Current Psychiatry

ADHD or bipolar disorder? Age-specific manic symptoms are key

Chronic irritability, grandiosity point to bipolar diagnosis

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Knowing what to look for can help you differentiate between pediatric bipolar disorder and attention-deficit/hyperactivity disorder (ADHD):

- Bipolar disorder is a problem with mood. Children with bipolar mania are elated and/or irritable and experience mood states that appear uncontrollable.
- ADHD is a problem with cognitive functioning, including attention, distractibility, and energy level.

Mood and cognitive symptoms may overlap,[1,2] but recognizing manic features is the key to

Table 1

Diagnostic features of bipolar mania in adolescents vs adults

Feature	Prepubertal and early adolescent	Older adolescent and adult
Initial episode	Mixed presentations predominate	Mania is more balanced between mixed and euphoric
Episode type	More consistently ill	Persistent/distinct episodes
Primary mood	Irritable	Euphoric
Duration	Chronic, continuous course	Weeks
Inter-episode functioning	Less distinct episodes	May return to baseline or deteriorate over time
Reality testing	Delusions (grandiosity) is common; hallucinations	More variable

distinguishing between these disorders—even when they co-occur.

We offer tips from our experience and a recent clinical trial to help you sort out the core symptoms that point to bipolar mania.

BIPOLAR CORE SYMPTOMS

Pediatric bipolar disorder is relatively rare, but children with it can experience substantial impairment and developmental delay. Intervening early with effective treatment[3] can improve their quality of life, function, and prognosis.

Diagnostic criteria for type I bipolar disorder require at least one manic episode and are the same for all ages. Many clinicians and researchers have advocated adapting DSM-IV criteria for children, but we believe separate adult and pediatric criteria would confuse discussions about the same phenomena. We do agree that symptoms should be evaluated in a developmentally appropriate context, as mania can present differently across the ages *(Table 1)*.

Mania in children and young teens tends to present with rapid cycling and irritable mood

Mania in children and young adolescents tends to present with rapid cycling and a primarily irritable mood.[4] Older adolescents and adults may present with more-distinct mood changes, with a primarily euphoric mood. Euphoric mania is less common in adults than previously thought. Forty percent to 60% of adults with bipolar disorder experience a chronic course, rather than more-discrete mood episodes.

A manic episode is an abnormally and persistently elevated (euphoria) or irritable mood that lasts at least 1 week. To satisfy DSM-IV-TR diagnostic criteria for a manic episode:

- patients with euphoria require three additional symptoms
- those who are irritable (and not euphoric) require another four symptoms.[5]

These symptoms must significantly impair several areas of functioning and not be caused by other mental or physical illness, including substance use or abuse. When depressive symptoms

Box

Bipolar mania? 24-hour sleep history provides important clue

Decreased need for sleep is a hallmark symptom of bipolar mania. A 24-hour sleep history may help determine if a child's irregular sleep patterns signal ADHD or bipolar disorder.

To perform the sleep history, collect time in bed and time asleep over several days, or ask the patient, "On a typical night, not your best, not your worst:"

- When do you go to bed?
- How long does it take to fall asleep?
- Once asleep, do you wake up?
- How long are you awake?
- When do you arise in the morning?
- What is the total amount of time you are asleep?
- Do you take naps?
- Are you rested or fatigued during the day?

occur in the same week as mania, the mixed mania modifier is used.

Disruptive and aggressive behavior are common and are what usually prompts parents to bring children to psychiatrists. These behaviors are not diagnostic of mania, however, and aggression has many other causes.

The threshold between a variant of normal and pathologic disruptive behavior can be difficult to establish and varies from culture to culture. Some families, for example, would allow a child to tell the parents what to do, whereas other families consider this a serious boundary violation.

Prolonged rages have been used as a proxy for mood swings. Although we agree that rages lasting >15 minutes and out-of-proportion to the circumstances may signal bipolar disorder, they are not diagnostic.

Other symptoms. Psychotic symptoms (hallucinations, delusions, disorganization) can occur in youths with bipolar disorder. Evaluation often reveals impaired social and cognitive development. Keep in mind that a child's developmental level can affect symptom expression.

ADHD CORE SYMPTOMS

Children with ADHD often present with hyperactive, uncontrollable behaviors and academic failure. To meet DSM-IV-TR diagnostic criteria, they must show symptoms before age 7. Primary symptoms may be inattention, hyperactivity and impulsivity, or both.

