

# Bipolar, ADHD or mood dysregulation?

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# Summary of Talk

- Differing views on diagnosing paediatric bipolar disorder
- Disorders that can be confused with paediatric bipolar disorder
- Assessing symptoms in children with mood and behaviour problems





# A very brief overview of the concept of Paediatric Bipolar Disorder

# Kraepelin on Paediatric Bipolar Disorder

“In rare cases the first beginnings can be traced back even before the tenth year.....The greatest frequency of first attacks falls, however, in the period of development with its increased emotional excitability between the fifteenth and the twentieth year”

Only 0.4% of Kraepelin's adult patients reported manic symptoms prior to the age of ten

1921 translation of Manic-Depressive Insanity and Paranoia, originally published 1899



# Mid 20<sup>th</sup> Century views on Paediatric Bipolar Disorder

- While case studies of apparent pre-pubertal presentation were reported the prevailing view was that bipolar disorder did not present in children
- Thought that children lacked the developmental capacity to develop mood disorder or psychosis
- Part of a lack of awareness of severe mental illness in children shown by many child health services
- For example, Anthony and Scott (1960) reviewed 28 cases of alleged mania from 1884-1954 and decided that they were almost all misdiagnosed
- From the 1990s increasing awareness of the possibility of bipolar disorder symptoms prior to puberty (Faedda 1995)



# NIMH Research Roundtable on Prepubertal Bipolar Disorder JAACAP 2001

Panel consisted of 19 experts studying paediatric bipolar disorder (including Biederman, Birmaher, Carlson, Geller & Kowatch)

- Diagnosis of bipolar disorder in prepubertal children is possible
- Rare for children to meet full DSM-IV diagnostic criteria for bipolar I or II, more likely in teenagers
- Other children do not meet DSM-IV criteria but are still severely impaired by symptoms (behaviour disorder, mood instability) – this group is much larger – 2-4% of the population
- Bipolar not otherwise specified (NOS) recommended as a “working diagnosis” for the non-DSM-IV group
- Symptoms in the NOS group included aggressiveness, agitation, explosiveness, irritability, excessive mood lability, ADHD, anxiety, oppositional defiant disorder and early onset of substance use
- Not clear what the outcome is for this group – do they go on to adult bipolar disorder?



# The broader pediatric bipolar spectrum concept

- In summary, current opinion is that “classic” adult mania or hypomania is rare in children
  - There is then controversy about what is the childhood equivalent:
    1. Need a developmental equivalent of hypomania to make the diagnosis – considers PBD rare - but acknowledges that in adolescents episodes can be frequent and mixed states are common OR
    2. Includes an elevated mood “equivalent” which may include irritability, agitation or explosiveness and considers some behaviours, including aggression, oppositional defiant disorder and ADHD as part of the spectrum – BPD more common
- Both groups agree that children with these symptoms will be distressed and disabled BUT the diagnosis and treatment plan will differ



# The conservative view: A child and adolescent mood disorder cohort

- Cohort of 9, average age 13.7 (range 10-17), 33% male
- All had a history of hypomania (7/9 interviewed during an admission for hypomania)
- All had a history of delusions (grandiose) and 7/9 had auditory hallucinations
- All met SCID (DSM-IV based diagnostic interview) criteria for Bipolar I (hypomania or mania)

Starling pilot data 2009



# A child and adolescent mood disorder cohort: other symptoms

At time of interview:

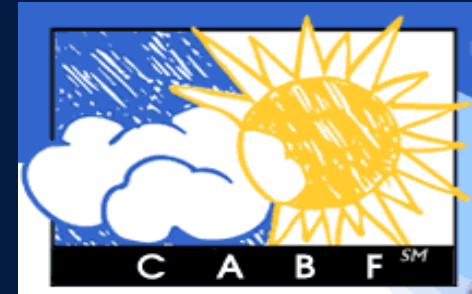
- Average mania rating scale II (YMRS range I-IV)
- Average DASS anxiety and stress score in moderate clinical range, depression score in mild clinical range
- Average CDI (depression scale) not in clinical range
- So even with a group who were unwell enough to be admitted and who had psychotic features the mania scale ratings were not extremely high and they had elevated scores for depression, stress and anxiety, suggesting a mixed picture
- Despite the lower YMRS scores they were impaired on cognitive testing – IntegNeuro - (working memory, verbal interference and frontal lobe functioning)



