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However, the recruitment and maintenance of the small groups of service users with personality disorder took a considerable amount of effort by the investigators and professional leads. The nature of personality disorder means that people may struggle to commit to and develop working relationships themselves. Larger numbers in each group might have made the task for the group and the investigator unwieldy.

Given the foregoing, and considering that our data are congruent with those reported elsewhere (National Institute for Mental Health in England, 2003*a*,*b*; National Institute for Clinical Excellence, 2004), this argues in favour of their validity, and guidelines for personality disorder have been produced for use in south-west London. It will therefore be possible to determine further the validity of our data by evaluating their clinical usefulness. This is our next step. If, after appropriate training, the guidelines prove to be ineffective in improving the user satisfaction with specialist services, we shall need to return to address the methodological limitations. If the guidelines prove effective, however, we shall consider how to introduce such training to a larger group of staff.

We conclude that our study shows that, with a degree of effort and persistence on the part of professionals, people with personality disorder can be involved to provide a distinctive perspective in pursuing the goal of improving the quality of their services.

Declaration of interest

None.

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Psychiatric Bulletin (2007), **31**, 88–91. doi: 10.1192/pb.bp.105.005934

OLGA RUNCIE, MARIE BOILSON AND ROSS HAMILTON

Monitoring weight and blood glucose in in-patients: how helpful is a protocol?

AIMS AND METHOD

Following a survey in 2001, a protocol for monitoring weight and blood glucose of psychiatric in-patients receiving antipsychotic drugs was developed. The effect of this protocol was investigated by comparing 61 admissions in 2004 with the 2001 in-patients.

RESULTS

No significant improvement in recording of admission weight or blood glucose was observed. Ongoing monitoring of weight after admission was significantly more common. For only 29% of patients studied in 2004 was there complete adherence to the protocol.

CLINICAL IMPLICATIONS

In spite of the availability of a protocol and education, the results suggest that monitoring of weight and blood glucose is still haphazard for psychiatric in-patients. The implications for out-patient monitoring are discussed.

A survey in 1996 reported that 44% of adult men and 32% of women in Scotland were overweight and a further 14% of men and 17% of women were obese (Scottish Intercollegiate Guidelines Network, 1996). Treatment with specific drugs is a potential reason for obesity and any practice that may exacerbate obesity warrants serious scrutiny (Allison & Casey, 2001).

There has been an increasing number of reports of an association between treatment with atypical antipsychotics, weight gain and hyperglycaemia. Moreover, de novo cases of diabetes mellitus have been reported in patients receiving these medications (Bushe & Leonard, 2004). Recommendations for regular weight and plasma glucose monitoring in patients receiving atypical and typical antipsychotics have been made (Haupt & Newcomer, 2001; Lebovitz, 2003; Casey *et al*, 2004).

Lebovitz (2003) suggested monitoring of body weight, plasma fasting glucose and lipids with the initiation of atypical antipsychotics and continuing monitoring throughout treatment. Others have supported baseline and continuation monitoring of body weight, body mass index (BMI), waist circumference, fasting blood glucose

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and fasting lipid profile (Marder *et al*, 2002; Taylor *et al*, 2003; American Diabetes Association *et al*, 2004; Casey *et al*, 2004; Menza *et al*, 2004). However, a recent study (Taylor *et al*, 2004) revealed that less than half of hospitalised patients prescribed antipsychotic drugs were tested for diabetes.

Our previous survey demonstrated that there was no reliable monitoring of weight or blood glucose among psychiatric in-patients in Aberdeen (Boilson & Hamilton, 2003). In the present study we developed a protocol for weight and blood glucose monitoring for psychiatric in-patients receiving antipsychotic medication. We then repeated the monitoring survey in the same in-patient settings as in our previous study.

Methods

Developing the protocol

Our recommendations from the previous survey (Boilson & Hamilton, 2003) were used for the development of the protocol, together with consultations with consultant endocrinologists and a working group involving hospital dieticians, pharmacists and psychiatrists. Consideration was given to the Grampian Guidelines for the Management of Diabetes Mellitus (further details available from the authors) and *Obesity in Scotland* (Scottish Intercollegiate Guidelines Network, 1996) when drawing up an action plan and defining risk groups.

The draft protocol was circulated among all general adult consultant psychiatrists and the ward managers of the four acute wards, and feedback was invited. The protocol was redrafted, approved and implemented on all four acute wards from 1 June 2004.

Copies of the protocol, BMI ready reckoners and essential information packages were distributed to all acute wards and to each general adult consultant psychiatrist prior to the start date. Each consultant, all junior doctors and ward managers were informed about the project by letters and individually. Reminder letters were sent to all junior doctors and senior trainees at the time of the medical staff rotation that occurred during the study period.

