Medications for Anxiety & Behavior in Williams Syndrome

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Disclosure of Potential Conflicts

None

Evaluation

• Diagnosis – Clinical Characteristics and Genetic Testing
• Physical Examination
• Review of Systems
• Neuropsychological Testing
• Family History
Treatment Options

- Behavior therapy
- Speech and Language therapy
- Occupational therapy
- Physical therapy
- Social skills therapy
- Special educational services (academic vs. life skills track)
- Treatment of comorbid medical problems
- Vocational training
- Pharmacotherapy

Target Symptoms for Medication

- Motor hyperactivity and inattention
- Interfering repetitive thoughts and behavior
- Aggression, self-injury, severe tantrums
- Depressive disorders
- Anxiety
- Sleep disturbance
- Inappropriate sexual behavior

Motor Hyperactivity and Inattention

- Psychostimulants: methylphenidate, dextroamphetamine
- Non-stimulants: alpha-2 agonists - guanfacine, clonidine, Intuniv; atomoxetine
Psychostimulants

- Work quickly
- Side effects: reduced appetite, insomnia, tics
- May cause behavioral worsening
- May need to be given multiple times per day
- Need new prescription each month (controlled substance)

Alpha-2 Agonists

- Need to monitor blood pressure and heart rate
- Can be sedating
- Generally don’t make symptoms worse
- 2/3 need to be given 2-3 times per day
- Intuniv now FDA-approved for ADHD in children

Atomoxetine

- Effective in ADHD; preliminary studies in developmental disabilities. May take longer to work than stimulants. May help with comorbid mood and/or anxiety.
Repetitive Thoughts and Behavior
• Selective Serotonin Reuptake Inhibitors (SSRIs)
  – Fluoxetine
  – Fluvoxamine
  – Sertraline
  – Paroxetine
  – Citalopram (prolongation of the QT interval)
  – Escitalopram (prolongation of the QT interval)

SSRIs (Cont'd)
• Data indicate SSRIs may be more effective in post-pubertal vs. pre-pubertal individuals with developmental disabilities
• Side effects: insomnia, behavioral activation, sedation, stomach upset, sexual dysfunction, weight gain
• Can generally be given once a day
• Concern about increasing suicidal thinking/behavior

Aggression/Self-Injury/Severe Tantrums
• Typical antipsychotics
• Atypical antipsychotics
• Mood stabilizers
Aggression (Cont’d)

• Typical Antipsychotics
  – Haloperidol
  – Thioridazine
  – Chlorpromazine
• Side effects: acute extrapyramidal symptoms (EPS), tardive dyskinesia (TD), sedation, weight gain, drooling, prolongation of the QT interval

Aggression (Cont’d)

• Atypical Antipsychotics
  – Risperidone
  – Aripiprazole
  – Olanzapine
  – Quetiapine
  – Ziprasidone

Risperidone

• Well-studied in autism (FDA-approved) and intellectual disability associated with behavioral dyscontrol
• Common side effects: increased appetite, weight gain, sedation (transient), drooling, elevated prolactin
Aripiprazole

- FDA-approved for “irritability” in children and adolescents with autism.
- Common side effects: EPS (akathisia) and nausea/vomiting if given at too high a starting dose. Occasionally transient sedation
- No prolactin elevation

Olanzapine

- Only small controlled studies in developmental disabilities
- Common side effects: increased appetite, weight gain (at times significant), has been associated with glucose and lipid dysregulation, sedation

Quetiapine

- No controlled studies in developmental disabilities
- Common side effects: increased appetite, weight gain (may be less prominent than with risperidone and olanzapine), sedation, orthostatic hypotension if dose increased too quickly
Ziprasidone

- No controlled studies in developmental disabilities
- Common side effects: sedation (transient), occasional insomnia or behavioral activation. Not associated with increased appetite or weight gain
- Should not be given to patients with cardiac problems without approval of cardiologist
- Must be taken with food

Aggression (Cont’d)

- Mood Stabilizers
  - Valproic acid
  - Lithium
  - Carbamazepine
  - Gabapentin
  - Topiramate
  - Lamotrigine
- Generally ineffective unless true co-morbid bipolar disorder

Depression

- Bupropion (risk of seizures)
- Venlafaxine (elevated blood pressure)
- Duloxetine
- SSRIs
- No systematic trials of medication for treating depression in Williams syndrome
Anxiety

- Buspirone
- Mirtazapine (weight gain, sedation)
- SSRIs (low dose)

- No systematic trials of medication for treating anxiety in Williams syndrome

Sleep Disturbance

- Melatonin
- Clonidine
- Trazodone (priapism)
- Mirtazapine
- Tricyclic Antidepressant (Doxepine, Amitriptyline)
- Chlordial Hydrate
- Benzodiazepines (Paradoxical reaction)
- Diphenhydramine (Paradoxical reaction)

Inappropriate Sexual Behavior

- Behavioral strategies
- Sex education
- Mirtazapine
- SSRIs
- Hormonal strategies
Questions?

Lurie Center for Autism

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http://www.massgeneral.org/children/services/treatmentprograms

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