Foster Care and Psychotropic Medications

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Times have changed

Use of Psychotropic medications has increased exponentially
Psychotropic medications prescribed 2-3 times as often to American children/adolescents, compared to those in Germany and the Netherlands.

- 19.2% in US were prescribed >1 psychotropic medication, 2x’s the rate of Holland, 3x’s the rate of Germany
- Annual prevalence:
  - US 6.7%  Holland 2.9%  Germany 2.0%
- Stimulants:
  - US 4.3%  Holland 1.2%  Germany 0.7%
- Antidepressants:
  - US 2.7%  Holland 0.5%  Germany 0.2%
- 0-4 year olds:
  - US 0.9%  Holland 0.9%  Germany 1.6%

Literature is scare

Research is harder and hence data is harder to get.
Literature

Results from large sample of kids in foster care in two Midwestern states show:

1. Psychotropic use: 2.4 -2.9%
2. 30%: Multiple Medications
3. Medicaid enrolled children receiving multiple psychotropic medications are more likely to be male, white, 10-14 years of age, disabled and in foster care.
4. There were lots of co morbidities when multiple medications were used.

Multiple Psychotropic Medication Use for Youths: A Two-State Comparison, (Susan dosReis et. al, 2005)
Literature (Narendorf et al)

- Elevated rates in child welfare: 2-3 times higher.
- Poly Pharmacy is higher.
- Evaluations are often short and side effects can be significant including oversedation.
- Reasons for Poly pharmacy include:
  1. Limited communication,
  2. Low reimbursement rates,
  3. Reactive meds to save placement,
  4. Greater psychosocial adversity leading to more difficulties.

(Narendorf et al)
Literature

Out of cohort 403 older youth in a Midwestern State:

1. 10% were on three anti psychotics.
2. 19-41% had a diagnosis but no medication.
3. History of abuse or significant mood disorder were associated with three or more antipsychotics.

(Raghavan & McMillen, 2008)
Literature

Results from large sample of kids in foster care from two states demonstrated following things:

1. Psychotropic use was 2.4% to 2.9%, 30% multiple medication
2. Medicaid enrolled children receiving multiple psychotropic medications are more likely to be male, white, 10-14 years of age disabled and in foster care.
3. Co morbidities were associated with multiple Psychotropic medication use.

(Susan dosReis, et al. 2005)
Not Black and White

To me,

Given the complexity of situation, the trauma and psychosocial adversity that these kids face it is important to be mindful of ways that providers and mental health providers can make a difference in positive ways.
1. Initial mental health screen within 24 hours to identify children who need to be seen emergently. Ideally with general health exam by someone trained in developmental and mental health.


3. Comprehensive assessment within 60 days include child adolescent psychiatrist.

4. Removal from primary caregivers usually constitutes a psychological and social crisis for the child and family. Internal experience of the placement and the nature of the child’s attachments

5. Assessment should try to understand child’s internal experience of removal, and nature of attachment.

6. Once in three months when stable.
Fadalia Kim, MD

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Literature Review

• Review of literature relating to the development and mental health of foster children with consideration of trauma history.

• A history of maltreatment is the most common background for out-of-home placement and often correlated to parents’ substance use.

• Abuse types include neglect, domestic violence, emotional, physical and sexual abuse.
Literature Review

- Maltreatment rates highest for neglect, then physical abuse, then sexual abuse.

- A study of physically neglected children found at initial placement into foster care height and weight were significantly below the standard. One year later the difference was no longer significant although still slightly lower than average.

- Lower cognitive functioning was related to neglect or physical abuse.
Literature Review

- Foster children exhibit more attention problems, social problems, delinquent and aggressive behavior, anxious/depressed symptoms and somatic complaints.
- Neurobiological implications for the hypothalamic-pituitary-adrenal axis and cortisol levels.
- Several studies underway investigating numerous different factors contributing to developmental delays and mental health diagnoses of foster children.
Case Study

• J is a 7 y/o AAF who lives with her adoptive parents. She was in 6 different foster homes from the age of 5 days to the age of 4 years old.

• Some concern for physical and sexual abuse at previous foster home.

• Presented with violent outbursts, physically aggressive towards mom during outbursts, other times “very clingy”.

