Psychiatric and Behavioral Comorbidities in Intellectual and Developmental Disabilities (IDD)

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Overview

• Describe behavioral presentations of psychiatric illness in people with IDD
• Outline common psychiatric illnesses in this population
• Discuss management strategies: Drug and non-drug treatments
Common Psychiatric Disorders in Persons with IDD

- Autism Spectrum Disorders
- Attention Deficit Hyperactivity Disorder-Children and Adolescents
- Obsessive Compulsive Disorder
- Intermittent Explosive Disorder (IED)
Common Psychiatric Disorders in Persons with IDD (contd.)

- Bipolar: Mania, mixed, chronic, rapid cycling
- Other: Major Depression, Psychotic Disorders, Sleep Disorders, Post Traumatic Stress Disorder, Adjustment Disorders, Antiseizure Med S/ES
- Be vigilant for abuse, seizures
Autism Spectrum Disorders

• Patient presents as unusual in terms of their interactions (can be intrusive, also)
• Difficulties with language, unless Asperger’s Disorder; odd, repetitive
• Stereotyped interests, repetitive behaviors, may be OCD
• Children and Adolescents may have Autism + ADHD + OCD
• Bipolar Disorder worsens OCD – more frenzied, more aggression, hypersexual, sleep, pacing
Obsessive Compulsive Disorder

• Common in Autism Spectrum Disorders - all ages
• Hoarding is common, lining up, symmetry
• May become explosive if stopped from these activities: ?IED; “rigid”, perseverate, repetitive
• Responds to low dose antipsychotics, support, therapy
• Mood stabilizers needed first if also manic
Attention Deficit Hyperactivity Disorder (ADHD)

- Hyperactivity across settings is an important clue: prior to puberty
- Impulsivity may be greater than hyperactivity in persons with IDD, especially after puberty
- Example of impulsivity: hits, kicks, bites, runs off, cusses
- Inattention may be missed in absence of hyperactivity and impulsivity
Attention Deficit Hyperactivity Disorder (ADHD) (contd.)

- Affective symptoms: anger, frustration (DSM-V)
- Predisposes to abuse, PTSD, foster care, institutionalization
- Family history: explore for ADHD
Intermittent Explosive Disorder

- Several discrete episodes of failure to resist aggressive impulses that result in serious assault acts or destruction of property
- Degree of aggressiveness expressed during the episodes is out of proportion to any precipitating stressors
- Not accounted for by another mental disorder; substance; general medical condition
- [A “wastebasket” diagnosis: ? correlation with OCD in persons with disabilities.]

Diagnostic and Statistical Manual of Mental Disorders; Fourth edition.
Bipolar Disorder

Manic Episode

A. Distinct period of abnormally and persistently elevated, expansive or irritable mood, lasting at least 1 week

B. Three or more of the following (four if irritable)
   A. Inflated self-esteem or grandiosity
   B. Decreased need for sleep
   C. More talkative than usual
   D. Flight of ideas or racing thoughts (subjective)
   E. Distractibility
   F. Increase in goal-directed activity/psychomotor agitation
   G. Excessive involvement in pleasurable activities that have risk for painful consequences

Diagnostic and Statistical Manual of Mental Disorders; Fourth edition.

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Bipolar Disorder

Manic Episode, cont.

C. Symptoms do not meet criteria for mixed episode

D. Causes marked impairment in occupational functioning, social activities or relationships; or requires hospitalization to prevent harm; or if psychotic features are present

E. Symptoms are not due to substance use or general medical condition

Diagnostic and Statistical Manual of Mental Disorders; Fourth edition.

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Bipolar Disorder

**Depressive Episode**

A. Five or more of the following for 2 week period and represent change from previous functioning (one must be either depressed mood or loss of interest/pleasure)

1. Depressed mood most of the day
   (Subjective / objective / irritable (children))

2. Diminished interest or pleasure in almost all activities
   (Subjective / objective)

3. Significant weight loss when not dieting or weight gain (5% change/mo) or increased / decreased appetite

4. Insomnia/hypersomnia

5. Psychomotor retardation/agitation

6. Fatigue or loss of energy

7. Feeling of worthlessness or inappropriate guilt

8. Diminished ability to think or concentrate or indecisiveness

9. Recurrent thoughts of death

Diagnostic and Statistical Manual of Mental Disorders; Fourth edition.

