

us first objectively show that there is indeed a growing problem at all, and if there is one then consider the best way to tackle it in the interest of the profession and the public we serve.

A FRASER-MOODIE
D I ROWLEY

Accident and Emergency Department,
Derbyshire Royal Infirmary,
Derby

Dopamine and dobutamine

SIR,—I am worried at the relative lack of differentiation given to the recently introduced pharmacological agents dopamine (Inotropin) and dobutamine (Dobutrex) discussed in your recent leading articles (17 December, p 1563, and 22 April, p 1010). It is unfortunate that these agents have similar generic names as, although both have inotropic action, there are important differences between them:

(1) Dopamine is a naturally occurring hormone which is the precursor of noradrenaline,¹ whereas dobutamine is a synthetic catecholamine which acts directly on the receptor sites of myocardial muscle.²

(2) Dopamine is dependent for its effect on the release of myocardial noradrenaline,¹ while dobutamine is not.³

(3) Dopamine has been associated with peripheral vasoconstriction⁴ and there have been reports of digital gangrene with dopamine usage,⁵ neither of which has been described in relation to dobutamine.⁶

(4) Dopamine exerts a direct effect on the dopaminergic receptors within the renal vasculature, which can result in an increased urinary flow.⁷ This improvement in urinary output may or may not be related to improvement in cardiac output. Dobutamine exerts no specific effect on these dopaminergic receptors and any increase in urinary flow is related to an increase in cardiac output.⁸

It is also of interest that there are strong reasons to support the experimental evidence⁹ that the inotropic action of dobutamine does not produce expansion of myocardial ischaemia following infarction.¹⁰

ALAN YATES

Cardiothoracic Unit,
Guy's Hospital,
London SE1

¹ Goldberg, L I, *New England Journal of Medicine*, 1974, **291**, 707.

² Stoner, J, Bolen, J, and Harrison, D C, *British Heart Journal*, 1977, **39**, 536.

³ Loeb, H, and Bredakis, J, *Circulation*, 1977, **55**, 375.

⁴ Greene, S I, and Smith, J, *New England Journal of Medicine*, 1976, **294**, 114.

⁵ Alexander, C, and Sako, Y, *New England Journal of Medicine*, 1975, **293**, 591.

⁶ Robbie, N, and Nutter, D, *Circulation Research*, 1974, **34**, 663.

⁷ Goldberg, L I, *New England Journal of Medicine*, 1974, **291**, 707.

⁸ Leier, C B, Webel, J, and Bush, C, *Circulation* **56** (3), 468.

⁹ Tuttle, R, and Pollock, G, *Circulation Research*, 1977, **41**, 357.

¹⁰ Gillespie, T, and Dieter Ambros, H, *American Journal of Cardiology*, 1977, **39**, 588.

Stiff shoulder after stroke

SIR,—Professor J C Brocklehurst and his colleagues (20 May, p 1307) found that 21 patients out of 135 with acute strokes had developed a stiff and painful shoulder within two weeks.

In our experience in this unit this early complication of a stiff and painful shoulder is entirely preventable and we have not seen it in patients admitted directly to our unit for very many years. It is not a matter of treatment

by the physiotherapists but of treatment by the nurses. All nurses in our unit are taught that whenever they attend a patient with an acute stroke, whether he is in bed or in a chair, they must lift his hemiplegic arm well above his head once in addition to whatever else they are going to do for him. This is a simple task and we often ask relatives as well as the nurses to do it for the patient. There is no reason why it should not be done by the patient's family if he is nursed at home.

R E IRVINE
T M STROUTHIDIS

Hastings Geriatric Unit,
St Helen's Hospital,
Hastings, Sussex

Non-epileptic television syncope

SIR,—Your leading article on television-induced epilepsy and its prevention (20 May, p 1301) was most helpful, but your readers may gain the impression that all seizures which occur in front of the television set are epileptic. Once again¹ it is important to emphasise that there is another common type of seizure, the "anoxic" seizure,² otherwise known as convulsive syncope. Anoxic seizures of this kind occur when the heart stops for about 10 seconds. In young children they are commonly reflexly precipitated by pain or other unpleasant stimuli,² and they may also be induced in certain children by fever as a genetic variety of febrile convulsions (to be published). What is of considerable interest is that similar seizures may occur in front of the television set for no other apparent reason. Four such cases are briefly described below.

