monitor-defibrillator allows a cardiac diagnosis to be made, and if the heart is in ventricular fibrillation it should be defibrillated. Children have been successfully defibrillated at temperatures of 27°C to 30°C, contrary to what has been previously thought.¹ If unsuccessful, further attempts should be made. Laying the patient on a dry blanket protects the operator; arcing does not seem to happen, even with a damp chest. If the heart is in asystole, cardiopulmonary resuscitation should be continued until the victim's temperature is higher than 32°C, the established technique for the management of cardiac arrest being followed.

Victims should never be certified dead until their body temperature and electrocardiogram can be monitored. Resuscitation should continue for however long this takes, for there are recorded cases of full neurological recovery after cardiopulmonary resuscitation for more than two hours.²

Although right heart bypass is an extremely valuable technique in warming the victim, I have seen many who have survived after peritoneal dialysis and continued cardiopulmonary resuscitation, a technique available in every district general hospital.

JONATHAN CHAPPELL

Kent Accident Rescue and
Emergency Service,
Hythe, Kent CT21 4PP

1 Simcock AD. Treatment of near drowning—a review of 130 cases. *Anaesthesia* 1986;41:643-8.

2 Orłowski JP. Drowning, near-drowning, and ice-water submersion. *Pediatr Clin North Am* 1987;34:75-92.

Child abuse and osteogenesis imperfecta

SIR,—In reference to the letters of Dr L S Taitz and of Drs Helen Carty and Donald G Shaw (23 January, p 292), I confirm that the 13 patients mentioned in our letter (12 December, p 1561) were all ones in whom there is now no doubt about the diagnosis of osteogenesis imperfecta. We deliberately excluded those, such as those mentioned by Dr Taitz, over whom some doubt may persist. These patients form a worrying group.

I can also reassure Drs Carty and Shaw that the patients we reported on in our recent paper on osteogenesis imperfecta type IVA¹ were collected after patients in whom the diagnosis of osteogenesis imperfecta was doubtful had been excluded, as had been all patients whom we could not, with confidence, allocate to the type IVA variant. Of this group, 64 had been seen personally and 45 had a clearly positive family history. In each case osteogenesis imperfecta had been diagnosed by local paediatricians or orthopaedic surgeons before we carried out our investigations. Skull fractures do occur in this group of patients, as in all other types of osteogenesis imperfecta. In any individual there are of course many more limb fractures than skull fractures, but our figures indicated the proportion of patients who had had at least one skull fracture at any time.

It is not true that osteogenesis imperfecta type IVA is always a mild disease; in our study the mean fracture rate was about twice that of IA disease at all ages. There is even more variation in the severity of the condition than is true of type I disease.

In all the cases I reviewed there were substantial reasons for doubt about the diagnosis of non-accidental injury before I was asked to investigate. Indeed about half were referred not by the parents' solicitors but by the guardians ad litem. The diagnosis in a child with unexplained fractures is seldom easy, and at least four bone disorders—osteogenesis imperfecta, copper deficiency, rickets, and hyperphosphatasia—can cause difficulty. It is incumbent on all of us who are concerned in

these difficult cases to ensure that an incorrect diagnosis of child abuse is not reached and equally that genuine cases of child abuse are identified to protect the patient and any siblings.

C R PATERSON

Ninewells Hospital and Medical School,
Dundee DD1 9SY

1 Paterson CR, McAllion SJ, Shaw JW. Clinical and radiological features of osteogenesis imperfecta type IVA. *Acta Paediatr Scand* 1987;76:548-52.

**This correspondence is now closed.—Ed, *BMJ*.

Clumsy children

SIR,—I agree with Dr D M B Hall (6 February, p 375) that clumsiness in childhood has many causes but suggest that within the overall group it is possible to identify a specific syndrome of difficulty in learning motor skills (and sometimes cognitive skills as well) for which no structural abnormality in the brain can be shown.^{1,2} At its most severe this syndrome probably represents one end of a spectrum of severity, since minor degrees of difficulty are common when detailed psychological assessment is carried out in school-children.³

I wondered, however, why Dr Hall did not refer specifically to psychometric testing of such children and whether he would agree that the use of the Wechsler intelligence scale for children can be a useful screening test; in most cases where a specific learning defect causes defective acquisition of motor skills it shows a discrepancy between a relatively high verbal IQ and a low performance IQ. I agree with Dr Hall that many of these problems are at least partially overcome in the teen years and that clumsiness of this nature is a talent deficit which, like other learning disabilities, demands specialised and skilled educational requirements for these children.

