diazepam. The description of the procedure and of the cases makes it clear that in all cases of hypotension the drug was given intravenously. The patients were nursed in an intensive care ward where observations of physiological functions were made regularly at 15 minutes, or less if necessary. Why Drs. Taylor and Ounsted should not know "how an adequately representative blood pressure was recorded from a patient in . . . grand mal status" is difficult to understand. Naturally one does not aspire to recording during the actual seizure, but the traditional techniques serve quite well between convulsions. Drs. Taylor and Ounsted believe that the "title may serve by itself to alarm practitioners into avoiding this . . . drug as their treatment of first choice." This may be a fair comment upon the reading habits of physicians or may reflect the view that Drs. Taylor and Ounsted have of their fellow practitioners. For those who read more than the title, the summary and the rest of the paper made it obvious that diazepam is a highly successful drug in the treatment of status epilepticus. The fact that combined treatment with other drugs in seriously ill subjects may lead to an undesirable or potentially fatal hypotension should not deter practitioners from its use, but should lead to greater caution.

Obviously combined treatment cannot be wholly avoided. Some cases of status epilepticus do not respond to treatment with diazepam, given early or late, even in the best-regulated of circles. The use of phenobarbitone or phenytoin in patients who have been receiving these drugs for years is not necessarily illogical and is sometimes essential; the deliberate or inadvertent withdrawal of anticonvulsant medication is a common cause of status epilepticus, and in cases of prolonged status the regular medication should be continued without interruption. Furthermore, when cases of intractable status arrive at a special treatment unit some will have received treatment, not necessarily the wisest, and probably with more than one drug. Consequently the dangers of treatment with diazepam in conjunction with other drugs should be adequately advertised. —I am, etc.,

D. S. BELL.

Psychiatric Research Unit,
Rozelle, 2039,
Australia.

Unsuspected Miliary Tuberculosis

SIR,—I read with interest the letter by Dr. R. Milton and others (1 February, p. 315) on the above subject.

In 1965 a colleague and I drew attention to unsuspected tuberculosis in the aged, of which two cases were diagnosed after death.[1] Recently I reviewed all post mortem material since publication of that paper to the end of 1968 (1,500 cases), and found 6 cases of miliary tuberculosis out of a total of 14 cases of active tuberculosis, two of the former being aged 80 and 90 respectively.

I would like to emphasize the importance of being aware of this hidden seed bed of tuberculosis, and it is practice in this laboratory to culture all sputa routinely for tubercle bacilli. Furthermore, in the nine cases of miliary tuberculosis in my two series all had miliary tubercles in the marrow—on this evidence I now recommend that we culture some of the marrow aspirate in all cases of pyrexia of unknown origin in liquid tuberculosis culture medium.—I am, etc.,

JANE M. FULLERTON.

St. Olave's and New Cross Hospitals,
Guy's Hospital Group,
London S.E.16.

REFERENCE

1 Fullerton, J. M., and Dyer, L., *Tubercle (Lond.)*, 1965, **46**, 193.

Awareness during Anaesthesia

SIR,—With regard to the article by Drs. J. Wilson and D. J. Turner (1 February, p. 280), may I make one very simple point? It is well known that sensory input during operations performed under light general anaesthesia plus muscle relaxation is an important factor in producing awareness. It has been my practice to apply tight-fitting plugs of moistened gauze to both external auditory meati on all patients undergoing caesarean section as soon as intubation has been performed.

There are clearly several factors operative in the cases described by Drs. Wilson and Turner, but the routine use of ear plugging, with consequent blocking of auditory stimuli, may well be an important factor in reducing the number of patients who complain of awareness during caesarean section.—I am, etc.,

W. T. MCNEIL.

Midland Centre for Neurosurgery and Neurology,
Warley, Worcs.

Torsion of Testis

SIR,—Following Mr. K. Mohay-ud-Din's letter (15 February, p. 445), without detracting from his statements I should like to remind him of the condition of idiopathic scrotal oedema of children[1] as a differential diagnosis. A few operations have been needlessly performed because of a mistaken diagnosis of torsion of the testis.

The distinguishing features are absent or minor pain, normal scrotal contents, and the distribution of the oedema, with some irritation of the scrotum or perineum.—I am, etc.,

BARRIE HANSTEAD.

Upminster, Essex.

REFERENCE

1 Hanstead, B., and John, H. T., *Brit. J. Urol.*, 1964, **36**, 110.

Bilateral Tension Pneumothorax in Newborn

SIR,—I was interested to read the letter by Mr. I. V. Lishman and Dr. F. Mansfield (11 January, p. 121). The authors mention the difficulty in diagnosis they might have experienced had their patient not had surgical emphysema as well as tension pneumothorax. I have observed in several cases of pneumothorax in newborn and older infants that abdominal distension may be a prominent clinical finding. The explanation is presumably that the pressure of the air pushes the diaphragm downwards, thus compressing the abdominal contents. The following case histories may help to demonstrate the point.

