The Role of Medications in the Treatment of Autism Spectrum Disorder and Related Neurodevelopmental Disorders

Pilar Trelles, MD
Assistant Professor of Psychiatry
Child and Adolescent Psychiatry

seaver autism center
for Research & Treatment at Mount Sinai

Mount Sinai
Seaver Autism Center for Research and Treatment
Deficits in social communication

Repetitive and restrictive behaviors

Autism Spectrum Disorder: A Behaviorally Defined Conditions

AUTISM SPECTRUM DISORDER
Associated Symptoms can Cause Significant Impairment
Clinical Trials
Autism is a Heterogenous Disorder
Why is this important?

• Individuals with ASD and other neurodevelopmental disorder that are behaviorally defined are different from each other
• We have more options than just the two “FDA” approved medications
• Monitor closely: consider efficacy and tolerability
• We are working to identify individuals with NDD that are biologically similar → narrow treatment options and improve outcomes.
Symptom Domain Approach

Deficits in social communication & Repetitive and Restricted behaviors

- Irritability
- Sleep
- Compulsive behaviors
- Aggression
- EEG
- ADHD
Atypical Antipsychotics

- Risperidone*
- Aripiprazole *
- Quetiapine
- Ziprasidone
- Haloperidol
- Olanzapine
- Clozapine

* FDA approval

Irritability
Aggression
Medications for ADHD

- Methylphenidate
- Atomoxetine
- Clonidine
- Guanfacine
Antiepileptic Drugs

- Depakote
- Lamictal
- Topiramate
# Antidepressants

<table>
<thead>
<tr>
<th>Medication</th>
<th>Open Label</th>
<th>Placebo Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>fluoxetine</td>
<td>++++</td>
<td>+ + --</td>
</tr>
<tr>
<td>fluvoxamine</td>
<td>+</td>
<td>+ + --</td>
</tr>
<tr>
<td>sertraline</td>
<td>+++</td>
<td></td>
</tr>
<tr>
<td>citalopram</td>
<td>+</td>
<td>--</td>
</tr>
<tr>
<td>escitalopram</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>venlafaxine</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>clomipramine</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>buspirone</td>
<td>++</td>
<td></td>
</tr>
</tbody>
</table>

**Repetitive Behaviors**

**Depression Anxiety**
Points to Take Home

• The foundation of treatment for ASD lies on psychosocial treatments, while pharmacological interventions target associated features

• Although risperdal and aripiprazole are the only medications with an FDA indication in the treatment of ASD, their side effect profile limits its use

• Pharmacological approaches in ASD use a dimensional and symptom specific approach

• Major setback in the development of new treatments lies in the heterogeneity of ASD and availability of objective outcome measures
Resources - Psychiatry Clinics for Neurodiverse Individuals in NYC

- Developmental Disabilities Center, Mount Sinai West
  https://www.mountsinai.org/care/neurology/services/pediatric-neurology/developmental-disabilities-center
  212-523-6230

- Premier Healthcare, Member of YAI network
  https://www.yai.org/services/psychiatry
  212-273-6272

- Adapt Community Network (Adults ages 18+)
  https://www.adaptcommunitynetwork.org/service-options/healthcare/
  877-827-2666
Important COVID-19 Services
Counseling – Medical – NYC services

- NYC Well – 24/7 confidential helpline and psychotherapy referral – nycwell.cityofnewyork.us – English, Spanish & other languages -1800-NYC-WELL/ 888-692-9355
- Thrive NYC – thrivenyc.cityofnewyork.us mental health support via phone or online.
- UFT Free Mental Health Hotline – general mental health support for NYC public school students and their families – 212-709-3222
- American Red Cross Virtual Family Assistance Center – Crisis counselors are available to provide emotional support and guidance when someone has lost a loved one. 585-957-8187 – www.redcross.org
- Free COVID – 19 Medical Infoline for NYC residents: if you have symptoms or questions about COVID 19 call: 1-844-692-4692 – 9am-9pm
- NYC COVID-19 Resources Directory – obtain resources for accessing food(1-866-888-8777), rental assistance, domestic violence (1-800-621-HOPE), etc. –go to: www1.nyc.gov