Recognition and Treatment of Bipolar Disorder

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Bipolar Disorder Topics

- Prevalence
- Phenomenology – What are the symptoms
- Treatments – 2 phases of illness
  - Mania
  - Depression
## Prevalence of Psychiatric Disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Youth %</th>
<th>Adult %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety DO’s</td>
<td>8-10</td>
<td>10+</td>
</tr>
<tr>
<td>ADHD</td>
<td>8</td>
<td>5?</td>
</tr>
<tr>
<td>Major Depression</td>
<td>3/8</td>
<td>10-12</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>1</td>
<td>1-3</td>
</tr>
<tr>
<td>Bipolar Spectrum</td>
<td>3</td>
<td>3-6</td>
</tr>
<tr>
<td>Substance abuse/dependence</td>
<td>Up to 10</td>
<td>12</td>
</tr>
</tbody>
</table>

Totals ~20% ~30%
Epidemiology of Bipolar Disorder

- Up to 1% in prepubertal children
- 1% in adolescents
- 1-3% in adults
- Studies indicate that Bipolar disorder is occurring at an earlier age in successive birth cohorts. (within families by generation)
- Possible causes: Cohort effect, early use of Stimulants and Antidepressants, depletion of EPUFA’s.
National Depressive & Manic-Depressive Association Survey

- Lish, Meenan, Whybrow, Price & Hirschfeld
  - University of Pennsylvania
- J of Affect Dis., 31 (1994) 281-294
- 3312 Questionnaires (886 Returned (27%))
- 154 Items
  - Onset & Course of Illness
  - Impact of Illness
  - Path To & Nature of Treatment
Age of Symptom Onset

Lish et al., 1994

Age Group (yr.)

- < 5: 5%
- 5-9: 16%
- 10-14: 12%
- 15-19: 28%
- 20-24: 14%
- 25-29: 14%
- > 30: 9%

- prepubertal: 31%
- Adult: 40%
Lish et al., DMDA Summary

- 59% Presented in Childhood or Adolescence
- Initial Symptoms
  - Depressive
  - Depressive & Manic/Hypomanic
- Child or Adolescent Onset
  - Recurrent Illness Common
  - Increased Rates of Psychosocial Morbidity
Difficulties in Diagnosing Pediatric Bipolar Disorder

- Low base rate of the disorder \( \leq 1\% \).
- Cross-sectional and longitudinal variability.
  - People seek care when depressed, they are brought in when manic
- Developmental stage.
- Co-morbidity (ADHD, Disruptive Behavior DO’s, PTSD)
- Symptom overlap

Bowring and Kovacs
# Clinical Features by Age of Onset for Bipolar Disorder

<table>
<thead>
<tr>
<th></th>
<th>Prepubertal and early adolescent</th>
<th>Older adolescent and adult</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial Episode</strong></td>
<td>Major Depression</td>
<td>Mania</td>
</tr>
<tr>
<td><strong>Episode Type</strong></td>
<td>Ultra-rapid cycling**</td>
<td>Persistent</td>
</tr>
<tr>
<td><strong>Primary Mood</strong></td>
<td>Irritable – Mixed manic</td>
<td>Euphoric</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Chronic, continuous</td>
<td>Weeks</td>
</tr>
<tr>
<td><strong>Interepisode Functioning</strong></td>
<td>Less distinct episodes</td>
<td>Improved function</td>
</tr>
<tr>
<td><strong>Reality Testing</strong></td>
<td>Delusions and Hallucinations Common</td>
<td>Less Common</td>
</tr>
</tbody>
</table>
Grandiosity

- More Self-Confident Than Usual
- Smarter, Stronger, Better than Others?
  - Smarter Than Teachers
  - Stronger Than Coaches
  - “I could run this school a lot better if they would just give me a chance.”
- Special Talents or Abilities
Elation, Expansive Mood

- Feels “Very Good” or “Great” Much of the Time
- Too Cheerful, High or Terrific
  - No Insight
- Feels on Top of the World
- Laughs a Lot, Gets Excessively Silly
  - “Super-Happy”
  - Hard To Be Around
*Decreased Need for Sleep*

- Needs Less Sleep Than Usual to Feel Rested
  - By Age Norms For Total Sleep Period
- Bedtime?
  - Usually Delayed
  - How Long Does It Take to Fall Asleep?
- Middle Awakenings?
- Final Wake Time?
  - Out-of-Bed Time?
- Sometimes parents do not know
Unusually Energetic & Increase In Goal-Directed Activity

- More Energy Than Usual to Do things
- Always On-The-Go
- Multiple Projects
- Wears Out Playmates
Accelerated, Pressured or Increased Amount of Speech