A newborn infant delivered by caesarean section failed to breathe. The child was cyanosed and limp, and the abdomen was soft and not distended. Heart rate was 96 but quite strong. An experienced anaesthetist passed an endotracheal tube and oxygen was administered at a rate of 2 l./min. through a Sampson respirator. Immediately the oxygen was started marked abdominal distension developed. The anaesthetist was certain the tube had entered the trachea but none the less removed it. Surgical emphysema developed in the neck. Resuscitative measures failed, and the infant died before an *x*-ray could be obtained. At necropsy the infant showed areas of pinkness contrasting with the generalized cyanosis.

Bilateral tension pneumothorax was present with ballooning of the diaphragm into the abdomen. No obvious area of trauma was found in the respiratory tract.

An infant of 3 months being treated for acute gastroenteritis developed marked abdominal distension. The child was a little dyspnoeic, and the air entry on the right side of the chest was poor. *X*-ray revealed tension pneumothorax on the right side and no intra-abdominal lesion. The pneumothorax was relieved by a catheter and underwater drainage, and following this the abdominal distension disappeared. Recovery from staphylococcal pneumonia and gastroenteritis was complete.

I wonder if any other readers would agree that abdominal distension may be a sign to turn one's thoughts to a possible diagnosis of tension pneumothorax in an infant with respiratory difficulty.—I am, etc.,

JOAN WAGNER.

Johannesburg,
South Africa.

SIR,—The correspondence (11 January, p. 121 and 22 February, p. 514) on the emergency treatment of tension pneumothorax in the newborn prompts us to relate our own solution to this problem when faced with it recently.

A child delivered by caesarean section after some hours of intermittent foetal distress attempted to breathe before the air passages could be cleared of thick meconium. Respiratory efforts ceased while the pharyngeal contents were being removed by suction, and as there was no improvement after gentle inflation with oxygen from a face mask an endotracheal tube was passed. Ventilation with oxygen then produced a rapid improvement in colour, and spontaneous respiration started, but when the endotracheal tube was withdrawn it was clear that something was wrong; respiratory efforts were excessive, and there was a violent seesaw movement of the thorax and abdomen. The child rapidly became cyanosed again, so the tube was replaced and artficial ventilation recommenced. Auscultation revealed very little air entry on either side of the chest, and an *x*-ray showed a right tension pneumothorax with marked displacement of the mediastinum to the left.

An underwater drainage apparatus was improvised, using a disposable infusion set (which, when taken to pieces, provides a number of useful parts, including several male/female Luer connecters), a 16-gauge disposable intravenous cannula, a wide-bore 6-inch 15 cm. aspirating needle, and a rubber-capped 100 ml. bottle containing 50% dextrose. The aspirating needle was inserted through the rubber cap, and the dextrose was removed and replaced by sterile saline and chlorhexidine solution to a depth of 4 cm. The delivery tube of the infusion set was divided just below the drip chamber, and

into the cut end was inserted the extracted and reversed outer terminal of the air-inlet tube after the cotton-wool filter had been removed; this produced a tube with a male Luer connecter at each end, and one of these was plugged into the aspirating needle. The wide-bore stylet was then cut from its attachment to the drip chamber and inserted through the rubber cap, so providing an air outlet. This completed the underwater seal.

The 16-gauge needle was then inserted into the pleural cavity through the third intercostal space in the anterior axillary line, and the whistle of escaping air was heard. The needle was removed, leaving the cannula in the pleural cavity, and to this was connected the free end of the infusion tubing. Air escaped intermittently through the underwater seal for several minutes, and the water level rose gradually up the tube, swinging with each breath, until the surprisingly high negative intrapleural pressure of some 20 cm. of water was indicated. The child's condition improved, and after ten minutes respiration was adequate and easy. He was nursed in an incubator overnight, and an *x*-ray the following day showed that both lungs were completely expanded. The water level had stopped fluctuating with respiration, so the cannula was removed. The child has continued to thrive.

The purpose of this letter is to show that in an emergency a sterile underwater seal can be improvised from standard ward equipment in a matter of minutes. In fact our own apparatus could have been simplified; all that is really necessary is to place the end of the tube under sterile water in an open bottle, and as long as it is safely secured in this position something more elegant can be fitted up at leisure. However, we now realize that it is wise for a busy maternity department to keep an underwater seal made up in a sterile pack ready for immediate use. We would also reinforce the view of Drs. I. V. Lishman and F. Mansfield that an immediate chest *x*-ray in infants with respiratory distress may be most valuable for revealing the presence of an easily treated but potentially fatal condition.—We are, etc.,

PATRICIA E. MORTIMER.
DAVID ZUCK.
Chase Farm Hospital,
Enfield, Middx.

"Bolus Injection"

SIR,—Fee Fie Fo Fum, I smell the onset of another year of word fashion and just after parameter had died and spectrum was feeling poorly. Dr. M. P. Chopra and others (25 January, p. 213) began it in their otherwise excellent article on lignocaine when they used a "bolus injection." In Dr. S. N. Sinha's letter (15 February, p. 440) the phrase recurs.

