acute diverticular disease. This is of great practical value.—I am, etc.,

JOHN A. SHEPHERD

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¹ Shepherd, J. A., *Surgery of the Acute Abdomen*, Appendix, p. 1204, 1st edn. Edinburgh, Livingstone, 1960.

Breast-milk Jaundice and the Pill

SIR,—Drs. Y. K. Wong and B. S. B. Wood (13 November, p. 403) purported to show a relationship between maternal oral contraception ("the pill") and subsequent jaundice in breast-fed infants—confusingly referred to as "breast-milk jaundice" (a term best reserved for instances where there is evidence that the breast milk does indeed contain a factor inhibiting conjugation of bilirubin).¹ They gave no time relationships between cessation of pill-taking and conception; the implication was that previous pill-taking, however distant in time and of as short a duration as one month, was related to the subsequent neonatal jaundice. The authors have not set out their data for the mothers of non-jaundiced infants. Other centres were invited to record their data and we would like to do so.

Records for the four years 1968-71 inclusive were used to obtain the names of all neonates clinically considered to be jaundiced during the first 10 days of life; each such infant had had a serum bilirubin determination routinely performed and the results were available to us. A serum bilirubin in excess of 10 mg/100 ml was chosen for inclusion; infants of low birth weight (<2 kg), sick infants, and those with a positive direct Coombs test were excluded. One hundred and twenty fulfilled these criteria. Questionnaires were then sent to the mothers concerned, asking about prior oral contraception, and in particular its duration and the time lapse between cessation and conception. Eighty-two replies were received. An identical questionnaire was completed by 82 mothers of comparable but non-jaundiced infants born sequentially during early 1972. The results are shown in Tables I and II.

TABLE I—Jaundiced Infants

Mother/infant	Breast-fed	Bottle-fed	Total
Pill	15	9	24
No pill	23	35	58
Total	38	44	82

TABLE II—Non-jaundiced Infants

Mother/infant	Breast-fed	Bottle-fed	Total
Pill	8	12	20
No pill	25	37	62
Total	33	49	82

The incidence of breast feeding and previous maternal oral contraception (15/82) within the group of jaundiced infants does not differ from that expected by chance (χ^2 (Yates correction)=2.07; $p>0.13$). Similar results were obtained in the non-jaundiced group (χ^2 (Yates correction)=0.06; $p>0.80$). When the two sets of data were compared directly no significant difference was found between the distributions in the four categories—that is, there was a similar incidence of breast feeding and pill-taking in the jaundiced and non-jaundiced groups. Like-

wise no significant difference was shown if data were used only from mothers who took oral contraceptives within six months of conception.

However, the incidence of pill-taking by mothers of jaundiced infants who were breast-fed in the Birmingham series (33/47) is significantly greater ($p<0.01$ than that in this series (15/38). The explanation for this finding is obscure, but it may reflect a greater overall incidence of pill-taking in Birmingham.

We have, therefore, been unable to substantiate the authors' claim to have established a relationship between prior maternal oral contraception and jaundice in breast-fed neonates.—We are, etc.,

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IAN STOTHERS

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MAXWELL SHARRATT

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¹ Gartner, L. M., and Arias, I. M., *Journal of Pediatrics*, 1966, 68, 54.

Unplanned Pregnancy

SIR,—Your leading article on this subject (8 April, p. 65) recommends still further education in sex. When will we ever learn? For never in the whole field of human history has so much been spoken so freely and so openly, or for so long, on so singular a subject as sex is now. To deny this is merely foolish.

Yet in spite of this unwanted pregnancies continue not to decline but to escalate. Clearly there is something wrong somewhere. It seems to me that education itself may well be one of the factors, especially if it is wrong education, as much of the current propaganda would seem to be. A big rethink of the whole of the physiology of sexual behaviour in man and animals would seem to be indicated.—I am, etc.,

T. RUSSELL

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Deputizing Arrangements

SIR,—I shall be grateful if you will allow me to correct some mistaken impressions which may have been conveyed by the remarks of some of the young doctors who took part in the conference of the Junior Members Forum of the B.M.A. (*The Times*, 10 April).

General practitioners in the National Health Service are independent contractors who have agreed to provide a service to their patients 24 hours a day for 365 days each year. Unless they arrange with a fellow principal on the medical list of the executive council to provide care during their periods off call they carry the full responsibility for everything that is done on their behalf.

The majority of doctors in London subscribe to a deputizing service, but they can only use this after they have obtained permission to use a particular service from the executive council, and this is normally given

to a single-handed practitioner for a maximum of up to two nights a week, half days, and alternate weekends. Of the 1,461 doctors in Inner London who have the council's consent to use a deputizing service only 17 have, because of illness, been given consent to use the service in excess of the normal maximum, and my impression is that the majority use a service with responsibility and discretion.

