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Treatment of Schizophrenia in 22q11.2DS

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Background: One in four individuals born with 22q11.2 deletion syndrome (22q11.2DS) develops schizophrenia. Current guidelines for 22q11.2DS recommend, as for other associated conditions, standard management for schizophrenia, including treatment with antipsychotic medications. However, there is a paucity of literature on the prescribing pattern of antipsychotic medications and comorbid metabolic illness in this patient population. **Methods:** We investigated 97 adults with 22q11.2DS and primary psychotic disorder (schizophrenia or schizoaffective disorder) per DSM-V criteria. We utilized a cross-sectional data analysis and review of lifetime psychiatric records to determine antipsychotic usage, antipsychotic polypharmacy, anticholinergic medication use, and concurrent treatment of metabolic diseases. **Results:** There were 89 (91.8%) individuals with a history of primary psychotic disorder and 22q11.2DS on antipsychotic medications. Of these, thirty-four (38.2%) were prescribed more than one antipsychotic. The prevalence of antipsychotic polypharmacy in this population was significantly higher than that reported in a large Canadian study of schizophrenia ($p<0.001$). Individuals on two or more antipsychotics were significantly more likely to be prescribed anticholinergic medications ($p=0.03$). There was concurrent prescription of antihyperglycemic medications in 10 (11.2%) patients and treatment of dyslipidemia in 8 (9.0%) patients. Individuals on an antihyperglycemic agent had significantly higher BMI ($p<0.001$) than those not on these agents. **Conclusions:** To our knowledge, this is the largest study to report on antipsychotic usage and comorbid treatment of metabolic disease in 22q11.2DS. Previous studies reported an elevated risk of obesity in 22q11.2DS independent of antipsychotic usage. The current study sheds further light on the management of psychotic illness in this high-risk genetic population, including evidence for high rates of treatment-resistance and antipsychotic polypharmacy. The results emphasize the need for further data on the pathophysiology and treatment of psychotic illness in this genetic subtype of schizophrenia as we improve our ability to diagnose genetic conditions and move towards personalized medicine in psychiatry.