A 9-year-old boy was referred as ? television epilepsy after a single, long, asymmetrical, clonic seizure which began while watching television. He was about to change schools in the following week and there had been two tragic deaths in his family in the immediate past. The electroencephalogram (EEG) with photic stimulation was normal on two occasions three months apart, but ocular compression in the supine position induced cardiac asystole of 10 s followed by EEG slowing.

A 3½-year-old boy while watching television tried to stand up, shaking all over, and collapsed on the floor. The EEG and the response to photic stimulation were normal, but ocular compression when supine induced asystole of 9.5 s with diffuse EEG slowing, deviation of his eyes, and a dazed expression.

A 14-year-old mentally handicapped boy, supposedly epileptic, had his worst-ever episode while watching television (a habit which was rare for him). He had some sort of warning, fell, his eyes went up into the back of his head with the whites showing, he was blue, stiff, and rigid, and then there was some jerking and he was briefly dazed. The EEG with photic stimulation was normal, but ocular compression induced asystole of 14 s followed by jerking of his lower limbs, cyanosis, and diffuse slowing of the EEG to 1½/s for 11 s. He responded to questions 8 s later.

A 9½-year-old girl had three episodes of unconsciousness in which she became limp with possible facial twitching, two of which occurred while watching television; she was referred as ? photosensitive epilepsy. The EEG with photic stimulation was normal, but ocular compression induced asystole of 7.7 s followed by 8 s of diffuse EEG slowing to 2½/s.

All four children had seizures in front of the television set but no EEG evidence of television epilepsy. On the other hand they had a highly abnormal oculocardiac response. More than 4 s asystole on ocular compression is regarded as abnormal, occurring in no

more than 1% of the population. Frank anoxic seizures following ocular compression in the supine position have been seen only in those subject to reflex anoxic seizures or syncope² and in a subgroup of those with febrile convulsions. The evidence presented here suggests that something in the act of television watching can induce a striking anoxic seizure easily mistaken for epilepsy unless ocular compression forms part of the EEG examination.

J B P STEPHENSON

EEG Department,
Royal Hospital for Sick
Children,
Glasgow

¹ Stephenson, J B P, *British Medical Journal*, 1977, **2**, 45.

² Stephenson, J B P, *Archives of Disease in Childhood*, 1978, **53**, 193.

Factors affecting length of hospital stay

SIR,—I would refer to the letter of Mr H B J Chishick (29 April, p 1145) purporting to compare the costs of cataract surgery in different areas of Wales.

The data presented by Mr Chishick are inaccurate. The duration of stay for cataract operations in West Glamorgan in 1975 varied from 6 to 11 days, depending on the surgeon operating and the nature of the complications, and not, as stated 17.0 to 25.4 days.

Mr Chishick's estimation of the cost of cataract surgery using erroneous lengths of stay must therefore also be incorrect. The methodology adopted to arrive at the alleged cost per inpatient week is unusual. The stated base line is data obtained from a Welsh Office publication,¹ which give the cost per inpatient week average for Wales in acute non-teaching hospitals as £139. This figure is derived from an aggregation of all specialties in all hospitals of that category in Wales. Mr Chishick apparently has then divided this amount by 7, to arrive at an inpatient day cost of £19.86. He has then multiplied this figure by the length of stay extremes in his quoted print out figures, to conclude that the inpatient week cost is £155 in Gwynedd and £504 in West Glamorgan.

Hospital Activity Analysis has value in the management of the Health Service, but its credibility is reduced by letters such as that from Mr Chishick.

D PHILLIPS-MILES
Area Medical Officer,
West Glamorgan Health Authority

Swansea

¹ Welsh Office, *Health and Personal Social Services Statistics for Wales*, No. 3. Cardiff, HMSO, 1976.

* * * We sent a copy of this letter to Mr Chishick, whose reply is printed below.—
Ed, *BMJ*.

