Psychopharmacology In Asperger Disorder

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Asperger syndrome or Asperger's syndrome or Asperger disorder is an autism spectrum disorder that is characterized by significant difficulties in social interaction, along with restricted and repetitive patterns of behavior and interests. It differs from other autism spectrum disorders by its relative preservation of linguistic and cognitive development.
Asperger syndrome

- In 1944 Austrian pediatrician Hans Asperger studied and described children in his practice who lacked nonverbal communication skills, demonstrated limited empathy with their peers, and were physically clumsy.
- Fifty years later, though it was standardized as a diagnosis.
One of the proposed changes in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, set to be published in May 2013, would eliminate Asperger syndrome as a separate diagnosis, and fold it under autistic disorder (autism spectrum disorder), which would be rated on a severity scale.
Prevalance

- A 2003 review of epidemiological studies reported autism prevalence rates ranging from 0.03 to 4.84 per 1,000, with the ratio of autism to Asperger disorder ranging from 1.5:1 to 16:1; combining the geometric mean ratio of 5:1 with a conservative prevalence estimate for autism of 1.3 per 1,000 suggests indirectly that the prevalence of AS might be around 0.26 per 1,000.
Anxiety disorder and major depressive disorder are the most common comorbid conditions in adolescents, adults.; comorbidity is estimated at 65%.

Children are likely to present with ADHD, tics, tourette syndrome, and bipolar disorder.

“Repetitive behaviors” of AS have many similarities with the symptoms of obsessive–compulsive disorder.
Asperger and high functioning autism

- Compared with children with AS, those with high-functioning autism are more impaired in early language development and behavior over the preschool period, and had a greater need for specialized education services.
- AS and high-functioning autism appear to be on the same spectrum but differ primarily in severity of developmental course.
The average age at diagnosis of AS is about 11 years, compared with 5.5 years for autism.

A limited number of studies have examined the efficacy of treatment approaches specific to AS or high-functioning autism.

No single methodology or intervention strategy has been identified as the most effective.

Common approaches involve using principles of applied behavior analysis, combination approach drawing on behavioral, developmental, and social–pragmatic principles.
Psychotropics do not change the core domains of Asperger.

Medication can be effective in combination with behavioral interventions and environmental accommodations in treating comorbid and associated symptoms.
The prevalence of use of prescription medications for children with ASD is high. Surveys indicate that one-half to two-thirds are prescribed at least one psychotropic.

The most commonly prescribed psychotropic medications are antidepressants, stimulants, and antipsychotics.
1995 survey found 30% of children with ASD using psychotropic medication and 8% on more than one.

2001 follow up survey found 46% on psychotropic's and 21% on more than one psychotropic.
One survey of medication use over a 4.5 year period indicated that amongst adolescents and adults with ASD, individuals were taking significantly more psychotropic medications than when the study began.
The pattern of increasing medication use described is particularly striking because it was during the same 4.5 year period that sample members showed a significant reduction in reported behavior problems.
Research into the efficacy of pharmaceutical intervention for AS is limited, there are very few clinical studies addressing the effectiveness of medications in this population.

Only one medication, Risperidone, has been approved by the Food and Drug Administration specifically for use among individuals with ASD who have serious behavior problems.
Amongst atypical antipsychotic medications risperidone and olanzapine have been shown to reduce repetitive and self-injurious behaviors, aggressive outbursts and impulsivity, and improve stereotypical patterns of behavior and social relatedness.

Data suggest that aripiprazole may also be effective and well tolerated for severe irritability in pediatric patients with PDD–NOS or Asperger's disorder.
Atypical antipsychotics and Asperger

- Four controlled trials with risperidone were all positive, with significant and robust reductions in aggression.
- Of three open-label trials with olanzapine, two suggested positive effects on self-injury and aggression.
- Of two open-label trials with ziprasidone, one was clearly positive and the other failed to show improvement.
- Two open-label trials of aripiprazole in youth with Asperger's disorder suggested improvements in irritability as assessed on the Aberrant Behavior Checklist.
- Studies of quetiapine have been largely, although not exclusively, negative.
Resperidone and Asperger

- Higher severity of behavior problems showed greater improvement for risperidone. Weight gain mediated treatment response negatively: those who gained more weight improved less with risperidone.
- Compliance correlated with outcome for risperidone.
- Of nonspecific predictors, parent education, family income, and low baseline prolactin positively predicted outcome;
- Anxiety, bipolar symptoms, oppositional–defiant symptoms, hyperactivity negatively predicted outcome.
Asperger and psychotropic's