• High level of anxiety, periods of appearing “zombie-ed out”.
Case Study

- J has been seeing a therapist for 2.5 years and had been started on medications by her PCP.
- Initial medications included: depakote (500mg), trazodone (150mg), adderall xr (30mg), risperdal (3mg) and clonidine (0.1mg).
- Changes to medications:
  - Tapered and discontinued depakote and trazodone
  - Tapered risperdal and clonidine
  - Discontinued adderall for summertime
  - Started Prozac for anxiety
Case Study

- Follow Up:
  - Mom reported J was more calm and able to focus and did not appear drowsy throughout the day.
  - Still having some outbursts but decreased frequency and severity
  - Able to self-soothe more when angry
- Continued changes:
  - Continuing to taper risperdal and clonidine
  - Will restart adderall when school starts at lower dose
Foster Care and Psychotropic Medications

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Medication principles

- Treat sparingly
- Usually no antipsychotics under 5
- Only with ongoing weekly psychotherapy
- Treat ADHD first
Common Diagnosis

- ADHD
- DEPRESSION
- ANXIETY
- PTSD
DISRUTIVE BEHAVIOR

- DISRUTIVE BEHAVIOR NOS
- ODD

Others to consider
1. Impulse control disorder NOS
2. Bipolar disorder and affective disorders
3. ADHD
Unusual

- Tics
- OCD
- Psychosis
- Organic disorder- hypoxia at birth, fetal alcohol etc.
- BIPOLAR
Medications

- Antidepressants: Celexa, Prozac, Zoloft, Lexapro
- Mood Stabilizers: Trileptal, Lithium, Tegretol, Depakote
- Antipsychotics: Risperidone, Abilify, Geodon
- Stimulants: Adderall, Ritalin
- Others: Clonidine, Tenex, Intuniv
DISORDERS

ADHD
Common presentations

- H is a 5 y/o WF in DHS custody living with grandmother with aggression, disruptive behavior
- C is a 7 y/o WM with disruptive behavior in class who threatened to stab another kid. He is being raised by single mother with significant medical condition
- D is a 6 y/o WM in kindergarten who doesn’t listen! Teacher says he can’t sit still!!
# ADHD

- **Boys 2-9% > Girls 3%**
- 80% Monozygotic Concordance
- Before age 7, 2 settings

<table>
<thead>
<tr>
<th>Inattention</th>
<th>Hyperactivity</th>
<th>Impulsivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Makes careless mistakes</td>
<td>1. Fidgets a lot</td>
<td>1. Often blurts answers</td>
</tr>
<tr>
<td>2. Seems forgetful</td>
<td>2. Often leaves seat</td>
<td>2. Often has difficulty waiting turn</td>
</tr>
<tr>
<td>3. Difficulty sustaining attention</td>
<td>3. Often climbs/runs</td>
<td>3. Often interrupts</td>
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<tr>
<td>4. Doesn’t seem to listen</td>
<td>4. Often can’t playing quietly</td>
<td></td>
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<tr>
<td>5. Doesn’t follow through</td>
<td>5. Often “on the go”</td>
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<tr>
<td>6. Difficulty organizing</td>
<td>6. Often talks excessively</td>
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<tr>
<td>7. Avoids tasks needing sustained mental effort</td>
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<td></td>
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<tr>
<td>8. Loses things</td>
<td></td>
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<tr>
<td>9. Easily distracted</td>
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Pathophysiology

- Poor inhibitory control
- Difficulties with higher executive function
- Motor timing problems
- Difficulties delaying reward

ADHD Symptoms
First Line treatments

Ritalin
  Methylphenidate
  Ritalin LA, Concerta, Metadate CD

Adderall
  Amphetamine
  Vyvanse, Adderall XR, Dexedrine

Non-Stimulant
  Atomoxetine / Strattera
Stimulant Treatment Response (Arnold 2000)

44% to one type only

41% to both

85% Response
Stimulant side effects

- Decreased appetite - monitor Height and Weight.
- Impaired Sleep – Sleep hygiene, Caffeine intake, and time of medications.
- Heart- Increased blood pressure and heart rate.— Reduced exercise Tolerance.
  (May feel more breathless, can make asthma worse.)
- Rare- Motor tics, Compulsive behavior – Reversible.
- Rare - Altered Mood/ Affect – Could be dose related, Co morbid.
Non Stimulant Side Effects