JOHN WALTON

Green College,
Radcliffe Observatory,
Oxford OX2 6HG

1 Walton JN, Ellis E, Court SDM. Clumsy children: a study of developmental apraxia and agnosia. *Brain* 1962;85:603-12.

2 Gubbay SS, Walton JN, Court SDM. Clumsy children: a study of apraxic and agnosic defects in 21 children. *Brain* 1965;88:295.

3 Brenner MW, Gillman S, Zangwill OL, Farrell M. Visuo-motor disability in schoolchildren. *Br Med J* 1967;iv:259-62.

AUTHORS' REPLY.—Sir John suggests that clumsy children represent one end of a spectrum. He does not specify whether he means a spectrum of normal function, as I proposed in my article, or of some as yet uncharacterised pathological process.

Clumsiness may, of course, occasionally be the functional manifestation of several distinct pathological processes. For example, it may follow encephalitis or neonatal hypoglycaemia. Perhaps some localised cerebral malformation might be responsible; such lesions have been associated with dyslexia⁴ (though they do not necessarily cause it). In my experience cases with evidence of pathology are rare, whereas some authors claim that clumsiness affects 3-15% of children. It is difficult to believe that they all have damaged or maldeveloped brains.

Since there is no radiological or biochemical marker for clumsiness the condition can be defined only clinically. Sir John implies that clumsy children can be identified through a verbal-performance discrepancy on IQ testing.

There are undoubtedly children of normal or superior verbal ability who not only are clumsy but

also have difficulties with constructional tasks, attention control, and so on. This apparent clustering, which gave rise to the concept of the "clumsy child syndrome" and the closely related idea of "minimal brain dysfunction," has been shown to be largely artefactual.² Each of the many subskills which make up psychological functioning can vary independently and is to some extent under separate genetic control.³ The unfortunate child who has a statistically improbable mix of talents and deficits is not well tolerated by parents, peers, or educationists. If he is referred for medical evaluation he is likely to be diagnosed as a "typical" clumsy child. Clumsiness is a pejorative term and is best avoided altogether, but the concept may have some value if it is applied specifically to motor disabilities. Any associated problems should be assessed and described on their merits.

Some children are undoubtedly helped by recognition that they have real difficulties with particular tasks, but there are also dangers in the medicalisation of normal human variation: "An entire generation has been conditioned to regard its deviation from the narrowing standards of approved norms as sickness."⁴

DAVID HALL

Department of Child Health,
St George's Hospital Medical School,
London SW17 0RE

1 Galaburda AM, Kempner TL. Cytoarchitectonic abnormalities in development dyslexia: a case study. *Ann Neurol* 1978;6:94-100.

2 Schmidt MH, Esser G, Allehoff W, Geisel B, Laucht M, Woerner W. Evaluating the significance of minimal brain dysfunction—an epidemiological study. *J Child Psychol Psychiatry* 1988;28:803-22.

3 Ludlow CL, Cooper JA, eds. *Genetic aspects of speech and language disorders*. New York: Academic Press, 1983.

4 Illich I. *Limits to medicine: medical nemesis, the expropriation of health*. Harmondsworth: Pelican, 1977:102.

Treatment of prostatic cancer

SIR,—Dr Jonathan Waxman (30 January, p 356) discusses the relative merits of subcapsular orchidectomy and gonadotrophin releasing hormone analogues for treating prostatic cancer.

In Bristol we have had extensive experience over the past three years with depot gonadotrophin hormone releasing hormone analogues. Undoubtedly when we discuss the treatment options most men will select a monthly (or three monthly) depot injection in preference to orchidectomy. Some men, however, do prefer the "once and for all" surgical option. Perhaps more men would choose it if we explained to them that while both provide effective treatment they both have the same physiological effects—impotence, flushes, and reduction in size of scrotal contents. The apparent advantages of avoiding a "mutilating" surgical procedure may well be outweighed for some by the need for regular outpatient attendance and therefore a monthly (or three monthly) reminder of their condition. This has been particularly noticeable in our unit, where patients are reviewed in a specific prostate cancer clinic. Some patients find the obvious deterioration of others, who may have been attending the same clinic on the same day for several months, disturbing.