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## Behavioral Equivalents

### DSM Criteria | Observed Equivalents
--- | ---
Depressed mood | Apathetic facial expression/lack of emotional reactivity
Decreased interest/pleasure | Withdrawal
Insomnia/hyperinsomnia | Change total sleep time
Psychomotor activity/retardation | SIB, aggression/passivity
Feelings of worthlessness/guilt | Negative statements – “nobody likes me, I’m retarded”
Decreased concentration | Change in workshop performance
Recurrent thoughts of death/SI | Perseveration on death of family members, preoccupation with funerals

Possible Behavioral Manic Equivalents

- Aggression – repeated, rapid flaring
- Pacing
- Intrusive
- Non-stop vocalization, may scream or yell
- Up at night
- Masturbation, hypersexual, touching

IDD and DSM Criteria

• Different manifestation, but try and identify overall diagnostic categories
• Self-report is often unreliable – need collateral information
• Tailor treatment to the diagnostic category if possible.
• Recognize sleep disturbances, environmental stressors, abuse
• Use common sense....
Self Injurious Behavior/Aggression

- Aggression Related to Psychiatric Diagnosis
- ADHD – also, if partially treated especially in children and adolescents, may still be aggressive and impulsive
- ADHD + Bipolar: more rare in children and adolescents
- OCD + IED
- Mood Disorders: Especially Bipolar often mixed, chronic
Self Injurious Behavior/Aggression (contd.)

• Manifestation of general medical condition
  – Pain/discomfort
  – Delirium
  – Seizure Disorders/Meds
  – Lack of sleep

• Manifestation of substance use / adverse drug reaction

• Phenotypic expression of an underlying syndrome (behavioral phenotype)
  – Prader-Willi, Lesch-Nyhan
Behavioral Dimensions

- Aggression
  - Explosive mood
  - Irritability
- Impulsivity
- Sleep disruption
- Inattention
- Hyperactivity

- Get to know the patient: later can often identify a syndrome + target treatment appropriately
- Normal developmental issues/stages/needs are important to compare
Keys to Diagnosing:

- Rule out underlying medical condition
- Rule out adverse drug reaction, side effect, interaction
- Rule out environmental stressor eg. changes in staffing
- Aggression as communication of frustration:
  - Tired? Hungry? Toilet? Need a change of scene?
- Ask caregivers to document behavior problems by type, time of day, proximity to transitions, etc; sleep charts
Non-Pharmacologic Treatment

• Positive Behavior Supports
  – All ages will benefit from supports, and need to experience both fun and satisfaction: “Get a Life” – Todd Risley PhD

• Predictability and Structure
  – Stable caregiver
    – Turnover in caregivers is ongoing problem

• Social skills and Behavioral Intervention
  – Teach social phrases such as “excuse me” to get attention rather than bite or pinch
  – Parent-child interaction training, functional analysis
  – Adolescents: Arrange for reliable high schooler or college student to take out once a week, pay like a sitter
Picture Board
Coordinate Routines with Home and School

“Keep It Positive”

- Hard for individuals with disabilities to use criticism constructively
- Better to give a positive option
  Eg. Instead of “your hair is messy,” say, “your hair looks good when you brush it.”, etc.
- Limit negative statements eg. “You're a bad boy”, etc.
Medication Treatment Approach

- Get to know the patient
- Target a diagnosis if possible
- Start low and go slow
- Severe side effects if introduced too rapidly
- Combinations often necessary, targeting comorbidity or one severe psychiatric diagnosis, eg. Bipolar
Physical Assessment

• Evaluate for obvious medical problems
  – Elevated or low temperature (from baseline)
  – HR, B/P and respiratory rate if possible
  – Signs of pain/discomfort
  – Signs of infection
  – Bowel problems
    – Constipation/diarrhea/fecal smearing/increased abdominal girth
  – Cerebral Palsy
    - Prone to clumsiness and falling with mood stabilizers, antipsychotics
  – Mental status change (from baseline)
Drug Treatments

