Post Traumatic Stress Disorder (PTSD) versus Bipolar Disorder: Confusion in the face of chaos.

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Disclosures

- No Financial Disclosures
14 yo Hispanic female presents to a psychiatric clinic due to increasing outbursts that poses a danger to herself and others. She is attending a behavioral school as she has a history of aggression in the classroom where she has attacked classmates. She has also been self injurious and expressed a desire to die numerous times. Most recently she broke a pencil in half and was stabbing her hand with it while in the classroom. She has one inpatient hospitalization for DTS. The family describes mood swings without any precipitating factors.

At the initial eval it is revealed the pt hears a male voice that tells her to harm herself and makes comments about her and others throughout the day.
Goals

- Differentiate the clinical presentation of PTSD from Bipolar
- Outline DSM-V criteria for PTSD in youth
- Develop management strategies for the treatment of PTSD and Bipolar Disorders
- Develop an appreciation for the impact of low threshold trauma on PTSD
Why this topic?

- Clinical presentation is challenging due to overlap of symptoms
- Effective treatment planning requires accurate diagnosis
DSM-V

Trauma and Stressor-Related Disorder

- Reactive Attachment Disorder
- Disinhibited Social Engagement Disorder
- PTSD
- Acute Stress Disorder
- Adjustment Disorder
Post Traumatic Stress Disorder

- DSM-V changes
  - Over 6 years of age
    - Exposure to actual or threatened death, serious injury, or sexual violence
    - Intrusive symptoms associated with the traumatic events (play, dreams, flashbacks, autonomic reactions)
    - Avoidance of stimuli associated with the traumatic event
    - Negative alterations in cognition and mood associated with the event
  - Irritability, anger, recklessness, concentration and sleep issues
Post Traumatic Stress Disorder

- DSM-V changes

- Under 6 years of age
  - Exposure to traumatic event, witnessing trauma to a caregiver or learning that an event occurred can trigger
  - Intrusive symptoms associated with the traumatic events (play, dreams, flashbacks, autonomic reactions)
  - Avoidance of stimuli associated with the traumatic event
  - Negative alterations in cognition and mood associated with the event
  - Irritability, anger, recklessness, concentration and sleep issues
PTSD Overview

- 700,000-1.25 million children are abused or neglected annually (1)
- Early abuse/neglect can impact attachment and the effects lie dormant in the brain until later life
- By adolescences, 80% of abused children will be diagnosed with a major psychiatric disorder

Reconsideration of what is traumatic

- Premature infants and neonatal intensive care leads to psychological distress and trauma in parents
- Domestic violence is capable of producing PTSD
Relationship between Genetics and childhood experiences

- Children have prewired brain circuitry to ensure attachment to their caregivers.
- Childhood experiences interact with our genetics to change the structure of the brain.
Post Traumatic Stress Disorder

- Abnormalities occur with NE, 5-HT, Opioid systems and the hypothalamic pituitary adrenal axis (HPA)

- Stress triggers the release of Corticotropin-releasing factor (CRF) in the hypothalamus. This increases the release of cortisol.

- High CRF levels at the time of trauma may facilitate encoding of traumatic memory and enduring anxiety via direct actions at CRF-1 receptors
Post Traumatic Stress Disorder

- Stress/trauma may interfere with the sympathetic nervous system.
- Makes pulse hormones that lead to changes in brain structure
- Hyperarousal and hypervigilance of PTSD may become chronic
Neurobiology

- Adolescents with PTSD demonstrated
  - Decreased activation of the middle frontal cortex
  - Increased activation in the left medial frontal gyrus
  - Activation of the anterior cingulate gyrus
Adolescents exposed to Domestic Violence showed midbrain, limbic, cortex, corpus callosum and cerebellum changes
Neurobiology

- If the Midbrain stays underdeveloped
  - Easily distracted, poor attention span

- Limbic
  - Emotion, survival, fear, anger and pleasure. Also involved in memory function and gauging the magnitude of a response.

- Cortex-understanding consequences
Neurobiology

- Prefrontal cortex - Executive functions
- Corpus callosum
  - Volume decreased in abuse or witnessing violence
- Cerebellum is involved in emotion and cognitive development and balance.
  Connects with the frontal lobe and modulates behavior
Which of the following is no longer required in DSM-V for the PTSD diagnosis?

- Intense fear, helplessness, or horror
- Insomnia or hypersomnia
- Avoidance
- A foreshortened sense of time
- Flashbacks
14 yo Hispanic female .......... 

During the third appointment, it is revealed by the parents that the pt was sexually abused at age 4 by a relative. Parents were in the US and the pt was being cared for by a relative in Mexico.
PTSD Challenges

- Different phenotypic presentation
  - Anxiety
  - Dysphoria
  - Externalizing angry and aggressive symptoms
  - Dissociative symptoms
  - Dysregulated mood states
Neurotransmitter Regulation of Mood, Cognition, and Behavior

- **Dopamine**
  - Attention
  - Motivation
  - Pleasure
  - Reward

- **Norepinephrine**
  - Alertness

- **Mood**

- **Anxiety**

- **Obsessive Compulsive Symptoms**

- **Serotonin**
Mood Lability

DMDD

Bipolar

Mood

PTSD
Mood Disorders in Children/Adolescents

- Major Depression
- Bipolar Disorder
- DMDD
- Persistent Depressive Disorder (Dysthymia)
Disruptive Mood Dysregulation Disorder (DMDD)

