Antipsychotic-Induced Hyperlipidemia Among People with Schizophrenia

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INTRODUCTION

The newest antipsychotic agents exhibit superior safety in terms of extrapyramidal side effects compared to conventional antipsychotics.

Recent evidence from the literature has suggested an association between the use of these agents and the development of metabolic abnormalities, including hyperlipidemia.

We used a large health care database to determine the independent contribution of these agents to the development of hyperlipidemia, while adjusting for other risk factors.

METHODS

DEFINING ANTIPSYCHOTIC EXPOSURE

Exposure was defined as receipt of antipsychotic monotherapy during the 12 weeks prior to the development of hyperlipidemia in the case (or the same time period in the control). To determine the effect of longer exposure durations, we did a parallel analysis where exposure was defined with respect to medications received up to 52 weeks prior to the onset of hyperlipidemia.

Second generation drugs included clozapine, olanzapine, quetiapine, and ziprasidone. First generation drugs included chlorpromazine, fluphenazine, loxapine, perphenazine, prochlorperazine, and thioridazine.

RESULTS

4,371 cases were matched to 8,052 non-hyperlipidemic controls (people with schizophrenia matched on gender and age ± 3 years).

In a large population of low-income, publicly-financed patients with schizophrenia, exposure to clozapine and ziprasidone, but not risperidone or quetiapine, was associated with a significantly increased risk of developing hyperlipidemia when compared to first generation antipsychotic medications.

DISCUSSION/CONCLUSION

These results were not due to age, gender, ethnicity, or concomitant exposure to other medications. African-American ethnicity, as well as exposure to other medications, were significant independent risk factors. More research is needed to determine the relative weights assigned to these factors.

African-American ethnicity was a significant risk factor for development of hyperlipidemia (OR=1.19, 95% CI: 1.07-1.32) as was unknown ethnicity (OR=1.22, 95% CI: 1.11-1.33). Exposure to beta-blockers and thiazide diuretics (OR=1.46, 95% CI: 1.29-1.65) or loop diuretics (OR=1.40, 95% CI: 1.40-1.72), or protease inhibitors (OR=1.95, 95% CI: 1.12-3.40) also increased risk.

When olanzapine or clozapine is prescribed, clinicians should exercise caution, other safety issues, tolerability, and cost. In practice, the relative weights assigned to these factors will likely differ with the clinical and financial context of the treatment.

In a large population of low-income, publicly-financed patients with schizophrenia, exposure to clozapine and ziprasidone, but not risperidone or quetiapine, was associated with a significantly increased risk of developing hyperlipidemia when compared to first generation antipsychotic medications.

REFERENCES