There is no evidence that men with prostatic cancer necessarily view orchidectomy as mutilating, and we know of no studies into the psychological effects of this procedure in this group of patients. Recent studies in patients with breast cancer have actually shown no difference in psychological morbidity between those undergoing mutilating surgery (mastectomy) and those undergoing conservative surgery.¹ Unless similar studies of attitudes to orchidectomy are undertaken it cannot

be simply written off as a "primitive and mutilating procedure." In these times, when balancing the cost benefit equation is increasingly important, to introduce an expensive new treatment for a common condition when an equally effective one already exists cannot be justified unless its benefits are fully examined.

A study of male attitudes to castration as a treatment for cancer is needed and this could well be funded by the drug companies introducing these new preparations.

D A GILLATT
J B M ROBERTS
J C GINGELL
P J B SMITH

Departments of Urology,
Southmead Hospital and the Royal Infirmary,
Bristol BS10 5NB

1 Fallowfield LJ, Baum M, Maguire GP. Effects of breast conservation on psychological morbidity associated with the diagnosis and treatment of early breast cancer. *Br Med J* 1986;293:1331-4.

Olfactory hallucinations

SIR,—Dr N E F Cartlidge states in Any Questions (23 January, p 278) that the commonest cause of olfactory hallucinations is epilepsy. While this may be so in purely neurological practice it is not true in general. The most frequent causes are depression and schizophrenia. In a series of patients with olfactory hallucinations drawn from both neurological and psychiatric clinics a third were depressed, a quarter were schizophrenic, a quarter had an olfactory reference syndrome, and only 8% had epilepsy.¹

In depression the hallucination is typically of a foul odour, and two thirds of patients believe this to arise from their own bodies. There are seldom any other sensory abnormalities. The depression is usually endogenous with retardation, depressed mood, and morbid thoughts. Olfactory hallucinations are common in schizophrenia but are often subordinate to hallucinations in other modalities. In late onset paranoid schizophrenia, however, they may be the dominant complaint. Such patients believe the smells are being forced on them and take "reasonable" steps to prevent this by, for example, blocking up chimneys or complaining to the police. In the olfactory reference syndrome the complaint of smell is usually of a true hallucination which the patient believes emanates from himself. It occurs without prior depression of mood and leads to excessive washing of hands, changes of clothes, and avoidance of other people.

In these conditions there is often secondary delusional interpretation, whereas in temporal lobe epilepsy the olfactory hallucinations are almost always recognised by the patient as a subsidiary part of the illness. Patients who present with olfactory hallucinations need careful neurological and mental state examination. The presence of delusions points to a psychiatric syndrome, but the clinician should not lightly dismiss organic causes in patients who have psychiatric symptoms.

P MEATS

Withington Hospital,
Manchester M20 8LR

1 Pryse-Phillips W. An olfactory reference syndrome. *Acta Psychiatr Scand* 1971;47:484-509

Transporting critically ill patients by ambulance

SIR,—Dr J F Bion and colleagues (16 January, p 170) suggest that blood pressure should be

monitored during transfer of very ill patients. We would be interested to know how they do this.

Measurement of blood pressure in a moving ambulance is not easy. Automatic measurement of blood pressure by invasive and non-invasive methods requires a still patient. Auscultation of Korotkoff sounds in an ambulance is awkward and frequently impossible. Oscillotonometers are inaccurate in the presence of vibration. The most satisfactory method of measuring systolic blood pressure is by the use of a mercury sphygmomanometer and a finger on the pulse. In the presence of hypotension even this technique is inadequate.

We confess that we are frequently unaware of the precise blood pressure of our patients in transit. Often it is a case of knowing whether or not the patient actually has a blood pressure.

W H KONARZEWSKI
A BANERJEE

Colchester General Hospital,
Colchester CO4 5JL

AUTHOR'S REPLY—We made it clear in our article that no monitoring was employed during transport of the 50 patients in the study. The results suggest that blood pressure monitoring would be a useful aid during ambulance transport of the critically ill, but space did not allow us to elaborate on possible methods.