- Speaks Rapidly
- Talks On and On
- Talks So Fast That Others Could Not Understand
- Difficult to interrupt
- Youth with ADHD are distractible from topic to topic but do not have flight of ideas.
Hypersexuality

- Many children (and adults) with BPD have a drive for pleasurable activities. This can include promiscuity.
- Not all children with sexual behavior have been abused.
- Abuse should still be considered.
Prodromal Symptoms for Bipolar Disorder

- Depressed mood (Dysphoria)
- Increased energy / decrease sleep
- Decreased energy
- Anger dyscontrol
- Irritability
<table>
<thead>
<tr>
<th>Wash-U-KSADS Mania Item</th>
<th>Bipolar</th>
<th>ADHD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grandiosity</td>
<td>85%</td>
<td>7%</td>
<td>0.001</td>
</tr>
<tr>
<td>Elated Mood</td>
<td>87%</td>
<td>5%</td>
<td>0.001</td>
</tr>
<tr>
<td>Daredevil Acts</td>
<td>70%</td>
<td>13%</td>
<td>0.001</td>
</tr>
<tr>
<td>Uninhibited People Seeking</td>
<td>68%</td>
<td>21%</td>
<td>0.001</td>
</tr>
<tr>
<td>Sillines, Laughing</td>
<td>65%</td>
<td>21%</td>
<td>0.001</td>
</tr>
<tr>
<td>Flight of Ideas</td>
<td>66%</td>
<td>10%</td>
<td>0.001</td>
</tr>
<tr>
<td>Racing Thoughts</td>
<td>48%</td>
<td>0%</td>
<td>0.001</td>
</tr>
<tr>
<td>Hypersexuality</td>
<td>45%</td>
<td>8%</td>
<td>0.001</td>
</tr>
<tr>
<td>Decreased Need for Sleep</td>
<td>43%</td>
<td>5%</td>
<td>0.001</td>
</tr>
<tr>
<td>Sharpened Thinking</td>
<td>51%</td>
<td>23%</td>
<td>0.001</td>
</tr>
<tr>
<td>Increased Goal Directed Activity</td>
<td>52%</td>
<td>21%</td>
<td>0.001</td>
</tr>
<tr>
<td>Increased Productivity</td>
<td>37%</td>
<td>15%</td>
<td>0.001</td>
</tr>
<tr>
<td>Irritable Mood</td>
<td>97%</td>
<td>72%</td>
<td>0.007</td>
</tr>
<tr>
<td>Accelerated Speech</td>
<td>97%</td>
<td>78%</td>
<td>0.002</td>
</tr>
<tr>
<td>Hyperenergetic</td>
<td>97%</td>
<td>92%</td>
<td>0.440</td>
</tr>
<tr>
<td>Distractibility</td>
<td>92%</td>
<td>95%</td>
<td>0.720</td>
</tr>
</tbody>
</table>
### Differential Diagnosis and Co-Morbidity in Bipolar DO.

<table>
<thead>
<tr>
<th></th>
<th>Child</th>
<th>Adolescent</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language DO</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ODD</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Conduct DO</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Antisocial PD</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Borderline PD</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Geller and Luby, 1997
### Co-morbidity of ADHD In Pediatric Bipolars

<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>Mean Age</th>
<th>ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>West et al., 1995</td>
<td>14</td>
<td>15.1</td>
<td>57%</td>
</tr>
<tr>
<td>Wozniack et al., 1995</td>
<td>43</td>
<td>7.9</td>
<td>98%</td>
</tr>
<tr>
<td>Faraone et al., 1997</td>
<td>68</td>
<td>6.1</td>
<td>93%</td>
</tr>
<tr>
<td>Geller et al., 1998</td>
<td>60</td>
<td>11</td>
<td>97%/74%</td>
</tr>
<tr>
<td>Kafantaris et al., 1998</td>
<td>48</td>
<td>16</td>
<td>29%</td>
</tr>
<tr>
<td>Kowatch et al., 2000</td>
<td>42</td>
<td>11</td>
<td>71%</td>
</tr>
<tr>
<td>DelBello et al., 2001</td>
<td>34</td>
<td>15.7</td>
<td>65%</td>
</tr>
</tbody>
</table>
DSM IV Manic Episode

- A *Distinct Period* of Abnormally and Persistently Elevated, Expansive, or Irritable Mood, Lasting At Least **One Week** (or any duration if hospitalization is necessary)

