Use of Psychotherapeutic Medications in Children and Adolescents with ASD and ID

Although not considered first line treatment in children with ASD and ID, depending on the severity of symptoms, some medications may be helpful. If the decision is made to use medication, monitoring for side effects is essential.

General Considerations

- Prior to beginning any treatment with psychotherapeutic medications:
  - Consider functional behavioral assessment to identify triggers/effects of maladaptive behavior.
  - Weigh risks/benefits of treating with psychotherapeutic medications.
  - Define target symptom domain and rule out medical etiology. Aim pharmacotherapy at the most impairing target symptoms first.
  - Obtain resting blood pressure, heart rate, weight, height, and body mass index (BMI) percentile at baseline and follow-up visits.
  - Baseline and follow-up electrocardiogram (ECG) are warranted if the child has a history or evidence of cardiac disease.

Considerations when Treating with Antipsychotic Medications

Note: See Table 1 on page 10 for full monitoring recommendations.

- Prior to beginning treatment with antipsychotic medication:
  - Obtain height, weight, and BMI percentile.
  - Obtain baseline fasting glucose and lipid panel.
  - Complete baseline tardive dyskinesia screen (AIMS or DISCUS).
  - Treat concurrently with psychosocial interventions.
- At treatment initiation:
  - Clearly establish the goal of antipsychotic therapy, first targeting symptoms that are most impairing.
  - Start low, go slow.
  - Start with antipsychotic medications that have the greatest strength of evidence in pediatric populations (ie, risperidone or aripiprazole).
  - Use the minimum effective dose to minimize adverse effects.
  - Provide healthy lifestyle information.
- Follow-up medication monitoring:
  - Monitor BMI.
  - Obtain fasting blood glucose, hemoglobin A1c (HbA1c), lipid panel, and tardive dyskinesia screen at least every 6 months; repeat more frequently if there is rapid weight gain or signs of abnormal movement. Consider total insulin level in those with significant weight gain or early evidence of metabolic derangement.
- **Not recommended:**
  - Use of antipsychotic medication without concurrent psychosocial treatment(s).
  - Olanzapine (Zyprexa®) and olanzapine/fluoxetine (Symbyax®) as first or second-line agents; use in patients who are overweight or obese, dyslipidemic, or hyperglycemic.

Note: Overweight is defined as BMI >85th percentile for age and sex, weight for height >85th percentile, or weight >120% of ideal weight.

Recommended Routine Monitoring in Youth with ASD and ID Treated with Antipsychotic Agents

Table 1.

Recommended Routine Monitoring in ASD/ID Youth Treated with Antipsychotic Agents						
Assessment	**Baseline**	**Each visit**	**During Titration and at Target Dose**	**At 3 Months**	**At 6 Months**	**Annually**
Personal and family medical history	√	—	—	—	—	√
Treatment efficacy, new medications and interaction effects with antipsychotics	√	√	—	—	—	—
Lifestyle behaviors	√	√	—	—	—	—
Sedation/somnolence	√	√	—	—	—	—
Calculate BMI percentile, BMI z score	√	√	—	—	—	—
Sexual/reproductive dysfunction	√	—	√	√	—	—
Parkinsonism (SAS or ESRS*), Akathisia (AIMS or ESRS*)	√	—	—	√	√	—
Fasting blood glucose, HbA1C and lipids	√	—	—	√	√	√ Based on clinical consensus.
Tardive dyskinesia	√	—	—	√	—	√
Blood pressure and pulse	√	√	√ During titration with clozapine	—	—	—
Liver function tests	√	—	—	√	—	√

Table 1 *(continued)*.