Intra-arterial blood pressure measurement is the ideal¹ but requires medical staff competent at inserting cannulas; a cheap and satisfactory monitor is the simple Tycos gauge which displays mean arterial pressure. Non-invasive methods suitable for the critically ill are still at the development stage: the Copal semiautomatic sphygmomanometer (Andrew Stephens Co, Blackpool), the Omega (Vickers), and the Dinamap (Critikon) are available in portable form but overestimate at low pressures.² The Finapres (Ohmeda) represents an important development in accurate and continuous non-invasive pressure measurement, but the device is not yet portable.

Until these problems are resolved critically ill patients should not be transported until they are physiologically stable,³ and they should be attended by staff properly trained in resuscitation; intra-arterial cannulation is the most reliable method, and the Tycos gauge the cheapest monitor.

JULIAN BION

Department of Anaesthetics,
Birmingham University,
Birmingham B15 2TH

- 1 Waddell G, Scott PDR, Lees NW, Ledingham IMCA. Effects of ambulance transport in critically ill patients. *Br Med J* 1975; i:386-9.
- 2 Johnson CJH, Kerr JH. Automatic blood pressure monitors. *Anaesthesia* 1985;40:471-8.
- 3 Bion JF, Edlin SA, Ramsay G, McCabe S, Ledingham IMCA. Validation of a prognostic score in critically ill patients undergoing transport. *Br Med J* 1985;291:432-4.

The future of teaching in district general hospitals in the NHS

SIR,—Professor Harold Ellis (16 January, p 152) casts doubt on the ability of private medicine to provide the basic requirements for teaching senior house officers and registrars.

I have just resigned from the NHS to go into the private sector 15 years before my due date of retirement as a result of the draconian cuts which have been forced on us in the Bromsgrove and Redditch District. These cuts have reduced our senior house officers by one and have completely swept aside a training post in knee surgery which

had been set up as part of the training rotation from the Robert Jones and Agnes Hunt Hospital at Oswestry.

The job description for the "fellow in knee surgery" had created a timetable in which the incumbent trainee was exposed to a maximum amount of knee surgery, including arthroscopic surgery, and spent most of his time in outpatients dealing with new and follow up cases of knee problems. This arrangement has now become impossible owing to the drastic cuts in funding in our district and the closure of our specialist orthopaedic hospital at Hill Top, Bromsgrove. The concomitant reduction in senior house officer staffing levels has meant that the teaching post has now become a common or garden NHS senior house officer post.

Furthermore, owing to the changes in staffing levels of registrars and senior house officers after the recommendations in *Achieving A Balance* we are now left with one registrar, four senior house officers, and no junior house officers to deal with about 1000 elective major orthopaedic cases a year and roughly the same number of emergencies and minor cases. This in effect means that the senior house officers spend nearly all their time clerking patients on the ward while the registrar and consultants deal with outpatients on their own and there is no time left at all for teaching or for instruction in operative technique.

The monetary restrictions have also prohibited the purchase of several items of diagnostic and therapeutic importance in knee surgery which would improve both the quality of teaching and the experience of the senior house officers during their six month sojourn in trauma and orthopaedics.

A far better deal can be offered in the private sector for the senior house officer or junior registrar who wants six months' training in a surgical or medical specialty. The junior would be attached full time to one or at the most two consultants and would deal in depth with a small number of inpatients (between five and 10 a week) and a similar number of outpatients.

Sophisticated modern equipment is what the private patient today expects in a specialist knee service, where there is no question of not being able to afford computed tomography, arthrograms, video recorded arthroscopies, routine clinical photographs, and so on. Theatre time is far more available, and emergencies are dealt with in the private sector by the consultant with help from his junior.

All this is good grist to the teaching mill, and the consultant in private practice should be encouraged to advertise for top quality juniors with the assurance that with very little effort the full time private surgeon has more to offer than the overworked and underfunded NHS consultant.

ANGUS STROVER

Bromsgrove and Redditch District General Hospital,
Redditch, Worcs B98 7UB

Fraud in medicine

SIR,—Dr Stephen Lock's leading article (6 February, p 376) suggests two lessons to be learnt from the many accounts of fraudulent publication: the close supervision of young researchers, and the re-thinking of the emphasis placed on number of publications. The latter seems likely to be the most effective. Faced with the enormous pressure, not just on juniors but on entire departments, to keep up a "good"—bulky—publications record, it is difficult to see close supervision as a satisfactory solution. The way in which Slutsky managed to involve those who should have been monitoring him shows this.¹