

THE EFFECT OF PSYCHIATRIC CONDITION AND MEDICATION ON THE PREVALENCE OF DIABETES IN A PSYCHIATRIC OUT-PATIENT CLINIC: AN AUDIT

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SUMMARY

Background: A diagnosis of schizophrenia, as well as the use of atypical antipsychotic medications, have previously been linked with a higher prevalence of diabetes.

Methods: 670 patients from a single out-patient clinic were analysed (Chi-square) to determine if diagnosis or antipsychotic treatment had an effect on the prevalence of diabetes. The overall rate of diabetes was also compared to the national average.

Results: No significant effects of antipsychotic class or diagnosis were found on prevalence, and the prevalence was not significantly different to the national average.

Interpretation: This work may point to a need to carry out a systematic assessment of these patients for Metabolic Syndrome or diabetes as a thorough review/screen for these patients.

Key words: diabetes - serious mental illness

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INTRODUCTION

It has often been stated (Leslie 2004) that the prevalence of diabetes is greater in those psychiatric patients with a diagnosis of schizophrenia, and also in those who take atypical antipsychotic medication (although, as the above study found, this may be a very small effect). Patients on antipsychotic therapy should be routinely monitored by their GP (or another member of the primary care team) for signs of possible diabetes and metabolic syndrome. However, this is often not reported to the psychiatry department, who rely on patients reporting these findings. Our aim with this audit was to determine whether we could detect an effect of either psychiatric condition, or type of antipsychotic medication, on the prevalence of diabetes in our patient sample. As a secondary goal, we also attempted to determine whether the patients visiting this out-patient clinic differed significantly in their overall rates of diabetes from the general population.

METHODS

Subjects were comprised of a complete set of patient records (1067 patients) maintained for a single psychiatric outpatient clinic in a district general hospital in the South of England. Subjects were placed into groups retrospectively based on (1) whether or not they had reported having diabetes, (2) their psychiatric diagnosis, and (3) the antipsychotic medication (typical, atypical or none) which they were taking. The specific categories are detailed in Appendix 1. Subjects were excluded from the audit if they had multiple pertinent diagnoses,

such as a diagnosis of mixed anxiety/depression, or if they were taking a mixture of atypical and typical antipsychotic medication. This was due to the fact that it would be impossible to attribute differences to any particular condition or medication class in such circumstances. After such exclusion had been carried out, 670 eligible subjects remained in the analysis. Two Chi-Square tests were carried out, one between condition and the prevalence of diabetes, and the other between medication and the prevalence of diabetes. In order to determine if the prevalence of diabetes is higher than in the general population, which would be expected, a Chi-Square analysis was performed using actual and expected values, with the expected values of a 5.5% prevalence being drawn from (www.diabetes.org.uk2011).

RESULTS

Our first analysis demonstrated that, in our sample, the prevalence of diabetes was not statistically significantly affected by the type of antipsychotic therapy patients were receiving (including no therapy) ($p < 0.23$) (Figure 1). Even simply comparing atypical antipsychotics against typical antipsychotics, without considering patients receiving no therapy, there were no discernible effects.

The current diagnosis of patients also had no effect on the prevalence of diabetes ($p < 0.16$).

With regard to the overall prevalence of diabetes, our patient sample had an overall prevalence of 6.8%. Compared with the England average of 5.5% (quoted earlier), the prevalence in our sample was not significantly different when compared to the UK average ($p < 0.12$).

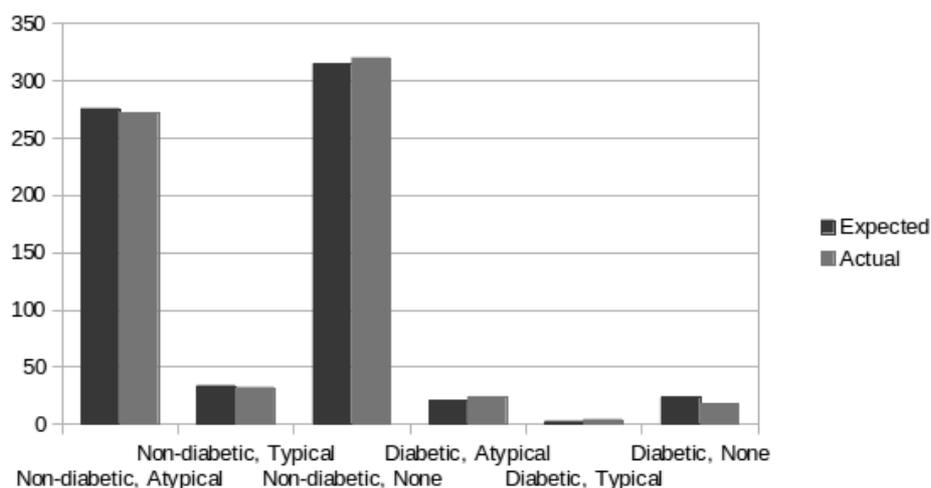


Figure 1. Prevalence of diabetes by the type of antipsychotic therapy patients were receiving

DISCUSSION

These results appear to contradict the general trend of published literature on this topic, and so we must look for reasons why our population is not significantly different from a UK population, and why the prevalence of diabetes is not significantly affected by condition or medication.

There are a number of possible reasons why this has occurred. Firstly, it may very well be the case that we simply do not have all of the information. Our knowledge of patients with diabetes is a result of self-report by these patients, as the department is not often informed by the GP. This could mean that we are underestimating the prevalence of diabetes.

Secondly, it is possible that, particularly as many patients in the sample are relatively newly diagnosed, that they simply have not had the necessary time to develop full-blown diabetes.

The patients who possess “mixed pictures” also complicate diagnoses. This problem is perhaps further confounded by the fact that many patients, particularly those who are “less ill”, are discharged back to their GP for care and regular review; if these patients go on to develop diabetes, it is unlikely that the psychiatry department will be informed. It may also simply be the case that these patients are not being monitored effectively enough, or regularly enough, for markers of diabetes.

The results of this study, while not statistically significant, still suggest several areas in which improvements could be made or further work carried out. Firstly, this study only assessed one out-patient clinic; a

multi-centre approach may very well yield vastly different results. Secondly, a “metabolic clinic” looking for markers of Metabolic Syndrome may be beneficial, and this could then be compared with different doses of specific antipsychotic medications via ANOVA statistical techniques.

This study suggests that improvements in communication are certainly possible between General Practitioners and Psychiatrists. As previously mentioned, our knowledge of whether patients have diabetes is entirely by self-report, which is obviously less than ideal. It would be helpful if the regular monitoring was reported back to the psychiatry department, not least because then there would be a guarantee that monitoring was being carried out; at present, there is a certain degree of “assumption” that monitoring is being carried out on at-risk patients, i.e. those taking antipsychotic medication.

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