• Benzodiazepines
  – Tolerance/dependency/paradoxical reactions/falls
  – Disinhibition/sedation (ie, clonazepam)

• Typical neuroleptics: Medium potency may be best
  – EPS, TD, cognitive blunting
  – May lower seizure threshold, sedation, NMS

• Atypical neuroleptics
  – Possible EPS, cognitive blunting, metabolic syndrome
  – May lower seizure threshold, NMS

• Beta-blockers
  – ? Efficacious, orthostatic hypotension → falls
  – Low doses for tremor

Drug Treatments (contd.)

• Stimulants, Tricyclics, Atomoxetine, clonidine, guanfacine
  – Improvement in symptoms of ADHD
    – No seizure breakthrough if seizures well-controlled
• SSRIs - evidence base is mixed
• Melatonin for sleep
• Anticonvulsants
  – Proven efficacy for mood stabilization
  – Side effects are well established for older agents
    – Clinical signs and labs can be readily monitored
• Antipsychotics: risperidone and aripiprazole are FDA-approved for irritability in children with autistic disorder ≥ 6 years

Stimulants

- Dexetroamphetamine: 0.5mg/kg/day in 2 or 3 doses
- Methylphenidate: ± 1mg/kg/day
- Tricyclics especially amitriptyline warrants further study: Need EKGs levels; overdose toxicity: watch QTc
- May need clonidine in low dose for sleep
- Side Effects: Initial insomnia, appetite, headaches, tics, worsened OCD, biting and picking
- Long-acting preparations may have more side effects in this population
Atomoxetine

- Atomoxetine studies in progress
- Start 1/2 mg/kg/day
- Increase slowly
- Up to ± 1.6 mg/kg/day
SSRIs

- Appear most helpful for mild anxiety/OCD
- Evidence base is mixed
- Fluoxetine
  - FDA-approved for adolescent depression
- Sertraline
  - FDA-approved for OCD
  - Dose 12.5 mg in the morning
- Citalopram
  - Lowest interactions with other medications + no active metabolites
  - Dose 10 mg at bedtime
- Side effects-activation, black box warning for suicidality, gastrointestinal complaints, insomnia, anxiety

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SSRIs

• Target depressive symptoms, compulsions, self-injurious behavior
• Behavioral activation may be a concern
  – Concomitant anticonvulsant or antipsychotic usage may mitigate activation
• No head to head studies available
• Avoid bupropion: activation, seizures

Risperidone

- *Risperidone in Children with Autism and Serious Behavioral Problems*
  - Randomized, double-blind, placebo-controlled multicenter study
  - 69% reported improved, though with increased side effects, weight gain

- *Crossover Study of Risperidone for Destructive Behavior in Children, Adolescents and Adults*
  - Good efficacy, serious weight gain, especially in children

- Adverse events include somnolence, dizziness, extrapyramidal symptoms, weight gain, increased prolactin, tardive dyskinesia

- 0.25–3 mg, M tablets & liquid
- Start low, e.g.: 0.25 mg at night


Mood Stabilizing Antiseizure Medications

• Replace phenytoin or phenobarbital with a newer drug!
• Carbamazepine
  – Often worsens behavior
• Divalproex sodium
  – Extended-release formulations available
  – Once-daily dosing
• Lamotrigine
  – May also be a mildly effective antidepressant
  – May worsen irritability
• Levetiracetam and oxcarbazepine may also be effective for bipolar spectrum symptoms
• Gabapentin plus divalproex helpful with low dose antipsychotics in Bipolar-like illness

Divalproex

• *An Open Trial of Divalproex Sodium in Autism Spectrum Disorders*
  – All patients with an abnormal EEG or history of seizures (10/14) were responders
  – Mean dose was 768 mg/day (range 125mg- 2500mg/day)
  – Improvement noted in core symptoms of autism and associated features of affective instability, impulsivity and aggression

