Some intrauterine devices are easily seen on a plain x-ray. The Dalkon Shield, however, has a lower level of radio-opacity, and unless certain x-ray techniques are used the device may be difficult or impossible to see. The radio-opacity is achieved by the addition of barium sulphate, which has the undesirable effect of rendering the device more brittle. To enable the Dalkon Shield to be bent during insertion through the cervical canal it must be as thin and as pliable as possible, and the concentration of barium sulphate is therefore kept lower than in other devices.

Three techniques for the radiographic location of the Dalkon Shield are suggested for the average-sized patient: (1) "Regular" technique: machine setting 200 mA, 76 kV, 3/5 sec. (2) "Soft-tissue" technique A: machine setting 200 mA, 76 kV, 1/2 sec. (3) "Soft-tissue" technique B: machine setting 200 mA, 70 kV, 2/5-1/2 sec. We would recommend the use of one of the above radiological techniques should radiographic location of a Dalkon Shield be required.—We are, etc.,

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1 Hall, R. E., *American Journal of Obstetrics and Gynecology*, 1967, **99**, 808.

Musical Bumps

SIR,—The patients Dr. P. Curtis describes (27 April, p. 226) with "guitar nipple" must surely have received faulty instruction in positioning the instrument. The classical guitar is played by a right-handed player with the instrument resting on the left knee and the base of the instrument cradled inside the right knee. The top edge of the soundbox should then overlie the region of the left nipple. Thus a right-sided player would be expected to develop left-sided mastitis. Perhaps the concept of "total patient care" should include pointing out the error of these players' ways.—I am, etc.,

JOHN MEYRICK THOMAS

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SIR,—We wonder if Novalis was fully aware of the significance of his aphorism, "Every sickness is a musical problem." Cases of "guitar nipple" (27 April, p. 226) and "cello scrotum" (11 May, p. 335) have been reported. We should like to add a more serious condition, "guitarist's groin."

A classical guitarist aged 24 was admitted with a deep venous thrombosis of his left calf and thigh. Quite marked varicose veins in this leg were also noted. He was used to 4-6 hours of daily practice in the sitting position, with the left leg fully flexed and the guitar belly compressing the medial aspect of the thigh. Stasis in the long saphenous vein was inevitable and provided an aetiological clue.—We are, etc.,

ROBERT SEMPLE
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Ninewells Hospital, Dundee

SIR,—Did Dr. J. M. Murphy's patient (11 May, p. 335) hold his cello in an unorthodox way? Personal observation suggests that the body of a cello is normally separated from the scrotum by several centimetres. Perhaps the patient supplemented his meagre musician's salary by sweeping chimneys.—I am, etc.,

PETER J. SCHEUER

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Amitriptyline and Imipramine Poisoning in Children

SIR,—In reply to Dr. R. W. Newton (20 April, p. 176) we should explain more fully when and why we consider diphenylhydantoin (DPH) may be of use in treating tricyclic antidepressant poisoning.

We agree with Matthew[1] that muscular twitching and hyperexcitability may precede convulsions and should be treated. He suggests the use of phenobarbitone to prevent convulsions, but others have stressed the potential respiratory depression of barbiturates[2] and we feel that parenteral DPH is a good alternative. According to Matthew[1] sinus tachycardias need not be treated, but excessive ventricular extrasystoles and possibly sinus tachycardia precede more severe dysrhythmias. Obviously several drugs are available to prevent and treat these dysrhythmias[3] and include intravenous practolol, DPH, and procainamide.

Thus if there are signs of impending dysrhythmias, either cardiac or of the central nervous system, parenteral DPH may be a useful prophylactic agent. The more direct approach of opposing the anticholinergic effects of tricyclic antidepressants with an acetylcholinesterase inhibitor which can cross the blood-brain barrier—namely, physostigmine salicylate[4 5]—is obviously indicated in severely ill patients. But this is not without its dangers, and many side effects have been observed, including oversalivation, vomiting, convulsions, and bradycardia. Perhaps physostigmine salicylate should be reserved for toxic effects refractory to other forms of treatment.