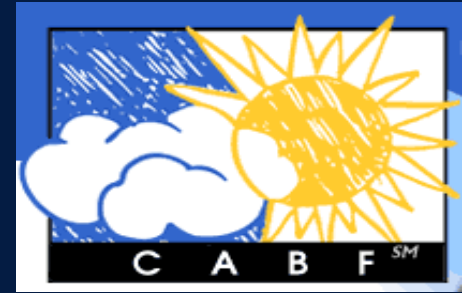
# The broader view: Child and Adolescent Bipolar Foundation website criteria 1

Several of the following should raise alarm bells:

- Severe and recurring depression
- Explosive, destructive or lengthy rages, especially after the age of four
- Extreme sadness or lack of interest in play
- Severe separation anxiety
- Talk of wanting to die or kill themselves or others
- Dangerous behaviors, such as trying to jump from a fast moving car or a roof
- Grandiose belief in own abilities that defy the laws of logic (eg possessing ability to fly)
- Sexualized behaviour unusual for the child's age



# Child and Adolescent Bipolar Foundation website criteria 2



- Impulsive aggression
- Delusional beliefs and hallucinations
- Extreme hostility
- Extreme or persistent irritability
- Telling teachers how to teach the class, bossing adults around
- Creativity that seems driven or compulsive
- Excessive involvement in multiple projects and activities
- Compulsive craving for certain objects or foods
- Hearing voices telling them to take harmful action
- Racing thoughts, pressure to keep talking





**What are the disadvantages of the wider bipolar diagnosis – or what could be missed?**

## What disorders have symptom overlap with wide spectrum childhood bipolar disorder?

- Attention deficit hyperactivity disorder (in particular with co-morbid learning or behaviour disorder)
- Pervasive developmental disorder (autistic spectrum disorder), in particular Asperger's Syndrome and other high functioning PDDs
- Children with severe affect dysregulation (often with a history of trauma)
- Note: these diagnoses do not exclude bipolar disorder; all are associated with a higher prevalence of depression and some with a higher prevalence of psychotic disorder



# What are the key differences with these disorders?

- Bipolar disorder classically has periods of illness and periods of full (or close to full) recovery
- Treatment is often focussed on finding the right medication to produce remission and prevent relapse
- While psychological and psychosocial treatments are important a person with bipolar disorder can function well with no extra assistance between episodes
- In contrast the other disorders are present at all times, (though they may worsen with stress) – medication may help some of the manifestations but the children or adolescents will still need support from many systems – family, schools, community services, health services



# Different treatment options

- As a generalisation the other disorders have more emphasis placed on:
  - managing a child's chronic difficulties using by manipulating the environment around the child (to provide clear, reliable structure with predictable consequences)
  - specifically teaching the child the skills they lack (academic, social, mood regulation)
  - educating families and schools
- Plus medication for specific symptoms as warranted



# Attention Deficit Hyperactivity Disorder

- One of the most common disorders in children
- Core symptoms of Inattention, Impulsivity and Hyperactivity present from a very young age
- Good evidence that stimulant treatment is effective
- Associated with other behavioural disorders including oppositional defiant disorder and increased rates of learning disorders
- Outcome in adolescence and adult life include total remission or continuing ADHD symptoms. At higher risk of ongoing behaviour disorder, academic underachievement, relationship breakdowns and accidental death



# Pervasive developmental disorder

(Also called autistic spectrum disorders)

- Neurodevelopmental conditions – lifelong
- Symptoms include deficits in social interaction, impaired verbal and nonverbal communication, restricted and idiosyncratic interests, and stereotyped behaviours. Increasing awareness of sensory perceptual abnormalities
- Increasing rates of diagnosis (60-120/10,000) particularly of Asperger's Syndrome
- High rates of other disorders including anxiety (obsessive compulsive disorder), depression in adolescence, ADHD and possibly increased rates of schizophrenia and bipolar disorder in adolescence



