Biochemistry of Schizophrenia

SIR,—Your leading article (18 February, p. 382) says that "only some schizophrenics improve with phenothiazine treatment." While this may well be true, it cannot be regarded as a fact sufficiently well proved to be used as a starting point for new theories on the biochemistry of schizophrenia.

Possible sources of error are: failure to prescribe adequate and sustained dosage, failure to check that prescribed phenothiazines were actually taken, mistakes in the diagnosis of schizophrenia, observation of cases complicated by leucotomy, and observation of cases complicated by senility or arteriosclerosis.—I am, etc.,

Wiglesley Hospital,
Toronto, Canada.

D. P. Birkett.

Compulsive Desire for Pregnancy

SIR.—Your leading article on "Sexual Promiscuity Among Students" (25 March, p. 711) is some of the best medical evidence yet published to demonstrate the foolishness of the social reasons proposed for abortion. The neurotic and, on occasions, compulsive desire for pregnancy is so often suppressed temporarily in the social embarrassment of the pregnant state. On the advice of well wishers or in a gesture of conformity abortion is requested. If this request is granted and permitted the previous desire has been born and the basic problem remain unsolved.—I am, etc.,

Welwyn Garden City.
E. H. J. Cotter.
Herts.

Haemodynamic Effects of Propranolol

SIR,—I was interested that Dr. Mary Stannard and Dr. J. G. Sloman (18 March, p. 700) found that in patients after acute myocardial infarction the fall in cardiac output caused by the intravenous administration of propranolol was prevented by the simultaneous administration of atropine sulphate.

Joseé has reported haemodynamic studies after intravenous injection of propranolol (0.2 mg./kg. bodyweight) and atropine (0.04 mg./kg.) to "isolate" the heart from the influence of parasympathetic and sympathetic nervous stimuli. In the normal subjects, isolation caused an increase in the heart rate, no change in cardiac output, and a rise in arterial pressure. Patients with myocardial disease showed a slower heart rate, higher end-diastolic left ventricular pressure, lower cardiac output, and lower arterial pressure than normal subjects. The measurement of heart rate alone after isolation paralleled as well as any other measurement the severity of myocardial disease assessed from clinical data. Joseé has termed the heart rate after isolation with propranolol and atropine as "intrinsic heart rate" (I.H.R.). In normal adults aged 20 to 30 years he found that the I.H.R. averages 104 beats per minute. The I.H.R. declined progressively with increasing age. At ages between 45 to 55 years the I.H.R. averages 92, and at 70 years the average is 80. The I.H.R. is depressed in the presence of cardiac disease and appears to be a quantitative index of the severity of the disease. Serial measurements may be useful in the assessment of the results of therapy. It is possible that I.H.R. estimation may be of value in diagnosis of subclinical coronary artery disease.

I have studied the I.H.R. in 61 patients with ischaemic heart disease and in 21 patients with hypertension. The I.H.R. was estimated after intravenous injection of 10 mg. propranolol and 2.4 mg. atropine. Pulse rate, blood pressure, and electrocardiogram were recorded before the administration and five minutes after blockade. In 26 of the patients with ischaemic heart disease (that is, 43%) the I.H.R. was lower than the estimated normal. One patient with an I.H.R. of 61 died suddenly from cardiac failure, and one patient with an I.H.R. of 56 had intractable angina. In six of the patients with hypertension (that is, 28%) the I.H.R. was lower than the estimated normal, and five of these six patients had evidence of hypertensive heart disease. The I.H.R. therefore appears to reflect myocardial function.

Of the 21 patients with hypertension, the I.H.R. was higher than the resting heart rate in 17 cases, and in no case was there a fall in the systemic blood pressure. Of the 61 patients with ischaemic heart disease the I.H.R. was higher than the resting heart rate in 50 cases, and in only three cases was the blood pressure lower after the intravenous propranolol and atropine. No significant side-effects were observed in any case. These findings support the conclusion of Drs. Stannard and Sloman that, if propranolol is indicated following myocardial infarction, it may be given with safety if combined with atropine sulphate.—I am, etc.,

ROBERT J. KERNOHAN.
Cardiovascular Unit, Belfast City Hospital, Belfast.

Reference


Deaths from Asthma

SIR,—In 1966 Smith1 reported an increased death rate from asthma in England and Wales and this has been confirmed in the letter by Mrs. R. Doll, M. Speizer, P. Heaf, and L. Strang (25 March, p. 756).

The figures shown below are from the Registrar General for Scotland. During the past three years there has been an increase in the number of deaths from asthma in Scotland and the decline in deaths from asthma noted in the fifties appears to have been reversed.

From Australia, McManis2 has reported three deaths in asthma which appeared to have been due to cardiac arrest following the administration of adrenaline to patients who had already received isoprenaline. Following this there have been several reports which suggest a link between the excessive use of sympathomimetic amines and death in asthma (Greenberg3 and the recent letters by Drs. M. J. Greenberg and A. Pines (4 March, p. 563) and Dr. W. Pickvance (25 March, p. 756)). This suggestion has been challenged by heart failure4 and renal failure.5 The recently reported low arterial Po2 tension found in some patients admitted to hospital with moderate or severe asthma6 has been confirmed in this unit. This observation, together with the changes in the electrocardiogram frequently found in these patients, suggests the myocardium is under strain. Some experimental work to support the concept that the myocardium when fatigued or under load is more susceptible to arrhythmias precipitated by isoprenaline has been reported by Professor Mary Lockett.7

Most of the sudden deaths in asthma occur out of hospital and the attention of the general practitioner must be directed to this problem. Meantime sympathomimetic amines should be avoided in the emergency

Deaths from Asthma

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2. Elf, 15 April 1967. Downloaded from http://www.bmj.com on 5 June 2022 by guest. Protected by copyright.

Reference


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