Second-Generation Antipsychotic Tip Sheet

Second-Generation Antipsychotic Medications

- Arpiprazole/Abilify/Abilify Maintena
- Asenapine/Saphris
- Clozapine/Clozaril/Versacloz
- Iloperidone/Fanapt
- Lurasidone/Latuda
- Olanzapine/Zyprexa/Zyprexa Relprevv
- Paliperidone/Invega/Invega Sustenna
- Quetiapine/Seroquel/Seroquel XR
- Risperidone/Risperdal/Risperdal Consta
- Ziprasidone/Geodon

Medical Issues Related to Second-Generation Antipsychotics Usage in Adults[i,ii]

Second-generation antipsychotics may cause abnormal blood work in adults such as:

- Elevated serum glucose
- Elevated serum lipids
- Increased prolactin levels

Conditions experienced may include:

- Weight gain
- Increased risk of type 2 diabetes
- Cardiovascular side effects
- Increased abdominal girth
- Diabetic ketoacidosis
- Sudden death in elderly

Monitoring Patients on Second-Generation Antipsychotics Medication

The American Diabetes Association, the American Psychiatric Association, the American Association of Clinical Endocrinologists, and the North American Association for the Study of Obesity recommend the following screening measures for monitoring patients using second-generation antipsychotics.[i]

Measure	Baseline	4 weeks	8 weeks	12 weeks	Quarterly	Annually
Personal/Family History	X					X
Weight	X	X	X	X	X	X
Waist Circumference	X					X
Blood Pressure	X			X		X
Fasting Blood Glucose	X			X		X
Fasting Lipid Profile	X			X		X

Both the psychiatric and medical communities have determined that the monitoring for metabolic side effects of second-generation antipsychotics is an important part of patient treatment. There are however, differences in the side-effect profiles of these agents. According to The American Psychiatric Association *Clinical Practice Guideline for the Treatment of Patients with Schizophrenia (2004)* and its *Guideline Watch (September*

2009), along with other more recently published head-to-head comparison studies, clozapine and olanzapine are the most likely to lead to weight gain and glucose and lipid abnormalities. These are followed by quetiapine and then risperidone. Clinical trial data has shown that other antipsychotics are relatively benign.[iii,iv,v]

The Potential Benefits of Second-Generation Antipsychotic Medications:[iii]

- Prescribed for a wide variety of diagnosis
- Reduced neurological sequelae over older agents
- Less incidence of extra pyramidal symptoms
- Less incidence of tardive dyskinesia
- Increased effectiveness for some of these agents in treating negative symptoms of schizophrenia

Issues Related to Use in Children

Multiple clinical studies and data published by the Government Accountability Office (GAO) have shown an increased use of psychotropic medications in children and adolescents despite long-term clinical studies. Careful consideration of the need for a second-generation antipsychotic, in addition to monitoring weight, serum glucose, lipid profile and abdominal girth, is imperative in this vulnerable population.

Summary

- Second-generation antipsychotics should be used for approved indications
- Second-generation antipsychotics have significant metabolic side effects
- Monitoring can reduce the risk of metabolic side effects

Practitioners should base selection of antipsychotic on individual risk factors for each patient. For instance, previous response, side effect profiles, family history, co-morbid conditions, medical vulnerabilities, tolerances and patient preference/expectations.[iv,vi]

These guidelines are not intended to replace a practitioners' clinical judgment. They are designed to provide information and to assist practitioners with decisions regarding care. The guidelines are not intended to define a standard of care or exclusive course of treatment. Practitioners using these guidelines are responsible for considering patients' particular situations in evaluating the appropriateness of these guidelines.

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[i] Dhamane A, Martin B, Brixner D, et al. (2013). Metabolic Monitoring of Patients Prescribed Second Generation Antipsychotics. Journal of Psychiatric Practice. 19(5): 360-374.
[ii] American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists; North American Association for the Study of Obesity. (2004). Consensus Development Conference on Antipsychotics Drugs and Obesity and Diabetes. Diabetes Care 2004 27(2):596-601.
[iii] American Psychiatric Association. Clinical Practice Guideline for Treating Schizophrenia 2004.
[iv] American Psychiatric Association. Guideline Watch (2009): Clinical Practice Guideline for Treating Schizophrenia.
[v] Leucht S., Komossa K, Rummel-Kluge C, et al. (2009). Meta-Analysis of Head-to Head Comparisons of Second Generation Antipsychotics in the Treatment of Schizophrenia. Am J Psychiatry. 166:152-163.
[vi] Kane J, Correll C. (2010) Past and Present Progress in Pharmacology Treatment of Schizophrenia. Clin Psychiatry. 71(9): 1115-24.