- At Least **Three: (4 if mood is only irritable)**
  - Inflated Self Esteem or Grandiosity
  - Decreased Need for Sleep
  - More Talkative Than Usual
  - Flight of Ideas or Racing Thoughts
  - Distractibility
  - Increase in Goal Directed Activity or Psychomotor Agitation
  - Excessive Involvement in Pleasurable Activities Potential for Painful Consequences

- Causes a **Marked Impairment** in Occupational or Social Functioning
DSM IV Hypomanic Episode

- A *Distinct Period* of Sustained Elevated, Expansive, or Irritable for 4 Days
- At Least Three: (4 if only irritable)
  - Inflated Self Esteem or Grandiosity
  - Decreased Need for Sleep
  - More Talkative Than Usual
  - Flight of Ideas or Racing Thoughts
  - Distractibility
  - Increase in Goal Directed Activity or Psychomotor Agitation
  - Excessive Involvement in Pleasurable Activities Potential for Painful Consequences
- Unequivocal Change In Functioning Observable By Others
- Does Not Cause a Marked Impairment in Occupational or Social Functioning or Necessitate Hospitalization
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Manic Episode</th>
<th>Hypomanic Episode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mood Symptoms</strong></td>
<td>&quot;Abnormally and persistently elevated, expansive, or irritable mood&quot;</td>
<td>Same</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>7 Days</td>
<td>At Least 4 Days</td>
</tr>
<tr>
<td><strong>Number of Symptoms</strong></td>
<td>3 or more (4 if only irritable)</td>
<td>Same</td>
</tr>
<tr>
<td><strong>Impairment</strong></td>
<td>Marked</td>
<td>Does not cause marked impairment.. Unequivocal change in functioning... Observable by others</td>
</tr>
</tbody>
</table>
Treatment of Bipolar Disorder

- Mood Stabilizers
  - Lithium
  - Depakote
  - Carbamezapine
  - Antipsychotics (‘Atypicals’)

- Other Treatments
  - Stimulants, for ADHD
  - Antidepressants (can trigger mania),
  - Therapy- CBT and family interventions with supportive role.
Nonpharmacological Management Techniques

- Stress Management
- Sleep Hygiene
- Diet
  - Caffeine, alcohol, weight
- Support Groups
  - Child & Adolescent Bipolar Foundation (CABF) [www.bpkids.org](http://www.bpkids.org)
  - The Bipolar Child
- School Interventions
- Psychotherapy
  - Multifamily Psychoeducational Group Therapy (Fristad, et al., 2002)
- Mood Charting
  - [www.manicdepressive.org](http://www.manicdepressive.org)
Mood Stabilizers

- **Traditional**
  - Lithium
  - Valproate (Sodium Divalproex)
  - Carbamazepine

- **Antipsychotics**
  - Typical
  - Atypical

- **New/Novel**
  - Gabapentin
  - Lamotrigine
  - Topiramate
  - Tiagabine
  - Oxcarbazepine
  - Levetiracetam
  - Zonisamide
Lithium Laboratory Studies

■ Baseline:
  – Electrolytes, **BUN**, **Creat.**, Calcium
  – CBC/diff
  – Free T4, **TSH**, Thyroid Antibodies
  – EKG
  – **Pregnancy test** for sexually active females

■ Routine Monitoring:
  – **TSH**, Specific Gravity & Creatinine
  Clearance at 6 Month Intervals (**BUN**, **Cr**)
  – Serum Calcium **Yearly**?
Valproate Laboratory Studies

- **Baseline**
  - Liver Function Tests (LFTs: AST, ALT, GGT)
  - CBC/diff and platelets
  - Pregnancy test for sexually active females

- **Routine Monitoring**
  - LFTS, CBC/diff and Platelets at 6 Month Intervals
Adequate Trials of Mood Stabilizers

- Depakote, at least 3 weeks with DVP levels between 75 and 125 mg/mL.
- Lithium Carbonate, at least 4 weeks with Lithium levels between 0.8 and 1.2 mEq/L.
Cumulative % Showing A Response

Kowatch et al, 2000
Atypical Antipsychotics

- Powerful / Often Necessary
- Limit Use Because of...
  - Sedation
  - Weight Gain
  - Prolactin elevation
- Current Agents
  - Risperidone (Risperdal)
  - Olanzapine (Zyprexa) - Indication in adult mania
  - Quetiapine (Seroquel)
  - Ziprasidone (Geodone)
  - Aripiprazole (Abilify)
  - Paliperidone (Invega)
## Antipsychotic Side-Effects

<table>
<thead>
<tr>
<th>Medication</th>
<th>EPSE</th>
<th>Akathisia</th>
<th>Weight gain</th>
<th>Prolactin elevation</th>
<th>NIDDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low potency typicals</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>High potency typicals</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>clozapine</td>
<td>+/-</td>
<td>+/-</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>risperidone</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>olanzepine</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>quetiapine</td>
<td>0</td>
<td>0</td>
<td>++</td>
<td>0</td>
<td>++</td>
</tr>
<tr>
<td>aripiprazole</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>ziprasidone</td>
<td>++</td>
<td>++</td>
<td>+/-</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>paliperidone</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>++</td>
</tr>
</tbody>
</table>
Stimulant Medications in Bipolar Disorder.

