On admission he was semiconscious and scored 9 on the Glasgow coma score. He showed writhing movements of his hands and subsequently had a short tonic-clonic fit. Both his plantar responses were extensor, but the remainder of the physical examination gave normal results. Initial investigations showed a serum sodium concentration of 121 mmol/l, potassium 3·9 mmol/l, and chloride 90 mmol/l with a creatinine concentration of 54 μmol/l and osmolarity of 254 mmol/l. A computed tomogram of the brain and results of examination of cerebrospinal fluid were normal. Unfortunately, a urine sample was not obtained at the time of admission, but it was presumed that he was a victim of near drowning; he was treated with fluid restriction over the next 72 hours, and his clinical state and biochemical profile returned to normal.

This patient must have ingested at least 1·2-1·5 litres of pool water during his swimming lesson to have lowered his serum sodium concentration to 121 mmol/l, assuming a previous serum sodium of 140 mmol/l. Such a rapid ingestion of dilute liquid can result in an abrupt lowering of serum osmolarity with a resultant shift of water into intracellular brain tissue.

A doctor faced with a history compatible with near drowning or possible aspiration of water must consider the diagnosis of acute water intoxication.

MICHAEL WRIGHT
PADMANI DE SILVA
SUNIL SINHA

Department of Paediatrics,
South Cleveland Hospital,
Middlesbrough TS4 3BW

1 Arieff AI, Ayus JC, Fraser CL. Hyponatraemia and death or permanent brain damage in healthy children. *BMJ* 1992;**304**:1218-22. (9 May.)

EDITOR,—Allen I Arieff and colleagues are correct to draw attention to the dangers of postoperative hyponatraemia in paediatric patients, but their suggested treatment with hypertonic saline is hazardous.[1] Use of hypertonic saline to correct postoperative hyponatraemia rapidly has been reported to cause osmotic demyelination in paediatric patients (<16 years).[2,3] In these cases the serum sodium concentration was corrected by a maximum of 15 mmol/l in the first 24 hours, but use of hypertonic saline may result in even greater changes in sodium concentration as the rate of correction is difficult to control.[4]

The main danger in acute severe hyponatraemia is brain swelling resulting in herniation. If the brain is not herniated hypertonic saline is probably unnecessary. If it is herniated hypertonic saline is ineffective as one cannot give enough to result in appreciable water shifts in the time necessary.[5]

I suggest that if a patient has severe postoperative hyponatraemia with relatively minor symptoms then hypotonic fluids should be stopped and homoeostatic mechanisms allowed to correct the sodium concentration. Only if this fails to occur should more aggressive treatments be considered. If the brain is herniated standard treatment with mannitol and hyperventilation to reduce intracranial pressure should be initiated.

SIMON J ELLIS

Department of Clinical Neurology,
Radcliffe Infirmary,
Oxford OX2 6HE

1 Arieff AI, Ayus JC, Fraser CL. Hyponatraemia and death or permanent brain damage in healthy children. *BMJ* 1992;**304**:1218-22. (9 May.)
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Treatment of malignant intracranial germ cell tumours

EDITOR,—In reviewing the recent developments in the treatment of germ cell tumours G M Mead suggests that treating primary malignant intracranial teratoma with chemotherapy alone is associated "with a substantial chance of cure."[1] This view is not supported by the available data as intracranial malignant teratoma carries a poor prognosis despite treatment with cisplatin containing chemotherapy.[2-4] Only one patient with malignant teratoma was described in the paper that Mead refers to, and she died three months after the start of treatment.[5]

Five year survival rates of around 33% have been reported for patients with these tumours treated with either cranial or craniospinal irradiation.[6,7] Combined modality treatment, with craniospinal irradiation after cisplatin based chemotherapy, seems to be necessary to improve the results in this group of tumours.[4,7] A literature review suggests that chemotherapy alone may suffice when the tumour is made up exclusively of choriocarcinomatous elements.[4]

Although the short term and long term deleterious sequelae of craniospinal irradiation are well recognised,[8] the available data support the view that the main concern in these patients is still to prolong survival rather than minimise the late effects of treatment.[9] The improved overall outlook for patients with malignant germ cell tumours is not seen in this subgroup of patients.

S SENAN

Cancer Research Campaign Beatson Laboratories,
Department of Radiation Oncology,
Glasgow University,
Glasgow G61 1BD

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Diarrhoea

EDITOR,—In A J M Watson's article on diarrhoea,[1] no mention is made of the role of notification or infection control in the management of infectious cases.

