

is being substituted, but the insulin should be withdrawn more slowly if chlorpropamide is being used, since, as you say, the effect of the latter may increase over the first week of its use. It is necessary to see the patient about two days after the insulin has been discontinued to make sure that ketosis is not developing while on treatment with the sulphonylurea. If there is ketonuria, treatment with insulin must be resumed urgently. In diabetic clinics, your advice that doses of chlorpropamide should not exceed 250 mg. a day must frequently be disregarded, since an appreciable increase of toxic effects does not appear until doses of 500 mg. a day are regularly exceeded. It is true, however, that hypoglycaemia is increasingly likely with these larger doses. The toxic effects of lethargy, weakness, and ataxia which your article cited for chlorpropamide were reported soon after its introduction when doses now known to be excessive were commonplace. These effects do not seem to occur with a daily dose less than 500 mg. unless in the presence of hypoglycaemia, which is an over-dosage effect—not a true toxic effect.

You mention that large doses of aspirin do not affect the blood sugar of normal individuals. This is not so, for the blood sugar level is often found to be raised in acute salicylism,¹ which may simulate diabetic ketosis in several different ways. In your concluding remarks you state that oral hypoglycaemic agents should be considered only for 10% diabetic patients. This is a considerable understatement if by diabetics you mean patients with diabetic symptoms and not just the biochemical stigmata of diabetes. There is for instance a place for the diguanides (phenformin and metformin) in the treatment of obese diabetics, for they not only lower the blood sugar but can be given in a dose just sufficient to curb the appetite and thus induce loss of weight. Your penultimate remark, that "the only advantage of these drugs is one of convenience," may also be questioned. There is evidence to show that sulphonylureas can induce hyperplasia of the insulin-secreting cells in the pancreas in experimental animals,² and protect against the diabetogenic action of growth hormone.³ Circumstantial evidence has been obtained for a curative role of the sulphonylureas in the early stages of human diabetes.^{4,5} No such effect can be cited for insulin.—I am, etc.,

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REFERENCES

- ¹ Cohen, A. S., *New Engl. J. Med.*, 1956, **254**, 457.
- ² Davidson, J. K., and Haist, R. E., *Diabetes Suppl.*, 1962, **11**, 115.
- ³ Mirsky, I. A., Gitelson, S., and Perisutti, G., *Ann. N.Y. Acad. Sci.*, 1959, **74**, 499.
- ⁴ Fajans, S. S., and Conn, J. W., *Diabetes*, 1960, **9**, 83.
- ⁵ Stowers, J. M., and Bewsher, P. D., *Lancet*, 1962, **1**, 122.

SIR,—The recent article on oral hypoglycaemic drugs (February 23, p. 521) concludes with the sentence: "The only advantage of these drugs is one of convenience; if used indiscriminately they may be harmful instead of beneficial." Nobody could take exception to the latter half of the sentence, since this is as true for these drugs as for any other drug in the pharmacopoeia. But to say that convenience is their only advantage is to deny the possibility of benefits at present under review.

If only insulin were satisfactory replacement therapy in diabetes, as thyroid is in myxoedema, or cortisone in

Addison's disease, or cyanocobalamin in pernicious anaemia, then we would not need to look further afield. Unfortunately it is not. Insulin saves and prolongs the life of diabetics, but in many cases it cannot prevent the onset of the degenerative changes that occur as the years go by. Whether drug therapy will be more successful in this respect is not known, but at least there is some evidence to give us hope. Some four years ago we demonstrated¹ that a course of therapy with the sulphonylureas could lead to an amelioration in glucose tolerance in adult diabetics, and an important study by Fajans and Conn² has shown that prolonged treatment with tolbutamide can lead to maintained improvement of carbohydrate tolerance in young mild diabetics. So important is this aspect of drug therapy that the Medical and Scientific section of the British Diabetic Association is organizing a long-term controlled trial on the prophylactic effects of chlorpropamide.³

Let us not prejudice the issue.—I am, etc.,

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REFERENCES

- ¹ Granville-Grossman, K. L., Crawford, S., Crowley, M. F., and Bloom, A., *Brit. med. J.*, 1959, **2**, 841.
- ² Fajans, S. S., and Conn, J. W., *Diabetes*, 1962, **11**, Suppl. p. 123.
- ³ *Lancet*, 1963, **1**, 203.

Early Diagnosis of Chronic Bronchitis

SIR,—In your leading article on chronic bronchitis and smoking (March 2, p. 557) you emphasized the importance of early diagnosis by the general practitioner. At present the diagnosis is seldom made until after largely irreversible damage to the bronchial tubes has already occurred.

Chronic bronchitis could be diagnosed by the G.P. earlier and with much greater confidence if he had recourse to objective methods of assessing bronchial airway obstruction and no longer relied on the traditional method of auscultation. The Wright peak-flow meter and the recently developed types of dry spirometer, which are portable and simple to use, are both eminently suitable for general practice. Unfortunately the cost of these instruments is high, and therefore it is unlikely that they will be used at all widely by G.P.s so long as we have to meet from our own income the cost of everything which we provide for our practices. This is a matter for great concern, since objective methods of measurement of all kinds are necessary in general practice if we wish to make any serious effort to promote good health by the early detection and prevention of disease.

A valuable contribution could be made towards research into the early stages of chronic bronchitis by G.P.s making objective measurements with one or other of the above instruments. Over the past year I have been using a Wright peak-flow meter in my practice. Provided that the test is properly performed and its limitations are recognized, peak expiratory flow rate (P.F.R.) is a most useful index of bronchial airway obstruction. I have measured the P.F.R.s of three groups of patients: (a) those who have never smoked and have had no chest disease, (b) those who smoke but deny any cough or other symptoms, and (c) those who have a "smoker's cough" but do not consider themselves to be bronchitic. A marked difference was found between the P.F.R.s of the three groups. Several patients who had a "smoker's cough" and a low P.F.R. were referred for comprehensive pulmonary function