SIR,—The figures that I quoted referred not to the absolute but to the *mean* duration of stay for cataract surgery, which was 17.0 days for men and 25.4 days for women, and in fact these mean values represented a range of 6 to over 50 days. It was not my intention to make invidious comparisons between the area health authorities in Wales but merely to demonstrate that there was a wide variation in the length of stay for one type of elective surgery for which there is a low incidence of complications.

The cost of any operation, procedure, or

stay in hospital can only be a notional figure. The cost of cataract surgery was indeed based upon the figures given in the Welsh Office publication as £139 per inpatient week in acute non-teaching hospitals and £214 per inpatient week in acute teaching hospitals, but Dr Phillips-Miles has failed to realise that the "cost" of cataract surgery was expressed as the *cost per patient* and not as the cost per inpatient week. Furthermore, these figures were the mean cost per patient in the areas concerned, derived from the mean duration of stay, and were certainly not calculated from the extremes that he suggests.

The unit cost of a hospital bed per week is unlikely to vary much between specialties or with the duration of stay of individual patients and will always be sustained by the long-suffering taxpayer. The marginal cost of any unnecessary delay in discharging patients is borne by those on the waiting lists, whose average age is likely to be over 70 and for whom waiting time is important. The real cost of cataract surgery lies not in a contrived figure based upon length of stay or aggregated statistics but in the human cost of those patients with cataracts who are awaiting surgery.

H B J CHISHICK

Welsh National School of Medicine, Cardiff

Intended place of delivery and perinatal outcome

SIR,—I am indebted to Mrs Marjorie Tew (29 April, p 1139) for discussing in such detail the paper I wrote with Professor N R Butler (25 March, p 763) and grateful for this opportunity to reply to her argument.

She first criticises the whole concept of analysing the data according to where the patient was booked for delivery rather than where she was actually delivered. The difficulty arises in that group of women who were booked for home delivery but were transferred for delivery in a consultant unit. This small group of deliveries has a very high perinatal mortality rate (not surprisingly—it seems reasonable to assume that they were transferred because the general practitioner had recognised some imminent danger). It is our contention that this group should be included in the home-booked group, transfer in labour being one of the dangers inherent in such a booking. The analysis then tests the hypothesis that the place of booking has no effect on perinatal mortality (that is, we start with the null hypothesis). Mrs Tew appears to think this is begging the question. Her argument is difficult to follow. To produce an analogy from adult medicine: if one were assessing the efficacy of place of care in a randomised controlled trial for patients who had had a myocardial infarct one would not omit from the domiciliary group those patients who

were being cared for at home but had suddenly deteriorated, were transferred to hospital, and died.

Mrs Tew quibbles about the levels of statistical significance of the beneficial effect found in patients booked for NHS consultant units in each of our three groups. The fact that in each group the effect was in the same direction and of the same order of magnitude is the important and, I think, wholly convincing fact.

The original paper included a graph to show that the national stillbirth rate in domiciliary deliveries has actually been rising since 1970. The figure was intended to contrast trends, but there has been some suggestion that it was misleading. It has never been our contention that the stillbirth rate in home deliveries was not much lower than that in hospital deliveries—for obvious reasons (see the analogy above).

Even were it not for transfers from home to hospital late in pregnancy, the result of selecting the women at highest risk over the years should automatically result in an apparent secular fall in stillbirth rate. This paradox has been discussed fully by Yudkin¹ and is illustrated in the table. Here I have taken a hypothetical situation in which the number of hospital deliveries has increased over a period of five years and assumed that, given the choice, the women at highest risk would be selected for hospital delivery. It can be seen that this automatically results in falling stillbirth rates in hospital and domiciliary deliveries. The worrying point about the graph we showed is that the stillbirth rate among domiciliary deliveries has actually been rising since 1970 in spite of the falling proportion of such cases. This indicates either that the assessment of high-risk patients has deteriorated or that the care of women delivered at home is not as good as it used to be. Both possibilities give cause for concern.

JEAN FEDRICK

Unit of Clinical Epidemiology, Oxford Record Linkage Study, Oxford

¹ Yudkin, P, *British Journal of Obstetrics and Gynaecology*, 1976, **83**, 603.