Copies of the protocol are available from the authors on request. Essentially an algorithm is provided for each patient for whom initiation or a change of antipsychotic is being considered. Baseline weight and fasting blood glucose are indicated with a timetable of monitoring thereafter for normal and 'high-risk' patients.

Survey

The second survey was performed retrospectively in October 2004 using the same study methodology as previously (Boilson & Hamilton, 2003). A list of all people with an ICD–10 (World Health Organization, 1992) diagnosis of schizophrenia, schizoaffective disorder, persistent delusional disorder, acute and transient psychotic disorder or induced delusional disorder who were admitted to the four acute general adult wards at the Royal Cornhill Hospital from 1 June 2004 to 31 August 2004 was obtained from medical records. Consent to examine medical records was obtained from the responsible medical officers. Fifty-nine patients were identified but 6 sets of medical notes were unavailable. Of the remaining 53 patients, 9 were readmitted during the specified period. Each admission was dealt with individually. For 8 of the readmitted patients both admissions were included in the study; for 1 only one admission was included owing to lack of appropriate notes at readmission. In total there was a data-set for 61 admissions.

Case notes and ward weight books were reviewed for any recordings of weight during the index admission. A record of blood glucose measurement was sought in both case notes and the regional laboratory computer database for the period of the index admission. Recording of weight and measurement of random and fasting blood glucose was compared for all admissions in the 2001 and 2004 study periods and for patients newly started on or changing antipsychotic drug by χ^2-tests.

Results

All patients included in the survey had been prescribed antipsychotic medication. Twenty-four were initiated on, or had a change to antipsychotic medication during admission; this is the group for whom the new protocol was intended. However, an overall improvement in monitoring for all patients receiving antipsychotic medication had been anticipated. Hence data are presented

Table 1. Weight and blood glucose measurements of patients taking antipsychotic medication in 2001 and 2004

	All admissions		Newly started or change of antipsychotic drug	
	2001, *n* (%) (*n*=51)	2004, *n* (%) (*n*=61)	2001, *n* (%) (*n*=27)	2004, *n* (%) (*n*=24)
Weight recorded	23 (45)	30 (49)	12 (44)	16 (67)
Weight repeated	1 (2)	11 (18)**	1 (4)	7 (29)
Glucose checked	25 (49)	28 (46)	15 (56)	14 (58)
Only random glucose	25 (49)	18 (30)*	15 (56)	7 (29)
Only fasting glucose	0	2 (3)	0	1 (4)
Random and fasting	0	8 (13)**	0	6 (25)**

*$P<0.05$, **$P<0.01$ for 2004 *v.* 2001.

https://doi.org/10.1192/pb.bp.105.005934 Published online by Cambridge University Press

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for the entire sample and then specifically for patients with a new prescription or drug change (Table 1).

Weight

Of the 61 admissions in 2004, 30 (49%) had body weight recorded during admission compared with 45% in 2001 (χ^2=0.18, *P*=NS). Eleven patients had their weight remeasured during admission in 2004 compared with only 1 patient in 2001. Of 24 patients who were newly started or initiated on different antipsychotics in 2004, 16 (67%) had their weight recorded compared with 44% in 2001.

Blood glucose

Of the 61 admissions in 2004, 28 (46%) had their blood glucose checked compared with 25 (49%) in 2001 (Table 1). Of the 28 patients whose blood glucose was checked, 18 had only a random glucose check, 2 had only fasting glucose measurements and 8 had random and fasting blood glucose tests.

Fifteen patients had random blood glucose levels over 5.5 mmol/l which, according to Grampian Guidelines for the Management of Diabetes Mellitus, indicates further investigation. Of the 15 patients with elevated random glucose levels, 6 had fasting blood glucose checked but 9 had no further investigation. Of the 24 patients who newly started or changed antipsychotic medication in 2004, 14 (58%) had some form of blood glucose test; in 3 cases the notes documented that patients had refused blood testing.

Two patients with diabetes mellitus were identified. One (BMI=30) had a fasting blood glucose of 14.2 mmol/l and had had an elevated random glucose level in 1999. A fasting blood glucose test was repeated and triglycerides, lipids and haemoglobin A_{1c} were checked during the admission in 2004. The patient was switched from olanzapine to risperidone and referred to a dietician. Problems of obesity and diabetes were mentioned in the discharge letter to the general practitioner but without any indication of result or requirement for monitoring.

The second patient, who had been treated with olanzapine for 2 years, had a fasting blood glucose level of 7.1 mmol/l. During the admission in 2004 the medication was switched to oral risperidone and lipids were measured. Results were reported to the general practitioner and recommendations for monitoring were made.

Discussion

Haphazard monitoring of weight and blood glucose was identified in our first survey (Boilson & Hamilton, 2003) but we postulated that this would have improved following warnings of a potential association between hyperglycaemia and olanzapine (Committee on Safety of Medicines, 2002) and the introduction of a local monitoring protocol.