- 2/3rds of youth with Bipolar Disorder also have ADHD that does not respond to mood stabilizers.
- The incidence in adults is somewhat less but should still be considered.
- Treating with stimulants is generally safe if the mood is stabilized.
Other Agents

- **Gabapentin (Neurontin)**
  - Variable Efficacy- (good for anxiety, little evidence for mood stabilizer)
  - Disinhibition

- **Lamotrigene (Lamictal)**
  - Serious Rashes/Serum Sickness
  - Do Not Use < Age 16 yr.

- **Topiramate (Topamax)**
  - Cognitive Blunting
  - May result in weight loss

- **Omega-3 Fatty Acids/ Antioxidants**
Bipolar Depression

- In adults, more time is spent depressed than manic or ‘euthymic’ (not ill).
- In youth, more time is spent manic or mixed manic.
- Antidepressants: 80% are either worse or no better.
- Antidepressants can cause mania.
- Nonetheless: 20% still benefit. This is hard to predict!
Treatment of Bipolar Depression

- Quetiapine is FDA approved
- The combination of fluoxetine and olanzapine is also FDA approved
- Lamotrigine, when added to other medications can help
- Omega 3 fatty acids can help.
Combination Treatment: The Rule Not the Exception

- Many patients can respond initially to a single agent.
- Even in youth it frequently takes a second mood stabilizer.
- Adding a stimulant in kids is very common.
- Drug-drug interactions are common with any combination of more than 3.
- Tolerating some ‘bumps’ will avoid unnecessary polypharmacy.
Helping The Bipolar Child/Adolescent Succeed

- Both Patient and Parent Education
  - Nature of the Disorder
    » Biologic Illness Which Interacts with Environment
  - Medication Risks/Benefits/Compliance

- School Interventions

- Charting the Course of the Illness
  - Kiddie Life Chart Method (K-LCM)
    » R. Post, M.D. & G. Leverich, Biological Psychiatry Branch, NIMH
Cognitive-Behavioral Therapy for Bipolar Disorder

- **Authors**
  - Monica Ramirez Basco
  - A. John Rush

- **Publisher**
  - Guilford Press
  - 1996

- **Aimed at Therapists (Yet not bad for parents)**
Behavioral Strategies for BPD

- Stress Medication: Adherence/Compliance
  - Adverse Effects
  - Medication Misconceptions
- Stabilize Sleep Patterns
- Minimize Periods of Overstimulation
- Monitor For Substance Abuse
- Encourage Mood Charting
- Encourage parents and patients to ‘ride-out’ minor fluctuations in mood and behavior. This decreases the number and amount of medications.
Development and Course of Bipolar Disorder

- Early age of onset has been associated with familial loading.
- Early onset subjects are less responsive to Lithium.
- 20% of adolescents hospitalized for Major Depression switched to Bipolar disorder.
  - This was predicted by:
    - Rapid Symptom onset, psychomotor retardation, and mood-congruent psychotic features.
    - Family history of Affective disorders
    - Antidepressant induced mania

Strober 1988
Course and Outcome of Bipolar DO

- Symptomatic recovery is likely.
- Time to recovery:
  - Typical mania: 9 weeks
  - Mixed mania: 11 weeks
  - Depressed phase: 26 weeks
- Probability of relapse is highest in those with rapid cycling. Multiple relapses highest in rapid cycling and mixed states.
- Suicide attempts in 20%.
- Substance abuse in 5% (rare)

Strober 1995
Early age of onset is not a factor in the prognosis of Bipolar DO. (Carlson 1997)

Adolescent onset predicted substance abuse compared to childhood onset. (Wilens, 1999)

Highly episodic.

9-12 year lag between 1st report and 1st episode. (Egeland 2000)
Summary

- Bipolar Disorder is a serious condition
- It is highly treatable
- Many people with Bipolar Disorder are very successful
- Not treating with medications is more harmful than treatment.
Any Questions?

- Clinic Number (316) 293-2647
Kansas: Practicing Child and Adolescent Psychiatrists

Number per county

21 in the rest of the state

4 doing child

(c)AACAP by C.F.Holzer psyn 30APR09