Recommended Routine Monitoring in ASD/ID Youth Treated with Antipsychotic Agents						
Assessment	**Baseline**	**Each visit**	**During Titration and at Target Dose**	**At 3 Months**	**At 6 Months**	**Annually**
Electrolytes, full blood count, renal function	√	—	—	√ Obtain more frequent blood count if on clozapine.	—	√ Obtain more frequent blood count if on clozapine.
Prolactin-related adverse effects (eg, galactorrhea, gynecomastia, oligorrhea/ amenorrhea)	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic.	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic .	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic.	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic.	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic.	Monitor for clinical symptoms of hyperprolactinemia at every visit. Obtain serum prolactin levels if symptomatic.
ECG[†]	If symptomatic or per guideline recommendations; see note below.	—	If symptomatic or per guideline recommendations; see note below.	If symptomatic or per guideline recommendations; see note below.	If symptomatic or per guideline recommendations; see note below.	If symptomatic or per guideline recommendations; see note below.

*Notes: *AIMS: Abnormal Involuntary Movement Scale; ESRS: Extrapyramidal Symptom Rating Scale; SAS: Simpson Angus Rating Scale. ESRS not available in the public domain*

[†]ECG: Obtain ECG in cases of family history of sudden cardiac death in first degree relatives (males <50 years, females <55 years), prolonged QT syndrome, personal history of heart murmur, irregular heartbeat, tachycardia at rest, dizziness or syncope upon exertion, or in the case of co-treatment with another QTC prolonging medication. Check ECG at baseline, during titration, and annually when using ziprasidone.

Adapted from: Correll JAACAP 2008; De Hert et al. Nat Rev Endocrinology 2011; and Ameis et al. JClin Psychiatry 2013.

Use of Psychotherapeutic Medications in Children and Adolescents with ASD and ID *(continued)*

Personal and Family Medical History:

- Include assessment for:
  - Metabolic Syndrome (e.g., obesity, arterial hypertension, diabetes, dyslipidemia)
  - Seizures and other neurological disorders
  - Current treatments
  - Potential interaction effects with antipsychotics (e.g., Fluoxetine and paroxetine may inhibit hepatic metabolism of aripiprazole and risperidone, increasing blood levels of aripiprazole and risperidone.)
  - Past medical history for coronary artery disease or coronary artery disease equivalent (i.e., diabetes mellitus, peripheral arterial disease, abdominal aortic aneurysm, and symptomatic carotid artery disease)
  - Premature coronary artery disease in first degree relative (males <55 years, females <65 years)
  - Personal history of heart murmur, irregular heartbeat, tachycardia at rest, or dizziness or syncope upon exertion
  - Past efficacy and adverse effects of medications in child/adolescent and/or family members

Lifestyle Behaviors:

- Diet, exercise, smoking, substance use, and sleep hygiene

Sedation/Somnolence:

- Youth with neurodevelopmental disorders are particularly prone to sleep disturbances due to many comorbid conditions, social stressors, and concurrent use of medications. Sleep hygiene should be optimized and reviewed at each visit. If sleep medications are administered, use caution as to the choice of medication and monitor for side effects.

Fasting Blood Glucose, Hemoglobin A1c (HbA1c) and Lipids:

- More frequent assessments may be necessary in high-risk patients (e.g., family history of diabetes, non-Caucasian ethnicity, BMI >95th percentile, weight gain >7% over 3 months or less, or weight gain >0.5 BMI z-score at any time point). HbA1c better identifies patients with pre-diabetes than fasting blood glucose alone. Consider total insulin level in high-risk individuals.

Prolactin Elevation:

- Monitor for clinical symptoms of hyperprolactinemia (i.e., signs or symptoms such as amenorrhea, oligomenorrhea, gynecomastia, galactorrhea, hirsutism, or erectile/sexual dysfunction) at every visit. Obtain serum prolactin levels if symptomatic. Draw prolactin level in the morning and approximately 12 hours after the last antipsychotic dose. The effects of asymptomatic, long-term hyperprolactinemia remain unclear (Ho et al, 2011).

ECG:

- Obtain in cases of family history of sudden cardiac death in first degree relatives (males <50 years, females <55 years), prolonged QT syndrome, personal history of heart murmur, irregular heartbeat, tachycardia at rest, dizziness or syncope upon exertion, or in the case of co-treatment with another QTc prolonging medication.