Clinicians managing cases of dysentry (bacilliary or amoebic) or food poisoning have responsibility under the Public Health Act 1984 and Public Health (Infectious Disease) Regulations 1988 to notify them to their local authority. Notifications by certificate or by certificate and telephone in the case of infected food handlers should be made to the proper officer, either the medical officer of environmental health or consultant in communicable disease control. Cases managed in the community should be nursed with gastroenteric precautions. Those admitted to hospital should be barrier nursed in single cubicles, the local infection control policy consulted, and the infection control team informed. Food handlers, health care and nursery staff, children aged less than 5 years, and people unable to implement good standards of personal hygiene (for example, mentally ill, handicapped, or infirm elderly people) pose a special risk of spreading infection and may require temporary exclusion from work or school as appropriate. Authoritative guidelines on the subject have recently been published.[2]

Control of infection is often overlooked in the management of infectious diarrhoea, with potentially serious and costly implications for the hospital and community. After all, prevention is surely better than cure.

A J HAY

Department of Medical Microbiology,
King's College Hospital,
London SE5 9RS

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Reversing vasectomy

EDITOR,—Anjan K Banerjee and Alan Simpson suggest that reversal of vasectomy leads to patency in 80-90% of cases but only a 30-40% chance of pregnancy, and they list a number of potential causes of functional failure.[1] They also suggest that reversal is requested by only a small number of men (3%).[2]

Experience in our donor insemination programme suggests that regret about vasectomy may be more common than suggested merely by the number requesting surgical reversal. Between 1984 and 1991, 160 of 1024 couples requested donor insemination treatment because of a previous vasectomy. Fewer than 2% of these couples were in the same relationship as when the vasectomy had been carried out. In 25% surgery had not been considered and no attempt at reversal had been made.

More importantly, sperm antibodies may account for a large part of the discrepancy between patency and conception rates. Of those who had had reversal attempted and spermatozoa subsequently seen on microscopical examination of semen, 85% (19/22) had significant titres of sperm antibodies in their seminal plasma. Whether these antibodies develop as a result of the original vasectomy or after its reversal is not clear, but we would strongly advocate screening for seminal plasma sperm antibodies before vasovasostomy is undertaken to help decide whether surgery is appropriate

An alternative would be to at least offer cryopreservation and banking of semen to men who are considering vasectomy. This would certainly give a more realistic chance of fatherhood for the roughly 5% of men who later regret their decision.

D J CAHILL S HARRIS
P G WARDLE W C L FORD
C COULSON M G R HULL

Department of Obstetrics and Gynaecology,
Bristol Maternity Hospital,
Bristol BS2 8EG

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Monitoring lithium treatment

EDITOR,—We confirm the findings of J S E Hellewell and Elizabeth Wyn Pugh, whose audit of lithium use showed deficiencies in pretreatment physical assessment and documentation of information given to the patient.[1]

We undertook in March 1992 an audit of lithium use during inpatient psychiatric treatment at Porirua Psychiatric Hospital, New Zealand. Clinical files were examined for 30 patients randomly selected from 62 patients prescribed lithium. Although lithium concentrations were monitored satisfactorily, pretreatment tests were inadequate in four patients whose lithium treatment was initiated during the past year, and monitoring tests were satisfactorily completed in only 16 patients. A patient with an ejection systolic murmur noted on physical examination had no electrocardiographic recording before starting lithium. Four patients had no physical examination, assessment of heart rate and rhythm, or measurement of serum creatinine concentration for four years during continuous lithium treatment; two of them had a raised serum creatinine concentration at the last measurement but creatinine clearance was not measured. No reason for use of lithium could be found in six patients' files. In only one of the 30 files was there documentation that the patient had been informed of the reason for the use of lithium and the need for regular salt and water intake. None contained documentation that the patient had been informed of toxic effects and what to do should these occur.

Another concern in the use of lithium is its potential to induce anomalies of the cardiac valves and major vessels if taken during the first trimester of pregnancy. Of the 10 female patients whose files were examined, four were premenopausal and had not undergone a sterilisation procedure. A negative pregnancy test had been obtained before starting lithium for three of the four, but in no file was there documentation that the possible effects of lithium during pregnancy or the need for adequate contraception and planning of future pregnancies had been discussed with the patient.

We encourage the use of published recommendations for monitoring lithium treatment[2] and endorse the need for documentation in the patient's file that important information about lithium has been given to and understood by the patient.

THERESE M EGAN
JOHN M G GRIGOR

Mental Health Services,
Porirua Hospital,
Post Box 50-233,
Porirua, New Zealand

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Treating small cell lung cancer

EDITOR,—I disagree with Robert Souhami and believe that, though small cell lung cancer may often be a disseminated disease, an above average survival in patients who have undergone surgery of the primary tumour should be considered to be the result of case selection only if a large scale randomised trial has ruled out an effect from surgery.[1] Such a trial should be considered to be a priority in the search for progress in the treatment of small cell lung cancer.