However, in spite of these national and local endeavours we conclude that practice had changed little in the period immediately following the introduction of the protocol. There was a trend towards improvement in the proportion of patients weighed when initiating or changing antipsychotic treatment, but the difference was not statistically significant. Less than half of all patients were weighed at all. The total proportion of patients undergoing blood glucose monitoring was actually less after the protocol was introduced, but we did observe the performance of fasting tests for the first time.

Only when patients had baseline weight, BMI and fasting blood glucose recorded in the case notes was it deemed that the protocol had been followed. This was the case for only 7 patients (29%) newly starting or changing antipsychotic treatment.

On analysing the raw data from individual wards we noted considerable variance. Where adherence to the protocol was high there was a motivated clinician, usually a trainee psychiatrist, who had undertaken the responsibility for this monitoring. Consideration is being given as to whether an individual clinician could oversee this monitoring across the acute wards. Our protocol was well publicised with consultants and ward managers, but training nursing staff and junior doctors in weight measurement, BMI calculation and blood glucose testing may pay dividends.

We accept that some of our analyses confer risks of type 1 error through multiple comparisons and that the study may be underpowered because of a relatively small sample size.

A critical consideration was the decision to restrict our review of monitoring to the in-patient setting. Most prescribing of atypical antipsychotics takes place in out-patient and general practice settings. We would anticipate that the lower availability and use of weighing scales and feasibility of blood glucose monitoring, particularly fasting samples, would make adherence to the protocol even less likely among out-patients.

In summary, although adherence to a protocol for weight and blood glucose measurement is important, the ultimate solution may lie in the emergence of efficacious antipsychotic drugs which are free from these side-effects.

Declaration of interest

R.H. has received fees for speaking and attending meetings from Pfizer, Lundbeck, Lilly and AstraZeneca. M.B. has taken part in research projects funded by Pfizer.

Acknowledgements

We thank Dr John Eagles, Consultant Psychiatrist, Royal Cornhill Hospital, Aberdeen for his helpful comments and Pat Grant, Medical Records Department, Royal Cornhill Hospital, Aberdeen.

https://doi.org/10.1192/pb.bp.105.005934 Published online by Cambridge University Press

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Psychiatric Bulletin (2007), **31**, 91–93. doi: 10.1192/pb.bp.105.008029

CLAIRE LITTLEWOOD

A new buprenorphine prescribing service for opiate detoxification

AIMS AND METHOD

A buprenorphine prescribing service was set up for opiate-dependent patients and the initiative was then audited using 11 standards.

RESULTS

Thirty-three patients met inclusion criteria for opiate detoxification and 7 successfully completed detoxification, equating to a number needed to treat of 5. However, 2-year follow-up data showed no clear advantage for these 7 patients compared with 9 patients who had failed detoxification at the outset. Only 5 of the 11 audit standards were satisfied.

CLINICAL IMPLICATIONS

The results suggest that a buprenorphine prescribing service may be of benefit to opiate-dependent patients in the short term. However, the audit standards identified may be unrealistic because of the likely lack of adherence of this patient group. Further work is needed to establish the feasibility of this treatment modality in 'real-world' settings.

Buprenorphine is a semi-synthetic derivative of opium which was licensed in the UK in 2001 for the treatment of opiate dependence. Many studies have suggested that buprenorphine is a safe and efficacious treatment (Ling & Wesson, 2003; Gowing *et al*, 2006), and some have suggested advantages over methadone, resulting in part from the partial agonist and antagonist receptor profile. This profile affords better safety in overdose (Auriacombe *et al*, 2004; Luty *et al*, 2005) and a lack of euphoria if heroin is also used. Fischer *et al* (1999) demonstrated significantly lower rates of illicit opiate consumption in opiate-dependent patients treated with buprenorphine compared with methadone maintenance.

Despite such evidence, until 3 years ago buprenorphine had not been used routinely in North Derbyshire to treat opiate dependence. This paper describes the setting up and auditing of a buprenorphine prescribing clinic within the Chesterfield Community Drug Team.

Method

A protocol was devised for prescribing buprenorphine for opiate detoxification with the help of 12 protocols from other centres and advice from the drug manufacturer. Central to this protocol (a full copy of which is available from the author) were the following exclusion criteria: age under 18 years; pregnant or breast-feeding; frequent (more than twice a week) intravenous injecting; polydrug misuse; alcohol dependence or harmful use; known hypersensitivity to buprenorphine; severe hepatic, renal or respiratory impairment; current use of more than 30 mg methadone or 0.5 g heroin per day.

A weekly prescribing clinic was set up over a 6-month period from July 2002 to January 2003, and took appropriate referrals (n=33) from keyworkers of the community drug team. About a dozen referrals were excluded from the trial after assessment. The most common reasons for exclusion were patient preference