# Autistic Spectrum Disorder

Autism

Variants  
of normal



Pervasive developmental disorder (autism)  
Little or no language, very impaired social interaction, unusual behaviours (flapping, stereotypies, aggression)

PDD-NOS

Asperger's Syndrome (high functioning autism) Unusual use of language, poor social skills, eccentric behaviour, can have highly developed skills in some areas

Eccentric normal

Abilities and behaviours vary with IQ, culture, family and the individual child



# Unusual perceptions in autistic spectrum disorders

- As part of autism, the following are often seen:
- Disorganised speech, affective flattening or excitement
- Socially unaware behaviour such as talking to themselves
- Unusual movements including flapping
- Unusual preoccupations and beliefs about the world
- Can be watchful and suspicious of others
- Persistence of age inappropriate interests (eg imaginary friends)
- Sensory perceptual abnormalities that may be misinterpreted as hallucinations



## Affect dysregulation

- Not a DSM-IV diagnosis but a description of symptoms including unstable mood (unhappiness, anxiety, anger) and difficult behaviours that fluctuate frequently with apparently minor triggers
- More likely to be seen in children and adolescents with a history of catastrophic or repeated severe trauma
- These children are more likely to be diagnosed with Post Traumatic Stress Disorder, anxiety disorders, depression, ADHD, oppositional defiant disorder and conduct disorder
- They are more likely to live in substitute care (extended family, foster placements, group homes, refuges)
- High rate of distress and aggression to others in childhood and self harm in adolescence
- More likely to develop depression and personality disorder as adults





# Hypomania symptoms and how they may present in children – also considering the differential diagnosis

# Diagnosing Mania in Children

DSM-IV definitions:

- Elated mood +/- grandiosity
- Decreased need for sleep
- Flight of ideas or racing thoughts
- Poor judgement
- Distractibility
- Increased energy, activity and agitation

How would these present in children and younger adolescents?

Note: always needs to be a change from previous level of functioning (hard if child very young) plus must cause impairment



# Elated mood +/- grandiosity

- Children with elevated mood look much the same as adults – giggly, happy, high, can become irritable if limited
- Grandiose delusions must be interpreted in a developmental context eg a child may think that they are going to be a famous actor as an adult but would realise as they grew older this was less likely
- Previous example – dogs as imaginary friends could be developmentally normal but being the lead dog is probably a grandiose delusion (while hearing them talk to you is a mood congruent hallucination)



# Decreased need for sleep

- Normal children sleep 8-12 hours/night
- May get less sleep if excited but tired the next day
- ADHD children often need less sleep, hard to get to sleep at night but lots of energy the next day
- Children with autism may have a partially reversed sleep/wake cycle
- Children with a trauma history may have difficulty getting to sleep and nightmares, but are tired the next morning
- In bipolar disorder there is a change in the amount of sleep required and the time is spent in purposeful activity, with the child waking full of energy



## Flight of ideas or racing thoughts

- Normal children are “hyped up” when excited, then settle
- They can often calm themselves with encouragement
- They are unlikely to report subjective racing or fear that their thoughts are out of control
- Children with ADHD can move and talk very quickly, but it is a longstanding pattern
- Children with autism are more likely to have formal thought disorder and behaviour on the catatonia spectrum, without another diagnosis
- Traumatized children can have rapid mood swings from elated to depressed which appear an over reaction to their circumstances



# Distractibility

- Normal children will become distractible when stressed or excited
- Core feature of ADHD
- Children with autism will only be interested in what they see as important, unable to focus on subjects of no interest at school or home.
- Children with anxiety, post traumatic stress disorder or affect dysregulation will have difficulty focussing because of their high level of arousal



## Increased energy, activity and agitation

- Again a core symptom of ADHD
- Agitation should be a change from previous levels of functioning, even then can be due to a psychosocial stress or another disorder (anxiety, depression)
- Increased energy should be goal directed in bipolar disorder, (usually less focussed in ADHD). Goals unrealistic, if not delusional



# Disinhibition

- What is considered appropriate varies by age, developmental level and cultural background
- Needs to be a change from previous level of functioning
- In Bipolar Disorder often has a context eg singing in public because you know you have special abilities
- Disinhibited behaviour also seen in traumatised children – can be sexually inappropriate or over familiar with strangers