**Strattera – Atomoxetine**

- Noradrenergic reuptake blocker that has some indirect agonism on dopamine.
- Effect size (0.62) appears smaller than that of stimulants.
- Full therapeutic effect may take patients a month of treatment.
- Black Box Warning for liver damage.
Second line Treatment

1. Clonidine
2. Tenex – Guafacine (intuniv)
3. Wellbutrin
4. TCAs (older antidepressants) not used
Treatment vs. No Treatment

ADHD Symptoms

Interpersonal problems, Poor school functioning

Negative Feedback

Low Self Esteem

Dropping out, Subs Abuse, High Risk Behavior
Disorders

Disruptive Behavior Disorder
The vicious cycle

Defiant
Irritable
Behavior

Impulsive
Aggression

Angry
Response
from
Environment
Disruptive behavior

Parent come with a list of complaints:

- Defiant....does not mind....very disrespectful
- Talks back...wants things his way
- Mean to sister....can throw huge fits
- Physically aggressive
- Angry

Lots of negative feedback from environment.
### Disruptive Behavior Disorder

Prepubertal M>F then equal

<table>
<thead>
<tr>
<th>ODD 4 for 6 months</th>
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<tbody>
<tr>
<td>1. Often loses temper</td>
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<tr>
<td>2. Often argues with adults</td>
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<td>3. Often defies or refuses to comply</td>
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<td>4. Often annoys people</td>
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<td>5. Often blames</td>
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<td>6. Often touchy</td>
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<tr>
<td>7. Often angry</td>
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<td>8. Often spiteful</td>
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</table>
**Conduct disorder**

- At least 3/15 in last year, 1/15 in last six months.

<table>
<thead>
<tr>
<th>Aggression</th>
<th>Destruction</th>
<th>Deceit/ Theft</th>
<th>Rules</th>
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<tbody>
<tr>
<td>Often bullies</td>
<td>8. Fire setting</td>
<td>10. break in house/car</td>
<td>13. Stays out &lt; 13 y/o</td>
</tr>
<tr>
<td>Initiates physical fights</td>
<td>9. Destruction of property</td>
<td>11. lies for goods/favors</td>
<td>14. Run away overnight at least</td>
</tr>
<tr>
<td>Weapons use</td>
<td></td>
<td>12. steals w/o confronting</td>
<td>twice</td>
</tr>
<tr>
<td>Physically cruel to people</td>
<td></td>
<td></td>
<td>15. Often truant</td>
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<tr>
<td>Physically cruel to animals</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Stole while confronting</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>forcible sexual act</td>
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Disruptive behavior

• **First treat ADHD**
• **No Specific Medications for defiance**
• For impulse control, irritability

1. Short term with behavioral interventions.
Medications.

1. Atypical antipsychotics / mood stabilizers - Risperidone, Abilify, Seroquel.
2. Clonidine, Gaunfacine
3. Depakote, Trileptal, Tegretal,
4. Lithium.

5. Short term with behavioral interventions.
Irritability

- Risperidone / Abilify.
- FDA approval only in Autism / Mental Retardation

- Less commonly Geodon, Seroquel and Zyprexa
Risperidal (Risperidone)

- Common problems:
- Increased appetite
- Weight gain
- Diabetes Mellitus (non insulin dependent)
- Movement disorders- short term and long term.
- Doses 0.25mg to 0.5 mg twice a day.
Abilify (Aripiprazole)

- Common problems:
- No difference in behavior.
- Sleepiness, blurred vision, GI symptoms.
- Some weight gain.
- Doses 2mg, 5mg and 10mg are commonly used.
Depression

Common presentations:

- “Feeling down”
- Conflicts at School and home
- Social Isolation
- Irritability instead mood sad mood in kids
- Poor school performance, poor attention
- Low self esteem
- Appetite, Sleep disturbance
- Acting out in younger kids,
- Regression in younger kids
Anxiety

Common Presentations:

- School refusal
- Separation anxieties - Cant sleep alone, cant do sleepovers
- Specific worries
- Social Isolation
- Gets anxious in public
SSRI’s are treatment of choice

Presynaptic inhibition of serotonin reuptake

Chronic treatment also down regulates serotonin receptors

Modulates serotonergic transmission.
Anti-Depressants

SSRIs are the first-line medication treatment for youth with MDD, OCD, and other anxiety disorders

1. Prozac
2. Celexa
3. Zoloft
4. Lexapro
5. Luvox
Depression

- Prozac FDA approved $>8$ yrs

- Only antidepressant to demonstrate efficacy in more than one RCT for depression.