- The symptoms of disorganization, oddness of speech, and extreme anxiety in response to stressful social interactions could be misdiagnosed as psychosis.
- Antipsychotics may reduce maladaptive behaviors and stereotype activities, but their side effects of sedation, and movement disorders, including tardive dyskinesia, need careful monitoring.
SSRI and Asperger

- At least 3 randomized controlled trials and 10 open-label trials or retrospective chart reviews on the use of SSRIs in autism spectrum disorders demonstrate significant improvement in global functioning and in symptoms associated with anxiety and repetitive behaviors.
SSRI and Asperger

- Use of SSRIs has increased for perseverative behavior, self injury, aggression, and obsessions.
- Findings of recent controlled studies have indicated limited improvements.
- Neuropharm Group, reported failure of fluoxetine to reduce repetitive behaviors in study of young adults. Large NIH multi-site trial of citalopram in children with repetitive behaviors and ASD reported negative findings.
- Thus, the early reports of SSRI benefits appear to be overly optimistic.
SSRI and Asperger

- SSRI use can result in increase impulsive behavior, increase energy level, hyperactivity, insomnia.
- SSRI seem to carry higher risk of such side effects especially in children and adolescents with autistic spectrum disorders.
Asperger and ADHD

- Methylphenidate was associated with significant improvement that was most evident at the 0.25– and 0.5–mg/kg doses in children (age 7–8 yr). Hyperactivity and impulsivity improved more than inattention.

- Observational measures of certain aspects of children's social communication, self-regulation, and affective behavior showed significant positive effect.
Asperger and ADHD

- Some open label studies indicate that atomoxetine and guanfacine may also be useful for the treatment of hyperactivity in children with PDD.
- Placebo-controlled studies are needed to guide clinical practice.
- Children with PDD may have a higher vulnerability for some of the known side effects especially “emotional side effects”
Overall use of stimulants in ASD has declined in recent years.
Only about 50% of children with ASD showed a positive response to CNS stimulants.
Asperger and sleep problems

- Eighteen studies on melatonin use in ASD have reported improvements in sleep duration, sleep onset latency, and night-time awakenings.
- Five of these studies were randomized double-blind, two of the studies contained blended samples of children with ASD and other developmental disorders, but only data for children with ASD were used in the meta-analysis.
Parents reported OCD–type behaviors, like needing to travel the same route home, eat from the same bowl, and line up toys. There were sensory issues where his clothing had to be cotton with no tags, and he wanted to wear his underwear inside out. If things were not the way he needed them to be (or thought they should be) he unraveled and could not get himself back together. He had a look in his eyes of "coming undone." They wouldn't call it defiance, but more like not having things under control. There were lots of melt downs.
• Rigid thinking! Things are a certain way to him and you cannot convince him otherwise. For example, he will think that his friend hit him on purpose when they were jumping on the trampoline, and he'll begin yelling at the friend to "Go home!" in a semi-rage.
• He has a hard time understanding other people's perspectives, and impulsive speech is a problem. He blurts out whatever he is thinking. He does not like to be touched or to be in small rooms. He does not make eye contact and adults often think he is being disrespectful."
Currently on 108 mg of Concerta which helped somewhat with focus, takes Cymbalta 90 mg and Zoloft 200 mg which had minimal if any effect on “rigidity” in behavior though did help his mood. Takes Resperidone 2 mg twice daily and Depakote 500 mg twice daily which helped him to have “less meltdowns.”

Parents said they agree to use of Resperidone as it has been known to help such kids though he had never been too aggressive or showed any self injurious behavior.
Parents reported that though they know that their child has something like Asperger but were too afraid of stigma to let him be enrolled in program for such kids.

Expressed concern about him getting forever bullied in school, struggling to fit in, increasingly frustrated and depressed about rejection by peers. Inspite of their best efforts and multiple trials of psychotrophic's, he is getting worse.
Asperger and Psychotropics

- No medications are autism specific.
- A medication that alleviates one maladaptive behavior, may have no effect on core autistic symptoms.
- Affected individuals may respond differently to the same medication. The response to a medication may reflect genetic differences between individuals, the waxing and waning of the behaviors over time, the progression of the disorder, and/or placebo effect.
Pharmacotherapy is not the ultimate treatment but it can be a critical element in a comprehensive treatment plan.