The *Oxford Dictionary* defines "bolus" as a large pill, other authorities quote the Greek *bolos* as a lump of earth, and we are all accustomed to its use as a dollop in the gullet. But how can such a mass pass through a needle?

Whatever happened to "stoss dose"?—I am, etc.,

G. L. BOLT.
West Norfolk and King's Lynn General Hospital,
King's Lynn, Norfolk.

General-practitioner Hospital Beds

SIR,—The gradual but remorseless reduction of hospital beds in which the general practitioner may treat his patients is a result of the policy of the Department of Health and Social Security for the rationalization of the hospital services as outlined in their Circular HM (68) 31 dated 3 May, 1968. Though not declared as such, the insistence on closure of the smaller hospitals, in which many "cottage" hospitals are included, in effect means a reduction in these beds. The circular states that efficiency and economy in the hospital service can best be effected by concentration of hospital services in fewer larger hospitals.

The General Medical Services Committee has made strong representations to the Department that, as your correspondents Dr. Alan Porter (22 February, p. 504) and Dr. K. E. Lane (1 March, p. 571) so rightly say, for many general practitioners and particularly young men and women who wish to make general practice their career to have the right of access to hospital beds is of prime importance. The removal of these beds—if indeed they are to be made available in the larger hospitals—to sites remote from the area where patients and doctor live may well make it impossible for the general practitioner to continue to care for his patients when they are in hospital. Further, the reduction of beds from three to two per 1,000 of the population to be served by the new district hospitals at Bury St. Edmunds and Frimley will present problems for our colleagues in the hospital service, who naturally consider that they have first claim on the available beds. It has been recommended to the Department that no beds should be closed until alternative facilities are provided for general practitioners at district or other hospitals within a reasonable distance.

The report of the Royal Commission on Medical Education[1] and the report of the subcommittee of the Joint Consultants Committee on hospital staffing structure (*Supplement*, 22 February, p. 75) foresee increased general-practitioner participation in the hospital service as part-time staff. The Royal Commission also proposes for those who intend general practice as a career a three-year period of general professional training, most of which will be spent in hospital. Neither report emphasizes the importance of the general practitioner treating his own patients in hospital—a service of inestimable value to certain patients which he will be well equipped to provide. It is true that the facility for the general practitioner to treat his patient in hospital is at present more a part of rural than of urban practice, and that continually increasing lists make it difficult for the urban practitioner to foresee when he will be able to take advantage of such a facility. Doubtless increasing experience of working in obstetric units will whet the appetite for access to other wards.

As the general practitioner further develops into the generalist physician of the future such hospital facilities must be available to him and in the interim must not be whittled away if enough recruits are to come forward to maintain and increase the manpower necessary for the survival of general practice.—I am, etc.,

C. J. WELLS.
Chairman, Hospitals Subcommittee,
General Medical Services Committee.
Sheffield 7.

REFERENCE
[1] *Royal Commission on Medical Education, 1965–68*, Report 1968, Cmnd. 3569. H.M.S.O., London.

SIR,—Having for 30 years worked in an area where a cottage hospital has been conspicuously lacking, I have read Dr. K. E. Lane's letter (1 March, p. 571) with the heartiest approval, but there are two riders to his argument in favour of general-practitioner hospital beds that need stating.

The first is that owing to the great increase in traffic density only those doctors living nearby could make use of beds in a district hospital. In the old days of light traffic we made much use of nursing-home beds in the town some miles away, and this partly compensated us. Now the homes have gone, the flood of cars is here, and the N.H.S. What is wanted is a hospital of the simplest type—and we are not going to get one now, ever, more's the pity.

The second proviso is that at least some young men do not want beds only for the type of case Dr. Lane and I envisage, or even beds in a general-practice maternity unit; they want a hospital where they can do a Dr. Finlay, atavistically giving their anaesthetics and wielding the knife as of yore. I speak feelingly here, having a son who has gone to the Antipodes for this very reason; not, I am sure, for money.—I am, etc.,

G. D. J. BALL.
Plympton, Plymouth,
Devon.

SIR,—I would like to endorse Dr. K. E. Lane's plea for general-practitioner hospital beds (1 March, p. 571).

I spent a short period in general practice in Canada some years ago. Conditions of work were similar to here (in some ways, not so good—for example, we had to pay our own rent and staff salaries), except that we had hospital beds. There is no doubt that this is of great benefit to the family doctor. As Dr. Lane mentions, he can look after his own cases of terminal cancer, pneumonia, etc., in the hospital. I found also other advantages—working closely with colleagues in hospital is most stimulating, and, I am sure, encourages doctors to maintain a high standard of care; the present dichotomy between hospital and family doctors would be much reduced and a consultant opinion would be more easily and quickly obtained to the advantage of the patient. Use of the hospital library, clinical meetings, and case demonstrations are more easily available. The legal problems can surely be covered by giving the general practitioner a contract with the regional hospital board, possibly to be reviewed annually.

The argument that family doctors may take on professional commitments for which they have not the experience or skill is surely answered by the fact that the conscience of each doctor is his guide as to what he feels