When I worked in Malmö in the beginning of the 1980s three patients—more than 10% of an unselected group—had undergone resection of the primary tumour before they were given combination chemotherapy (F E von Eyben *et al*, third world conference on lung cancer, Tokyo, 17-20 May 1982).[2] They remained alive for a substantial period after the chemotherapy was stopped. A few years later I gave the same chemotherapy regimen to another series of patients not treated surgically, and despite an impressive objective response none of these patients was cured.

Long term follow up of patients treated only with surgical resection of the primary tumour shows that a small proportion may be cured by this modality alone. Other studies of small series of patients who underwent surgery before chemotherapy show above average survival—that is, three times the survival associated with chemotherapy alone. Accordingly, a randomised trial should study the gain achieved by adding surgery to treatment with chemotherapy. As the few data available consistently suggest an improved survival from this combined approach, I await the results with great interest. Control of the primary tumour, which is often bulky, is an important aspect of treatment. The optimum role of surgical resection of the primary tumour among the many options for treating small cell lung cancer should be determined.

FINN EDLER VON EYBEN

Fylkessjukehuset 1 Lærdal,
N-5890 Lærdal,
Norway

1 Souhami R. Lung cancer. *BMJ* 1992;**304**:1298-301. (16 May.)
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Monitoring ambulatory blood pressure in general practice

EDITOR,—David J Webb and colleagues rightly warn against indiscriminate and uninformed use of ambulatory blood pressure monitoring in general practice and using instruments of doubtful accuracy.[1] Though true, this should not obscure the need for a better method of making important clinical decisions, often entailing lifelong treatment, than the present system of random clinic readings with a mercury sphygmomanometer.

The recommendations of the British Hypertension Society that patients with a diastolic pressure of 96-110 mm Hg should be asked to attend at least six times over three months and that those with an average pressure of $\geq$100 mm Hg should be treated[2] is not only expensive in terms of clinic time and patients' time but may still not exclude the fifth of patients whose blood pressure outside the surgery is normal but who react specifically to measurement in the clinic.[3] Some patients fail to attend for follow up and have to be reminded. Others, whose blood pressure is just under the level for treatment, are recalled in a year's time; if their blood pressure is then found to be back in the problem range they start on another group of assessment visits. It is not surprising that many patients are found to be receiving treatment unnecessarily.[4]

Webb and colleagues point out that normal values for ambulatory monitoring have yet to be established. Much work needs to be done, but an informed guess on the basis of the largest population study so far reported is that a reasonable cut off for treatment would be a mean 24 hour diastolic blood pressure of 90 mm Hg.[5] The assumptions made in such an estimate are not greater than those necessary in applying the results of clinical trials to current practice. Blood pressures obtained during ambulatory monitoring will eliminate "white coat hypertension" and are better predictors of target organ damage than casual measurements.[6] They are also valuable in assessing the adequacy of control during treatment.[7] Finally, they allow the identification of patients whose blood pressure does not drop during sleep, who are at increased cardiovascular risk.[8]

We have used an ambulatory monitor (Spacelabs 90207) in our hypertension clinic over the past year as an adjunct to traditional methods of assessment. It has given us a much clearer understanding of what it is we are treating and confidence that we are giving effective treatment to the right patients. It is the most important advance since Riva Rocci introduced the mercury sphygmomanometer nearly 100 years ago.[9]

JOHN COOPE
GERALD COOPE

Bollington,
Near Macclesfield SK10 5JL

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Bovine spongiform encephalopathy and risk to health

EDITOR,—In response to Paul J Harrison and Gareth W Roberts's editorial on spongiform encephalopathies[1] E Coyle and Ian Harvey rightly suggest that systematic collection of data on Creutzfeldt-Jakob disease is essential to assess any potential risk from bovine spongiform encephalopathy.[2] This recommendation was originally made by the Southwood committee, and since May 1990 the Department of Health and the Scottish Home and Health Department have funded the systematic surveillance of Creutzfeldt-Jakob disease throughout the United Kingdom at the Western General Hospital in Edinburgh. As part of this inquiry a case-control study is being carried out on all cases with particular reference to dietary history, occupational history, and other putative risk factors.

There has been no evidence of any change in the epidemiological characteristics of Creutzfeldt-Jakob disease since the advent of bovine spongiform encephalopathy, and a paper on this will shortly be submitted for publication. Although the scientific evidence suggests that any risk to the human population from bovine spongiform encephalopathy is probably remote, the prolonged incubation period for the spongiform encephalopathies indicates that it will be many years before a risk to public health from bovine spongiform encephalopathy can be finally excluded.

R G WILL
J W IRONSIDE
J E BELL

National Creutzfeldt-Jakob Disease Surveillance Unit,
Western General Hospital,
Edinburgh EH4 2XU

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Fulminant hepatitis B in infants

EDITOR,—S V Beath and colleagues report on three infants with fulminant hepatitis B born to hepatitis B virus carrier mothers positive for antibody to hepatitis B e antigen (anti-HBe).[1] In our clinic recently two patients—one 3 months old