Valproate

Treatment of Affective Symptoms in Individuals with I/DD

- Prospective, open-label, 2-year trial with valproate
  - 18 individuals with I/DD plus 3 of the 4 following symptoms
    - Irritability
    - Sleep disturbance
    - Aggression or self-injury
    - Behavioral cycling

- Valproate levels
  - 60 – 124 µg/mL

- Discontinuation of initial neuroleptics in 9/10 patients

*Valproic acid

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Valproate in Aggression: in Youth With PDD

- Prospective double-blind, placebo-controlled study
- 30 outpatients (20 boys, 10 girls)
  - 6-20 years of age with PDD and significant aggression
  - Randomized to valproate (VPA) or placebo (PBO) for 8 weeks
  - After 8 weeks, voluntary open-label VPA maintenance phase

Valproate in Aggression: in Youth With PDD (contd.)

- Study Results
  - No treatment differences was observed statistically between VPA and PBO groups.
  - Primary outcome measure: Aberrant Behavior Checklist-Community Scale (ABC-C) Irritability subscale (p=0.65)
  - Secondary outcome measures CGI-Improvement (p=0.16 and OAS (p=0.96)
    - Mean VPA trough blood levels
      - 75.5 mcg/mL at week 4
      - 77.8 mcg/mL at week 8

- Post Study
  - 16 (10 VPA and 6 PBO) completers of 8-week study elected to participate in open-label maintenance trail of VPA
  - 10/16 (63%) demonstrated a sustained response
  - 4/10 (40%) later attempted taper, with significant relapse of aggression. VPA was resumed.

Other Evidence

• *Efficacy of Levetiracetam in Developmentally Disabled Patients: A Review of the Literature and Six Case Reports.*

• *Aggressive Behaviour in Intellectually Challenged Patients with Epilepsy Treated with Lamotrigine.*

• Anecdotes of improved social skills and language development in autistic kids treated with antiepileptic medication
  
  – *Autism: Electroencephalogram Abnormalities and Clinical Improvement with Valproic Acid*

# Expert Opinion

## Bipolar Disorder and IDD

<table>
<thead>
<tr>
<th>Bipolar disorder, manic</th>
<th>Treatment of</th>
<th>Other First-Line Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic, euphoric mania</td>
<td>Valproate</td>
<td>Lithium</td>
</tr>
<tr>
<td>Mixed or dysphoric</td>
<td>Valproate</td>
<td>Lithium</td>
</tr>
<tr>
<td>Rapid cycling mania</td>
<td>Valproate</td>
<td>Lithium,</td>
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<thead>
<tr>
<th>Bipolar disorder, depressive</th>
<th>Treatment of</th>
<th>Other First-Line Treatments</th>
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</thead>
<tbody>
<tr>
<td>Nonpsychotic depression</td>
<td>Mood stabilizer + antidepressant</td>
<td></td>
</tr>
<tr>
<td>Psychotic depression</td>
<td>Mood stabilizer + antidepressant + antipsychotic</td>
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### Expert Opinion

**Behavioral Symptoms in IDD**

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<th>Behavioral Symptom</th>
<th>First-Line Treatments</th>
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<tr>
<td>Self-injury</td>
<td>Treatment of choice in Risperidone, valproate</td>
</tr>
<tr>
<td>Aggressive/destructive behavior</td>
<td>Treatment of choice in Risperidone, valproate</td>
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<tr>
<td>Nonaggressive agitation</td>
<td>Mood stabilizer</td>
</tr>
<tr>
<td>Psychiatric/behavioral problems in a patient with comorbid epilepsy</td>
<td>Treatment of choice in Valproate</td>
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Summary

- Frequent neurological comorbidity in IDD
  - Increased risk of recurrent seizures, especially in children with lower IQ
  - Seizure control improves behavior
- Psychiatric disorders increase impairment in IDD
- Psychiatric illness is 3 to 4x more common in IDD patients than in general population
- Try to target a DSM-IV diagnosis
- All classes of medication may be used effectively to treat comorbidities
- Best results with medications + therapy interventions
- Combination treatments often used but studies still needed
Thank You

• Thank you for your interest and participation.

• Please don’t forget to complete and return the program evaluation and CME request form to program staff before you leave.