ADHD is a disorder of attention and the cognitive skills related to attention, rather than a mood disorder. Children with ADHD show substantially impaired function in at least two settings (such as at home and in school), and—unlike bipolar disorder—their symptoms are persistent rather than episodic.

DIFFERENTIATING BY SYMPTOMS

When differentiating between ADHD and bipolar disorder in children, remain focused on both diagnoses' core symptoms.

Euphoria, or elation, is a key distinguishing factor in bipolar disorder.[6] Although all children are at times giddy or silly in appropriate environments—such as during slumber parties—consider a threshold of appropriateness when making a bipolar diagnosis. Families perceive the giddiness, inappropriate laughter, and elevated mood of children with mania as disturbing and inappropriate, not funny or endearing. They are often annoyed and concerned.

Children with primary ADHD do not show euphoria; their failures often make them dysphoric

Table 2

Pediatric mania and ADHD respond differently to mood-stabilizer therapy

Children with bipolar I or II disorder and concurrent ADHD	Treatment with divalproex, 8 weeks (N = 40)[a]	Subjects enter double-blind, crossover treatment with MAS and placebo, 2 weeks each (N = 30)	
Manic symptoms[b]	32 of 40 (80%) improved; significant (P <0.0001)	**MAS**	**Placebo**
		No significant change in manic symptoms (P = 0.17)	
ADHD symptoms[c]	3 of 40 (7.5%) improved; not significant (P = 0.96)	26 of 30 (87%) improved	3 of 30 (10%) improved
		CGI scores improved 1.9 points more on MAS than on placebo, a significant difference (P <0.0001)	

[a] Average divalproex blood levels = 82 µg/mL
[b] Manic symptom improvement defined as >50% decrease in baseline Young Mania Rating Scale scores
[c] ADHD symptom improvement defined as Clinical Global Impression (CGI)–Improvement scores of 1 or 2
MAS: Mixed amphetamine salts

Source: Reference 7

Children with primary ADHD do not show inappropriately elevated mood. In fact, their failures often make these children dysphoric.

Irritability is common in children with psychiatric illnesses. Manic youngsters can be very irritable most of the time. Families describe "walking on eggshells" because of these children's touchiness. Unpredictable triggers set off explosive, prolonged tantrums that may be associated with aggression, and their mood swings are almost constant.

Children with ADHD can be irritable, but their irritability is less severe and intense than that seen in bipolar disorder. Stimulant medication "wear-off" can cause irritability in ADHD, so consider this possibility if symptoms occur mostly in the evening.

Grandiosity can be confusing to evaluate in children but is often a core symptom in bipolar disorder. All children sometimes say self-inflating things, but those with pathologic grandiosity cross the threshold into the dysfunctional belief that they are better, stronger, smarter, or more talented than others.

For example, a 7-year-old patient insisted he was the world's best chess player and could beat anyone, including Russian chess masters. When the therapist asked him about chess, he did not know the names of the pieces or how they moved. Yet despite facing these contradictory facts, he continued to insist that he was the best.

Children with grandiosity may act inappropriately on their beliefs, such as by telling adults what to do or engaging in risky, daredevil acts with no concern for their safety or the law.

Children with ADHD are not usually grandiose. Instead, they often become demoralized and develop poor self-esteem from negative feedback about their behavior.

Decreased need for sleep is the hallmark symptom of mania that is absent in other psychiatric disor-

Table 3

Core symptoms: Pediatric bipolar disorder vs ADHD

Symptom	Bipolar disorder	ADHD
Euphoria/giddiness	Excessive	Appropriate to situations
Irritability	Severe and intense, often accompanied by tantrums	Occasional, may be caused by medication "wear-off"
Self-esteem	Grandiose	Demoralized
Sleep patterns	Decreased need for sleep	Difficulty settling at night
Speech patterns	Pressured, fragmented, with flight of ideas	Energetic and quick
Thought processes	Racing thoughts Psychosis can occur at times	Patients do not report racing thoughts
Attention	Distractible	Distractible
Activity level	High energy, on-the-go, multiple projects, creative High-risk behaviors	Hyperactive, multiple projects Impulsive
Disruptive behaviors	Can become aggressive	Intrusive and active

ders. A true decreased need for sleep is only indicated in someone sleeping less than his or her usual cumulative hours each day, without fatigue or recuperative sleep.

Children with bipolar disorder may need 1 or more hours less sleep or deny needing sleep at all. Use age-appropriate amounts of sleep as a standard. A school age child usually averages 9 to 11 hours of sleep per night. If the patient is getting only 6 hours and is not tired, this would be a decreased need for sleep. A 24-hour sleep history can easily assess decreased need for sleep *(Box, page 44)*.