# Irritability/Aggression

- Irritability: while it is a DSM-IV criteria for bipolar also seen in many other disorders
- Aggression also non-specific - types of aggression include:
  1. Predatory (goal directed, planned, some level of control) – seen in conduct and other behavioural disorders
  2. Impulsive/affective (loss of control in front of others, can damage own property, often remorseful) – seen in PBD but also in anxiety and mood disorders, also in stressed children

Again needs to be a change from normal functioning to be part of PBD



# What happens with co-morbidity?

- Presentations often become more complex and difficult to manage
- For example, ADHD and mood disorder, traumatised child who develops depression
- The next slides are an example of how traumatised children and teenagers who have psychotic symptoms present differently to those with psychotic symptoms and no history of trauma

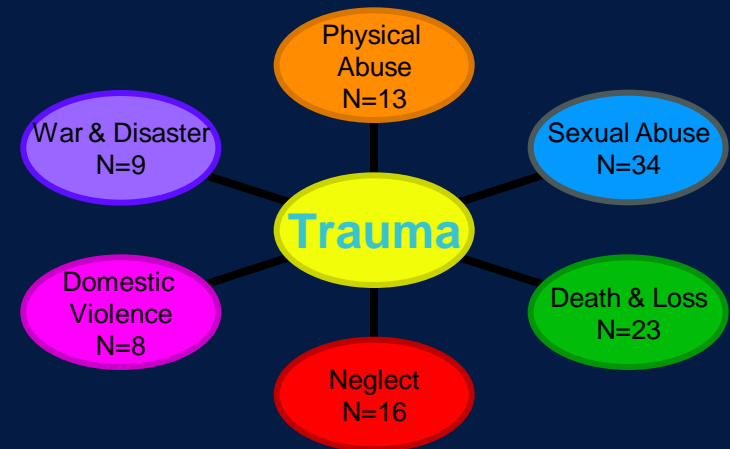


# A file review of children with trauma and psychotic symptoms

A file audit of 118 subjects who reported hallucinations and/or delusions, mean age 13.7 (CHW)

60 of these subjects also reported a history of trauma

72% of the subjects who reported trauma were female



## Symptoms more commonly seen in traumatised children with psychotic features

Symptoms	Trauma history (N)	No trauma history (N)	$\chi^2$ (p-value)
Hallucinations	95% (57)	84.5% (49)	3.57 (0.05)
Poor self care	41.7% (25)	24.1% (14)	4.1 (0.04)
Flashbacks	20% (12)	1.7% (1)	10.05 (0.002)
Aggression	56.7% (34)	29.3% (17)	8.99 (0.003)
Running away	33.3% (20)	13.8% (8)	6.22 (0.01)
Suicide attempt	50% (30)	20.7% (12)	11.05 (0.001)



## Symptoms more commonly seen in sexually abused children with psychotic features

Symptoms	History of Sexual Abuse (N)	No history of Sexual Abuse	$\chi^2$ (p-value)
Hallucinations	100% (34)	85.7% (72)	5.4 (0.02)
Nightmares	35.3% (12)	13.1% (11)	7.6 (0.006)
Flashbacks	26.5% (9)	4.8% (4)	11.6(0.001)
Drug abuse	29.4% (10)	11.9% (10)	5.3 (0.02)
Alcohol abuse	29.4% (10)	8.3% (7)	8.7 (0.003)
Suicide attempt	61.8% (21)	25% (21)	14.3 (0.00)



# The effect of co-morbidity

- Children with pre-existing difficulties (especially those from a background of trauma) who develop a mood or psychotic disorder are significantly more likely to have disturbed behaviour
- This behaviour can make their disorder harder to manage and put them at greater risk



# Summary

- PBD is a diagnosis of some controversy
- It does exist but can be over diagnosed
- The potential problem with over diagnosis is unlikely to be labelling a normal child with a disorder, but is more likely to be missing the best possible treatment for another disorder
- Ruling out BPD in a child does not mean that they will not develop the diagnosis at a later age, but our power to predict is currently poor