In the wider context of paediatric care we support the view of Drs. K. M. Goel and R. A. Shanks (23 March, p. 575) that there should be a more critical approach to the use of tricyclic antidepressants in the treatment of enuresis and that careful warning should accompany their prescription.—We are, etc.,

R. J. POSTLETHWAITE
D. A. PRICE

Booth Hall Children's Hospital,
Manchester

1 Matthew, H., *Prescribers' Journal*, 1971, **11**, 120.
2 Rasmussen, J., *Lancet*, 1965, **2**, 850.
3 Matthew, H., *Medicine*, 1972, **51**, 273.
4 Rumack, B. H., *Pediatrics*, 1973, **52**, 449.
5 Newton, R., *British Medical Journal*, 1974, **2**, 176.

Was it a Drug? (Optimax)

SIR,—Under the heading "Was it a Drug?" (*Supplement*, 13 April, p. 16) there appeared a report of a decision by referees that in several cases general practitioners had been surcharged under regulation 16 of the N.H.S. (Service Committees and Tribunal) Regulations 1956 in respect of part of the constituents making up Optimax Powder. I think your readers should be aware that in the three cases where the practitioners were represented by the Medical Defence Union applications have been made to the High Court for a writ of certiorari on the basis that the referees exceeded their jurisdiction and that their finding is erroneous in law. These cases are therefore sub judice and, pending the hearing of the application, the Department of Health has, I understand, deferred all action about numerous other similar cases.—I am, etc.,

J. W. BROOKE BARNETT
Secretary,
Medical Defence Union

London W.1

Adjustment of Plasma Calcium Measurements

SIR,—Dr. A. M. Parfitt (16 March, p. 520) suggested that the formulae relating total calcium to albumin concentration in plasma or serum proposed by Dr. E. M. Berry and others (15 December, p. 640) and by ourselves (p. 643) might introduce significant errors if applied when ionized calcium values were high or low. He is right. The slope of the regression of total calcium on albumin is steeper than normal when albumin is varied in the presence of a high ionized calcium and shallower than normal when ionized calcium is low. However, adjusted values are higher than they should be when the ionized calcium is high and lower than they should be when it is low, so, if anything, the clinical usefulness of the adjustment is enhanced.

We agree with Dr. Berry and the U.C.H. group (6 April, p. 53) that the selection of an albumin level as a point of reference for the adjustment of total calcium is arbitrary. We had considered avoiding the problem by suggesting that the adjustment should be to zero albumin concentration (total calcium minus the product of the slope of the regression and the albumin concentration). This would have given "unbound calcium" and would bring the Leeds and the U.C.H. adjustments closer together. However, such values would be unfamiliar to clinicians.

Dr. H. M. Hodkinson (27 April, p. 223) asks whether we can discount the possibility that our estimate of the regression of calcium on albumin is biased because hypoalbuminaemia is often associated with hyperglobulinaemia, and globulins may contribute to the protein-binding of calcium. The association in our data between albumin and total globulins is a relatively weak one ($r=0{\cdot}299$ for 200 pairs). Pedersen[1] calculated that less than 4% of normal total plasma calcium is bound to globulins, while he found negligible binding to the gammaglobulins in hypergammaglobulinaemia—by far the commonest globulin abnormality in our patients. Furthermore, the intercept of our regression line at zero albumin concentration, 5·7 mg/100 ml, is close to reported values for normal plasma ultrafiltrable calcium,[2-4] indicating that our regression coefficient is not in serious error.

However, we should like to emphasize that we excluded patients with the nephrotic syndrome from our investigation and stated that our adjustment cannot be applied to them. Nephrotics have higher calcium levels than patients with the same degree of hypoalbuminaemia from other causes,[5 6] possibly owing to an increased plasma concentration

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