

# Perspectives on psychiatric treatment of autism spectrum disorder

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# Seattle Children's Autism Center

- Goal of integrated approach to care
- Multidisciplinary team
  - Neurology
  - Speech & language therapy
  - Behavioral therapy
  - Psychology
  - Developmental pediatrics
  - Psychiatry

# Seattle Children's Autism Center

- Featuring:
  - Family resources and support team
  - Integration with research teams / projects
- Coming soon:
  - Adult autism transitional services

# Phenomenology of ASD

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## Core Symptoms:

- Social / communication deficits
- Restricted, repetitive interests or behaviors

# Are core symptoms of ASD appropriate targets for medication treatment?

- NO, core symptoms generally are NOT good targets for use of psychiatric medications
- Our understanding of neurobiological causes of autism is still quite LIMITED
- Even with better understanding, brain development extraordinarily complex

# Associated Symptoms

- Attention/hyperactivity problems
- SIB, aggression, tantrums
- Depressed or unstable mood
- Anxiety
- Insomnia
- Obsessive-compulsive or repetitive behaviors

# Decision to use consult a psychiatrist

- Are target symptoms present that may be amenable to meds?
- Have non-medication options been tried?
- Severity of symptoms and their effect on functioning?
- Have previous trials with meds been ineffective for whatever reason? Worth trying others?

# Psychiatric evaluation

- Identification of question for consult
- Gathering of history from appropriate sources
  - parents
  - patient
  - clinicians
  - teachers
- Psychiatric and medical history
- Social and educational history
- Clinical formulation
- Decision-making with patient, family, and clinicians



# Strategy for use of meds

- Clearly identify **target symptoms** that the patient, family, and school can monitor
- Discuss various options in choosing medication class
  - Likelihood of effectiveness
  - Possible side effects
- Keep in mind higher incidence of SE's, lower incidence of effectiveness (compared to pts without autism)

# Strategy for use of meds

- Get the patient and family on board
- Generally change one thing at a time
- Start low, go slow
- Use med for an appropriate duration before abandoning
- If one med in a class doesn't work, try another in same class
- Consider preparation of meds

# Effects on brain development

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# Medication Classes

- Antidepressants
- Antipsychotics
- Alpha-2 adrenergic agonists
- Stimulants
- Mood stabilizers
- Other agents

# Michael, age 7 years old

- Diagnosed with ASD
- Lifelong concerns:
  - anxiety
  - mood dysregulation
  - depression
  - aggression (younger brother, parents)
  - hyperactivity
  - oppositionality
- Worsening:
  - above symptoms over past year
  - grandiosity (“I’m in charge here!”)

# Michael, age 7 years old

- Past therapies
  - OT
  - Homeopathic medicines
  - HANDLE Institute
  - DAN protocol
  - Individual psychotherapy just started
  - Psychiatric medications
- Testing:
  - Full-scale IQ 87
  - Processing speed 70

# Michael, age 7 years old

- Past medication therapies
  - risperidone
  - fluoxetine
  - bupropion
  - atomoxetine, Focalin, Adderall
  - fluvoxamine

# Antidepressants

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- SSRI's
- SNRI's
- Trazodone, bupropion, mirtazapine



# SSRI's

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- Fluoxetine (Prozac)
- Sertraline (Zoloft)
- Citalopram (Celexa)
- Escitalopram (Lexapro)
- Fluvoxamine (Luvox)

# SSRI's

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- Target symptoms
  - depressed mood
  - anxiety
  - irritability
  - rigidity, repetitive behaviors

# SSRI's

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- Evidence of effectiveness?
  - fluoxetine
  - citalopram

# SSRI's

- Side effects
  - nuisance SE's (headache, stomachache, nausea, dizziness)
  - sleep disturbances (incl. dreams)
  - anxiety
  - irritability, agitation, manic sx
  - **SIB, suicidality**

# Other antidepressants

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- trazodone
- venlafaxine, duloxetine
- mirtazapine

# Antipsychotics

- risperidone (Risperdal)
- aripiprazole (Abilify)
- quetiapine (Seroquel)
- ziprasidone (Geodon)
- olanzapine (Zyprexa, Zydis)
- lurasidone (Latuda)
- older meds -- Haldol, etc.

# Antipsychotics

- Target symptoms :
  - psychosis generally NOT present
  - aggression, SIB
  - severe agitation, irritability
  - anxiety
  - stereotyped, repetitive behaviors or speech

# Antipsychotics

- Evidence of effectiveness
  - haloperidol (Haldol)
  - risperidone
  - aripiprazole



# Antipsychotics

- Side effects
  - sedation
  - increase in appetite and weight
  - metabolic syndrome (chol, DM)
  - extrapyramidal symptoms
  - anticholinergic symptoms
  - tardive dyskinesia
  - neuroleptic malignant syndrome

# Alpha-2 adrenergic agonists

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- Clonidine
- Guanfacine (Tenex or Intuniv)

# Alpha-2 adrenergic agonists

- Target symptoms :
  - hyperactivity
  - impulsivity
  - insomnia
  - aggression, SIB
  - irritability

# Alpha-2 adrenergic agonists

- Side effects :
  - somnolence
  - fatigue
  - irritability
  - hypotension
  - caution with stimulants

# Stimulants

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- Methylphenidate (Ritalin)
- Dextroamphetamine (Dexedrine)
- mixed amphetamine salts (Adderall)

# Stimulants

- longer acting formulations
  - Concerta
  - Metadate CD
  - Focalin XR
  - Adderall XR
  - Vyvanse
  - Daytrana (patch)

# Stimulants

- Target symptoms :
  - inattention
  - hyperactivity
  - impulsivity
  - possible use: for increased appetite when using antipsychotics

# Stimulants

- Side effects :
  - loss of appetite
  - insomnia
  - headache, stomachache
  - irritability
  - anxiety
  - tics
  - height suppression



# Stimulants

- Side effects :
  - Cardiovascular concerns:
    - EKG?
    - Effects on blood pressure

# Atomoxetine (Strattera)

- Non-stimulant approved for ADHD
- As effective as stimulants??
- SE's :
  - Sedation
  - Gastrointestinal upset

# Mood stabilizers

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- Lithium
- Valproate (Depakote)
- Carbamazepine (Tegretol)
- Lamotrigine (Lamictal)

# Mood stabilizers

- Target symptoms :
  - manic / depressive sx
  - seizures
  - irritability / mood lability
  - impulsivity
  - aggression, SIB

# Mood stabilizers

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- Side effects :
  - lithium
  - valproate
  - carbamazepine
  - lamotrigine

# Other agents

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- Buspirone
- Propranolol
- Amantadine
- Oxytocin

# Michael, age 7 years old

- Current therapeutic course
  - severe disruption in family and school life
    1. Discontinued fluvoxamine (concerns about bipolar)
    2. Tried aripiprazole in place of risperidone (because of severe weight gain) → ineffective
    3. Tried valproate (ongoing concerns about bipolar) → severe agitation, GI complaints. Led to 2 ER visits
    4. In ER, tried chlorpromazine and then lorazepam
    5. Then: lamotrigine → didn't work well
    6. Then tried guanfacine, which reduced agitation!

# Summary

- Take home messages:
  - Usually no simple solutions
  - Multidisciplinary approach is the norm
  - Co-morbidity is the norm
  - Track target symptoms to assess effectiveness
  - Don't give up!