- Better younger than age 12.

- Lots of drug interactions since it is a potent inhibitor of liver enzymes
Prozac / Fluoxetine

- It is the only antidepressant to have more than one positive RCT for MDD, OCD, and anxiety disorders.

- It may also be beneficial in improving OCD symptoms associated with other disorders (e.g., repetitive symptoms associated with autism).

- Starting dose 5-10 mg. May increase to 20 mg.
Celexa / Citalopram
Lexapro / EsCitalopram (s-enatiomer)

- Specific for serotonin receptors
- Low chance of interaction
- Relatively less side effects
- Dose 20-40/10-20
- Lexapro is more expensive.
Zoloft / Setraline

- Inhibits reuptake of serotonin as well as dopamine
- Better in adolescents than children
- Has been evaluated as part of Pediatric OCD Treatment Study (POTS)

\[ \text{CBT=meds< Combo} \]
Paxil/paroxetine – don’t use it in kids!!!

- Most potent serotonin and norepinephrine reuptake inhibitor. Its muscarinic acetylcholine antagonism also rivals that of TCAs
- Very short half life can cause withdrawal
- Smaller does in younger kids
- Adolescents might respond better

- Don’t use it usually in kids!!!
Luvox / fluoxamine

- Not as well studied for pediatric depression.
- FDA indication for OCD
- Lots of drug interactions through the P450 system
- Dose 25mg QHS to start and slowly increase to 200 mg day in two divided doses.
SSRIS – SIDE EFFECTS

- Vomiting, diarrhea, headaches
- Dizziness
- Somnolence
- Vivid or strange dreams
- Changes in appetite, weight loss, weight gain
- Tremors, akathisia, restlessness
- Skin rashes
- Increased sweating, bruxism
- Mania/activation
SSRIS – SIDE EFFECTS

- SSRIs may increase the risk of bleeding, esp. with OTC painkillers.

- Sexual side effects are also common, including decreased libido, anorgasmia, and erectile dysfunction.

- Increased suicidal thinking and behaviors.
Suicide risk – black box

Males > females (actual suicide)

Most risk before – one month prior to treatment initiation

Some increase in suicidal ideation but not behavior (4/100 vs 2/100)

No increase in number of suicides
SSRIs also have a higher margin of safety in overdoses compared to TCAs and MAOIs. However, deaths have been reported with large ingestions of SSRIs.
Discontinuation symptoms similar to flulike symptoms

1. Headache,
2. Diarrhea
3. Nausea,
4. Vomiting,
5. Chills,
6. Dizziness,
7. Fatigue
Other Antidepressants

- Trazodone
- Welbutrin unrelated chemically to other antidepressants contraindicated in eating disorders
SNRIs

- Venlafaxine Hydrochloride Inhibits serotonin, norepinephrine (Weakly DA)
- Mirtazapine/Remeron
- Cymbalta
- Strattera (also ADHD)
Bipolar disorder

- Mood Stabilizers
  1. Lithium – High toxicity so needs a lot of monitoring.
  2. Depakote – high risk of weight gain, POCS.
  3. Trileptal – Hyponatremia,
Insomnia - Melatonin

- Melatonin is a hormone produced in the pineal gland.
- Send signals to the brain and affects sleep and circadian rhythms.
- Nocturnal melatonin secretion in initiating and maintaining sleep.
- Control by the day/night cycle.

Wurtman, MD, Physiology and clinical use of melatonin In: UpToDate, Basow, DS (Ed), UpToDate, Waltham, MA, 2012.
Melatonin

Affect parameters of sleep itself
1. Decreasing sleep latency,
2. Increasing sleep efficiency,
3. Increasing total sleep time.
4. Acting via the mechanisms that control circadian rhythms to change the phasing of the sleep rhythm.
Insomnia

Melatonin 300mcg to 1 mg OTC – first line.
1. No loud sounds,
2. No bright lights,
3. Same time daily,
4. Not a sleeping pill,
5. Non addictive.
6. Too high doses might not work.
7. Drug holidays if stops working.
Insomnia

- Clonidine – blood pressure medication – use for insomnia has no evidence and should be discouraged.

- Trazadone - older antidepressant but does not work as an antidepressant in low doses. Not well studied in kids. May have impact on liver function.
Questions..?

Thank You.