Each of the medical directors of the three services in London is interviewed at intervals by members of the executive council and it is then decided whether or not permission will be given to doctors to use the service he offers.

Because practitioners themselves bear the full responsibility for the advice that a deputizing doctor gives on their behalf the local medical committee regards it as one of its prime responsibilities to maintain a high standard in deputizing services, which now in London compare very favourably with those provided—in the name of the B.M.A.—in other parts of the country. Each service now has a medical advisory committee elected by subscribers which meets regularly and inquires into any complaints which have been made and makes suggestion for the improvement of the service. Every member of the medical advisory committee is invited to visit the service at any time to observe the way in which it is being conducted.

Members of the local medical committee attend the meetings of all the medical advisory committees. I have attended—perhaps more recently than Mr. F. J. Bramble—interviews of applicants to serve with deputizing services, and I have been impressed with the high standards which are required. Further convincing rebuttal of the allegations made at the young doctors' meeting is provided by the fact that of 50 complaints considered by the Inner London Executive Council last year only one—which was dismissed—concerned deputizing arrangements.

The person best qualified to assess the quality of a deputizing service is the family doctor who visits the patient the next morning and carries responsibility for what has been done. Through the local medical committee and the medical advisory committees he now has ready channels of communication which provide a mechanism for the immediate expression of any criticism or dissatisfaction. This provides a means of control arising from the point of delivery of the service, which is much more effective and much more rapid than any powers which might be given to the Secretary of State for Social Services by legislation.—I am, etc.,

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Verapamil in Cardiac Arrhythmias

SIR,—I was interested to read Dr. L. Schamroth and colleagues' paper (11 March, p. 660) on the efficacy of verapamil in controlling supraventricular dysrhythmias. I noticed, however, there was no reference to its use in postinfarction dysrhythmias. Recently, I used this drug on two patients who were admitted to the coronary care unit at Edgware General Hospital.

A 63-year-old woman had a history of

chest pain radiating to both arms and associated with sweating. The E.C.G. showed a sinus tachycardia with occasional supra-ventricular extrasystoles and an inferior infarct. Serial serum transaminases were raised. The next day she developed a rapid atrial fibrillation for which she was digitalized. However, the dysrhythmia persisted 18 hours and 10 mg verapamil were given intravenously over a period of 20 seconds. Within 10 minutes, her cardiac rate had decreased from 180 per minute to 120 per minute. A tracing at this time showed a sinus tachycardia with supra-ventricular extrasystoles. The patient remained in sinus rhythm and 24 hours later the rate was 90 per minute. No side effects were noted.

The second patient, aged 62, gave a two-year history of infrequent attacks of paroxysmal tachycardia, which usually lasted 10 minutes only. On this occasion she developed severe central chest pain radiating to the left arm. This was preceded by palpitations. At the time of admission she was conscious but drowsy, her breathing shallow and spasmodic. She was ashen and sweating profusely.

The blood pressure was unrecordable. An E.C.G. showed a supra-ventricular tachycardia of 180 per minute with widespread severe ischaemic changes. 5 mg of verapamil were given intravenously over a period of 10 seconds. After a short episode of asystole lasting about 10 seconds, sinus rhythm was restored at the rate of 60 per minute. The blood pressure became recordable at 50/20 mm Hg. The central venous pressure was monitored and 50 mg phenoxybenzamine were given in 200 ml of 5% dextrose over two hours. The patient also required intermittent positive pressure respiration which was maintained for 18 hours. Two hours after admission she was still drowsy, but peripheral pulses were palpable and the blood pressure was 105/60 mm Hg. The next day she was conscious and alert, and no longer required cardiac monitoring. The serum glutamic oxaloacetic transaminase was raised at 270 S.F. units, confirming severe myocardial damage.

Both cases confirm the usefulness of verapamil as an antidysrhythmic drug, and the second demonstrates that verapamil will restore sinus rhythm in a patient with severe circulatory failure and cardiac ischaemic due to rapid supra-ventricular tachycardia without worsening ventricular function or precipitating ventricular arrhythmias.

I should like to thank Dr. J. G. Lewis who suggested using this drug.

—I am, etc.,

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SIR,—The antiarrhythmic properties of verapamil (Cordilox) are well established. It is reported to be a safe drug producing little adverse cardio-circulatory disturbance. Schamroth *et al.* (11 March, p. 660) treated 181 patients and none experienced any ill effect, though cardiac output and blood pressure were diminished in two patients already receiving digoxin and practolol.

A 70-year-old man presented with a supra-ventricular tachycardia of 160 beats per minute. He was already digitalized, having had a similar episode three years previously.

