

Neurosis induced by home monitoring of blood glucose concentrations

S F Beer, C Lawson, P J Watkins

Diabetic Department,
King's College Hospital,
London SE5 9RS
S F Beer, MRCP, registrar
C Lawson, RGN, liaison sister
P J Watkins, FRCP, consultant

Correspondence to:
Dr Watkins.

Br Med J 1989;298:362

The introduction of home monitoring of blood glucose concentrations in the 1970s was a major advance.¹ A number of patients, however, become obsessed with the results and develop a disruptive neurosis. We describe three such patients.

Case reports

Case 1—A 53 year old woman was referred with recurrent severe hypoglycaemia. Insulin dependent diabetes mellitus had been diagnosed 43 years previously. Treatment had been by once daily soluble insulin and protamine zinc insulin for many years, with control assessed by regular urine testing. Six months before examination her treatment had been changed to soluble insulin and insulin zinc suspension (Ultratard; Novo) and she had been taught to monitor blood glucose concentrations with a meter. Her diet had not changed. She had soon overreacted to her readings of glucose concentrations and had changed her insulin regimen daily. Attacks of hypoglycaemia resulted in three or four hospital visits a week, and her husband was giving her glucagon daily. On examination she showed no complications, and haemoglobin A₁ concentration was 11.2% (normal range 4.0-8.0%). After re-education she took a constant dose of insulin and had hypoglycaemia less often. Concentration of HbA₁ at follow up was 11.1%.

Case 2—A 56 year old woman referred with recurrent severe hypoglycaemia had been treated with once daily protamine zinc insulin for 22 years apart from a brief period of twice daily treatment six years before referral. One year before referral she had been instructed in home monitoring of blood glucose concentrations and converted to a twice daily regimen of neutral insulin injection (Actrapid; Novo) and insulin zinc suspension (Monotard; Novo). Shortly afterwards she had begun to make large changes in her insulin dose daily, which had led to as many as 30 episodes of hypoglycaemia in 44 days, many leading to unconsciousness. She had not altered her diet in any way. On examination she had a few microaneurysms

and no other evidence of diabetic complications. Concentration of HbA₁ was 11.1%. After re-education she had only one episode of hypoglycaemia in two months. Only one change was made in her insulin dose, and on repeat testing HbA₁ concentration was 10.2%.

Case 3—A 20 year old woman was referred with multiple disruptive episodes of hypoglycaemia. She had been receiving twice daily insulin for 10 years. Four years previously, at the time of conversion to U100 insulin, she had been instructed in home monitoring of blood glucose concentrations and soon became frantic at the fluctuations in her results. She made daily changes in her insulin dose (often up to 100%), resulting in disruptive hypoglycaemia. She had tried virtually every possible insulin regimen; when seen she was using a NovoPen injection device. Clinical examination showed no diabetic complications, and HbA₁ concentration was 8.6%. After re-education she maintained a regular insulin dose and had substantially fewer episodes of hypoglycaemia. On repeat testing HbA₁ concentration was 8.4%.

Comment

These patients had no serious problems with diabetes until they started monitoring their blood glucose concentrations, when they failed to understand what fluctuations to expect. All changed their insulin doses daily, and disabling hypoglycaemia resulted. All made several glucose readings every day and obsessively kept records. All feared complications and tried to achieve "normal" blood glucose concentrations. In addition, all of them had been labelled as having "brittle" diabetes² and referred for better control. For re-education they were shown how to detect peaks and troughs in glucose concentrations and were instructed to modify their insulin dose no more than once or twice weekly.

Home monitoring of blood glucose concentrations, though benefiting most patients, may lead to neurosis in patients with an obsessional trait. The problem often arises when patients are asked to achieve normal blood glucose concentrations to avoid complications but inadequately comprehend the expected blood glucose profile.

1 Sonksen PH, Judd SL, Lowy C. Home monitoring of blood glucose. *Lancet* 1978;i:729-32.

2 Pickup J. *Brittle diabetes*. Oxford: Blackwell Scientific, 1985.

(Accepted 21 October 1988)

Which type of hospital discharge report reaches general practitioners most quickly?

A R Kendrick, D J Hindmarsh

Weybridge Health Centre,
Weybridge, Surrey
KT13 8DU
A R Kendrick, MRCP,
general practitioner
D J Hindmarsh, DCH,
general practitioner

Correspondence to: Dr Kendrick.

Br Med J 1989;298:362-3

Patients recently discharged from hospital often have to be followed up by their general practitioners in the absence of any information from the hospital because of delays of several days before a discharge note reaches the practice.^{1,2} Some hospitals have combined the form for prescribing treatment for patients to take home with them with the discharge note. Thus a note is automatically written to the general practitioner for any patient who is given drugs to take home before that patient can be discharged. The note should be posted before, or at the time of, discharge.

This combined discharge note and prescription form should reach the general practitioner more quickly on average than a separate discharge note, which is usually written when the junior hospital doctor can find time, not necessarily at the time of the patient's discharge. We carried out a study to assess this.

Methods and results

Between 1 May 1987 and 30 April 1988 emergency admissions to general medical and surgical beds were monitored prospectively in two group practices. The Weybridge practice, with five partners and about 10 000 patients, received discharge notes from a hospital that used the combined discharge note and prescription form. The Dover practice, with four partners, one trainee, and about 8000 patients, received discharge notes from a hospital that used separate discharge notes. Both practices received typed final summaries. The notes and the final summaries were