- Created due to the concerns for over diagnosis and treatment of Bipolar Disorder in Children
- Persistent irritability (non-episodic)
- Frequent episodes of extreme behavioral dyscontrol
- Dx made between ages 6-18
- Onset of symptoms before age 10
Disruptive Mood Dysregulation Disorder

- Verbal and physical rages out of proportion to the situation
- Outbursts occur 3> times a week
- Mood between outbursts is irritable or angry
- Must have had sx for 12> months
- Occur in 2 or more settings
Disruptive Mood Dysregulation Disorder

- Prevalence 2-5%
- Rates higher in Males and school age children
- Rates of conversion DMDD to Bipolar are very low
- Children typically develop unipolar depression or anxiety disorders
Disruptive Mood Dysregulation Disorder

- Risk-
  - Chronic irritability as children before onset of disorder
  - ADHD, Depression and Anxiety may be comorbid
  - ODD, Bipolar, Intermittent explosive disorder cannot occur
Bipolar Disorder-Children

- Prevalence in 1994 was 0.42% and 6.7% in 2003 (1)
- High prevalence child inpatient hospitals
  - Discharge diagnosis rate 12 times higher when compared to England data (2)
- 20-40% adults recalled sx began in childhood (3)

3. Judd L; J Affective Disrod: 2003; 123
Bipolar Criteria

- Elevated, expansive or irritable mood and increased goal-directed activity/energy for a week
- Grandiosity
- Decreased need for sleep
- Talkative, flight of ideas
- Distractible
- High risk behaviors-sexual, spending money
Bipolar Criteria via NIMH

- No significant changes in criteria for children
- Bipolar symptoms are extreme and tend to last for most of the day, nearly every day, for at least 1 week
- Sometimes a child may have more energy and be more active than normal, but not show the severe signs of a full-blown manic episode ➔ hypomania
Features

- Grandiosity (defies law of logic)
  - Story Telling
  - Harass Teachers—may fail classes intentionally
  - Steal expensive Items
  - Rules do not apply to them
  - Prominent positions in career despite limitations; i.e. grades, talent
Comorbid Disorders

- Attention deficit/hyperactivity disorder (ADHD) 90% prepub and 30% adol
- Substance abuse - 60%
- Anxiety disorders - 33% child/12% adol
- Oppositional defiant disorder
- Conduct disorder - 22% child/ 18% adol
- Suicide - completed 10-15% (1)

1. Goldstein; arch Ped Adolesc Med 2012; 166(4) 362
Scenarios that Raise Suspicion for Bipolar Illness

- 3 or more antidepressant failures
- Antianxiety medication failures
- Antidepressant Activation
- Psychosis + Depression
- Family history positive for Bipolar Disorder
Differential Diagnosis

DMDD
- Non-episodic
- Irritability is persistent and present for months

Bipolar
- Episodic mood changes
- Baseline changes to normal mood, behavior, cognitive functions
- Elevated mood
## Differential Diagnosis

<table>
<thead>
<tr>
<th>PTSD</th>
<th>Bipolar</th>
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<tbody>
<tr>
<td>Dissociation</td>
<td>Psychosis</td>
</tr>
<tr>
<td>Diminished interest in activities</td>
<td>Mania</td>
</tr>
<tr>
<td>Irritable behavior and outbursts</td>
<td>Depression</td>
</tr>
<tr>
<td>Problems with concentration</td>
<td>Mood lability</td>
</tr>
<tr>
<td></td>
<td>Problems with concentration</td>
</tr>
</tbody>
</table>
How to evaluate

- History is critical for abuse and mood cycles
- Traumatic Events Screening Inventory (TESI)
- Child Mania Rating Scale (SMRS-P)
- Young Mania Rating Scale (YMRS)
- Mood Diaries
- Clinical Response
The pt was started on Celexa and Risperdal was added later for augmentation. Following much rapport building, trauma informed therapy was initiated and continued over a two year period. The pt reported reduced frequency and intensity of the hallucinations and was able to transfer back to a mainstream school. Mood lability improved and she had no further SIB.
## Treatment

### PTSD
- SSRI
- Mood Stabilizers
- Alpha-2-agonists
- CBT
- Trauma Based Therapy
- EMDR

### Bipolar
- Lithium
- Anticonvulsants
- Atypical Antipsychotics
- CBT
- Education
Treatment of Bipolar

- Lithium (Lithium Carbonate)
- Depakote (Valproic Acid)
- Tegretol (Carbamazepine)
- Trileptal (Oxcarbazepine)
- Lamictal (Lamotrigine)
Atypical Antipsychotics

- Risperidone (Risperdal)
- Olanzapine (Zyprexa)
- Ziprasidone (Geodon)
- Quetiapine (Seroquel)
- Aripiprazole (Abilify)
- Asenapine (Saphris)
- Clozapine (Clozaril)
Treatment Duration With Mood Stabilizers

- Maintain at therapeutic levels at least 2 years after symptom resolution
- Taper slowly, over a 6-month period
Psychosocial Treatment

- Family and Individual therapy
- Education
- Relapse Prevention
- School Support
Summary

- Often difficult to diagnosis due to symptom overlap
- Accurate diagnosis important for medication selection
- Inquire about PTSD in patients suspected of having Bipolar
- Reconsider DMDD diagnosis for patients with previous Bipolar Disorder diagnosis
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