Practolol 20 mg was given intravenously over a period of 15 minutes. No alteration in cardiac rate of rhythm was produced, and the patient experienced no symptoms over the following 40 minutes. Verapamil 5 mg was then given intravenously over five minutes. Ventricular rate fell to 100 beats per minute, with the appearance of atrial flutter with A-V block. Further ventricular slowing occurred, proceeding to complete ventricular asystole. External cardiac massage and intravenous isoprenaline were required for 10 minutes to maintain the circulation. The patient recovered fully and the supra-ventricular dysrhythmia persisted. Sinus rhythm was finally established following DC cardioversion.

A 6-month-old child had myocarditis with cardiac failure and a supra-ventricular tachycardia of 240/min. The cardiac failure had responded to digoxin and frusemide. Eyeball pressure caused the dysrhythmia to slow to 130/min, but it rapidly reverted despite adequate dosage of epanutin or practolol. A verapamil bolus of 1.25 mg intravenously produced no effect. A second dose given slowly after 15 minutes slowed the rate to 180/min, but 10 minutes later ventricular asystole developed, which responded only after six minutes to external cardiac massage, intravenous isoprenaline and sodium bicarbonate, intracardiac calcium gluconate, and isoprenaline. We would therefore suggest caution in the use of verapamil for supra-ventricular tachycardias after previous treatment with digoxin and practolol. —We are, etc.,

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G.M.C. Accounting

SIR,—Last year I had an extraordinary brush with the General Medical Council, which threatened to erase my name from the *Register* because, said the council, it had not received my annual retention fee. I was very surprised by this because I had completed a banker's order and the sum in question had in fact been debited from my current account. Subsequently, the General Medical Council admitted to having received the fee and the threat to erase my name from the *Register* became inoperative.

Now I have just read the council's latest circular dated April 1972 in which they state that they are no longer disposed to recommend payment of the retention fee by banker's order as preferable to payment by cheque. If, as would appear to be the case from the circular, the council finds it difficult to keep track of fees paid by banker's order, the policy of asking doctors to pay by cheque is no doubt prudent; but it is surely bizarre that the council should find itself in this difficulty. Like many other people I pay dozens of subscriptions by banker's order, and the one to the G.M.C. is the only one in my personal experience which has been the subject of confusion. I wonder whether other practitioners have had a similar experience.—I am, etc.,

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Psychosis and Ketamine

SIR,—We should like to answer the points raised by Drs. D. L. Coppel and J. W. Dundee (25 March, p. 805). The trial¹ was conducted on inpatients alone, and our recommendations for the use of ketamine in electroconvulsion therapy (E.C.T.) do not apply to outpatients, although we found that the recovery time following intravenous ketamine was not substantially longer than that for intravenous thiopentone. They are correct in assuming that suxamethonium in customary dosage was used as a relaxant.

Following intramuscular ketamine the recovery period was naturally somewhat longer, but we felt that this was outweighed by the fact that the induction of distraught, uncooperative, or agitated patients was made considerably easier and less unpleasant for both staff and patients.

Your correspondents draw attention to the possibility of ketamine delirium, but we had made it clear (12 February, p. 442) that in none of our patients was ketamine anaesthesia followed by hallucinations or other perceptual disorders. This corresponds with the experience of Orecchia *et al.*² and suggests that psychiatric patients receiving E.C.T. are less likely than others to become disturbed after ketamine anaesthesia. Likely explanations for this finding were advanced previously (12 February, p. 442).—We are, etc.,

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¹ Brewer, C., Hereward, S., and Davidson, J., *British Journal of Psychiatry*, 1972, in press.
² Orecchia, C., Marullo-Reedtz, G., and Bram, S., *Minerva Anestesiologica*, 1969, 33, 711.

Amantadine in Jakob-Creutzfeldt Disease

SIR,—Dr. J. Braham's report (23 October 1971, p. 212) of benefit in Creutzfeldt-Jakob disease from the administration of amantadine is of great interest and deserves further trial in other patients. The occurrence of amyotrophy in many patients with that disease might suggest to some that amantadine also be tried in amyotrophic lateral sclerosis or motor neurone disease.

Between 1967 and 1970, I used amantadine in the experimental treatment of amyotrophic lateral sclerosis with no detectable alteration of the usual clinical course in 18 patients and distinct worsening in two patients. The latter improved somewhat when the amantadine was discontinued temporarily, worsened again when the amantadine was reinstituted, and improved somewhat when the amantadine was finally stopped. I concluded therefore that amantadine is of no value in the treatment of motor neurone disease and in fact might be harmful in some cases.—I am, etc.,

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Health Service Woman-power

SIR,—Married women doctors and their attempts to return to or stay in medicine is a continually recurring theme. Besides the