The therapeutic Smartie

SIR,—Now that I have received a letter from the Secretary of State for Social Services and the Chairman of Council of the BMA regarding the need for economy in prescribing tranquillisers I feel this may be an opportune moment to publish the fact that I am seriously using tubes of Smarties in order to help my patients recognise their oral needs to allay anxiety and to give them a way of communicating with me that they are feeling depressed and worried.

There are many adolescents who are not

suffering from endogenous depression but have social problems which burden them, and they make an appeal for help by taking a handful of the nearest tablets. But for those young people for whom I prescribe Smarties, two three times a day and overdoses when required, I am quite sure that this gift from me to them has reduced the number of attempted suicides and the need for ambulance and hospital attention, has enabled group therapy to be more meaningful, and is more valuable than the usual placebo.

My colleagues tease me, but I have found that some social workers have copied the idea, and, when given with concern and care, it can be a valuable adjunct to psychotherapy.

JOSEPHINE M LOMAX SIMPSON

South London Hospital for Women and Children, London SW4

Klebsiella ozaenae in bronchiectasis

SIR,—In her interesting article on bronchiectasis and cystic fibrosis Dr Margaret E Hodson (15 April, p 971) mentions the important pathogens in bronchiectasis. She does not, however, mention the presence of *Klebsiella ozaenae* in bronchiectasis.

Since the observation¹ that capsular type 4 *K ozaenae* seems to be associated with chronic secondary infection in destructive disorders such as cystic fibrosis or bronchiectasis as opposed to chronic bronchitis I have always queried, when reporting the presence of this organism in sputum, the existence of bronchiectasis in the patient from whom the organism was isolated. It has been both gratifying and, occasionally, surprising how often the presence of bronchiectasis has been confirmed or, in fact, revealed in patients about whom such an inquiry was made. I think it is useful that both clinical bacteriologists and clinicians should be aware of this association.

R J FALLON

Department of Laboratory Medicine, Ruchill Hospital, Glasgow

¹ Burns, M W, *Lancet*, 1968, **1**, 383.

Self-poisoning with beta-blockers

SIR,—In your leading article on this subject (22 April, p 1010) you mention the use of intravenous isoprenaline. This drug certainly has its merits, but it should be remembered that the dose of isoprenaline which will produce an increase in heart rate due mainly to β_1 adrenoceptor stimulation will also reduce diastolic blood pressure by its action upon vascular β_2 adrenoceptors.¹

You also recommend the use of atropine 2-3 mg intravenously in divided doses. It has been shown that atropine 0.04 mg/kg body weight is required to abolish vagal influences on the heart after therapeutic doses of beta-blockers.^{2 3} We have recently observed that such a dose of atropine given as an intravenous bolus injection after propranolol or labetalol significantly increases systolic and diastolic pressures in normal healthy males (unpublished data). In addition, we have also shown that the same dose of atropine alone has a similar effect on blood pressure and can substantially potentiate the pressor effects of intravenous noradrenaline (unpublished

Hypothetical situation in an area with 10 000 deliveries per year and an increasing proportion of hospital deliveries

| Year | Hospital | | | Home | | | All | | |
|------|------------------|-------------------|--------------------------|------------------|-------------------|--------------------------|------------------|-------------------|--------------------------|
| | No of deliveries | No of stillbirths | Stillbirth rate per 1000 | No of deliveries | No of stillbirths | Stillbirth rate per 1000 | No of deliveries | No of stillbirths | Stillbirth rate per 1000 |
| 1 | 1000 | 50 | 50.0 | 9000 | 50 | 5.5 | 10 000 | 100 | 10 |
| 2 | 2000 | 70 | 35.0 | 8000 | 30 | 3.8 | 10 000 | 100 | 10 |
| 3 | 3000 | 80 | 26.7 | 7000 | 20 | 2.9 | 10 000 | 100 | 10 |
| 4 | 4000 | 85 | 21.3 | 6000 | 15 | 2.5 | 10 000 | 100 | 10 |
| 5 | 5000 | 89 | 17.8 | 5000 | 11 | 2.2 | 10 000 | 100 | 10 |