Determine daytime fatigue by self-report or observation by parents or teachers. Then ascertain if there are periods of days with less fatigue. Many bipolar youth have a nearly continuous decreased need for sleep.

Children with ADHD often have difficulty settling at night, which delays their falling asleep. The sleep history will likely show that—once asleep—they sleep well for an appropriate amount of time or are fatigued during the day.

Pressured speech, or the need to talk excessively, is a relatively straightforward symptom. Children experiencing mania often speak so quickly and excessively that others cannot understand or interrupt them. Flight of ideas and racing thoughts are reflected in their speech.

By contrast, rapid speech by children with ADHD is related to hyperactivity. They speak too fast and often become distracted from the topic.

Racing thoughts. Children with bipolar disorder may report that their thoughts come so quickly they cannot get them out fast enough. The idea that their thoughts "need a stop-sign" suggests racing thoughts, a core bipolar symptom. Their speech can be unintelligible, with rapid changes

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in thought patterns, flight of ideas, and sentence fragments. Children with ADHD are energetic and quick but do not report racing thoughts.

LESS-HELPFUL SYMPTOMS

Distractibility—a core symptom of both inattentive ADHD and manic episodes—does not help differentiate the two diagnoses. The high comorbidity of ADHD with bipolar disorder increases the likelihood that the child will be easily distracted.

Multi-tasking. Increased goal-directed activity is often associated with the high energy of children with mania. They have more energy than most people, are always on the go, and engage in multiple projects or activities that may be markedly creative or unrealistic. This increased energy—combined with other hallmark manic symptoms—can lead to high-risk behaviors.

Hyperactivity in ADHD can appear similar to agitation in bipolar disorder. In both disorders, children may engage in many tasks—not finishing any of them—or appear to move quickly from one task to another.

High-risk behaviors. Parents often report their children with bipolar disorder have tried to jump from moving vehicles, "fly" off of roofs, and jump their bicycles or skateboards over impossible distances. These children behave as if the laws of nature do not apply to them. Children with ADHD behave impulsively but are not always "daredevils." Their activities appear more impulsive and feature high activity in inappropriate situations, rather than distinctly high-risk activities.

RESPONSE TO THERAPY

Our group[7] showed that pediatric manic and ADHD symptoms respond differently to mood-stabilizer treatment *(Table 2, page 45)*.

We first used open-label divalproex sodium to treat manic symptoms in 40 children ages 6 to 17 with bipolar I or II disorder and concurrent ADHD. Serum valproic acid levels averaged 82

Related resources

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- Papolos DF, Papolos J. Bipolar child: *The definitive and reassuring guide to childhood's most misunderstood disorder*. New York: Broadway Books, 2002.
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DRUG BRAND NAMES

Divalproex sodium • Depakote
Mixed amphetamine salts • Adderall

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μg/mL. Manic symptoms improved in 80% of patients, whereas ADHD symptoms improved in <10%. Most children's symptoms still met severity criteria for ADHD.

In a subsequent double-blind, crossover trial, we compared the effects of mixed amphetamine salts (MAS) or placebo on ADHD symptoms in 30 children whose manic symptoms stabilized on divalproex. MAS showed a significant, independent effect on ADHD symptoms One patient's manic symptoms recurred during stimulant therapy and subsided with MAS discontinuation.

In this trial, mania symptoms responded to divalproex, whereas ADHD symptoms did not. MAS treatment showed a specific effect on ADHD symptoms of inattention, impulsivity, and hyperactivity. The shared symptoms of mania and ADHD (impulsivity and hyperactivity) decreased with divalproex to some extent.

WHEN MANIA/ADHD CO-OCCUR

ADHD and bipolar disorder symptoms overlap to a great extent, and the disorders can co-occur:

- Up to 20% of children diagnosed with ADHD also meet bipolar criteria.
- Two-thirds of children with bipolar disorder may also meet criteria for ADHD, with reports ranging from 29% to 98%.[1,2]

When trying to differentiate ADHD and bipolar disorder in children, consider the core symptoms of each diagnosis *(Table 3, page 46)*.

Bottom Line

Because pediatric mania and ADHD respond differently to medications, distinguishing between these disorders is key to successful treatment. Symptoms that point to bipolar mania include euphoria, irritability, grandiosity, decreased need for sleep, pressured speech, and racing thoughts.

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