure on the registration of EEC doctors and associated activities of £33 900 was not covered by the fees of £13 040 received for the full registration of EEC doctors, because to comply with the requirements of our membership of the EEC the fee charged for the registration of an incoming EEC doctor must be the same as that charged to a British-qualified doctor. The Council is thus not free to vary the fees to match the higher cost of registering an EEC doctor.

M R DRAPER

General Medical Council,
London W1N 6AE

Medical communication: the old and the new

SIR,—As a devout optimist, I would like to share Dr C C Booth's hope (10 July, p 105) that the present publishing climate may encourage Britain's healthy tradition of radical medical journalism. The portents, however, are not encouraging.

Just two pages beyond Dr Booth's article, Jerry Cowhig, editor of a first-rate newspaper for GPs, writes: "In editorial policy one must always aim for maximum readership." Because what advertisers measure is, at best, claimed readership there is a danger, as Jerry Cowhig admits, that an editor will play it safe by pandering to the readers' prejudices or massaging their egos.

Even more depressing were two items in the job specification issued by the "head hunters" commissioned to search for a new editor for *World Medicine*. The first reads: "As editor he will be expected to continuously look [sic] for new areas of interest for the readers and work closely with the advertisement manager to exploit possible revenue earning opportunities afforded by such new editorial content." The second item explains that a troika of managing director, advertisement manager, and editor "will be responsible for all aspects of the journal." Such a team, however well intentioned, seems unlikely to take the sort of risks that are central to the tradition that Dr Booth commends.

That tradition will, I submit, be resuscitated not by publishing techniques or methods of distribution but by individual publishers who tend to keep their "front office" free of those multinational accountants who flit from industry to industry measuring the worth of a rose by counting its petals and of an article by counting the words.

MICHAEL O'DONNELL

Weybridge,
Surrey KT13 8SJ