

Mary M. Stephens, MD,
MPH and Jaya Bajaj, MD
East Tennessee State University
Family Physicians of Kingsport

Rick Wallace, MSLS, MA,
MDiv, MAOM
East Tennessee State
University Quillen College of
Medicine Library, Johnson City

Which tool is most useful in diagnosing bipolar disorder in children?

Evidence-based answer

No single, well-validated screening instrument for clinical diagnosis of bipolar disorder in children exists. That said, the Kiddie Schedule for Affective Disorders and Schizophrenia (KSADS), a semi-structured interview, along with clinical evaluation by a childhood mental health specialist, is used most frequently in major research studies (strength of recommendation [SOR]: **C**).

As a screening tool in the primary care setting, family history of bipolar disorder in either biologic parent increases the odds of diagnosis (SOR: **A**). High or low scores on parent-reported screening tests (Parent Young Mania Rating Scale [P-YMRS], Parent General Behavior Inventory [P-GBI], and Child Behavior Checklist [CBCL]) also significantly increase or decrease the likelihood of diagnosis (SOR: **B**).

FAST TRACK

Family history and parent-reported screening tests can help you determine if a referral is in order

Clinical commentary

Make sure it's not ADHD

When evaluating a child for mental health, behavioral, or academic concerns, I always begin with an assessment targeting potential attention deficit hyperactivity disorder (ADHD). Distinguishing mania from hyperactivity and impulsivity is difficult. The most useful clue is family history. Suspicion of bipolar disorder (based on mood cycling or family history) would prompt me to refer to a child mental health specialist. Also, when I'm treating a child with ADHD, I consider alternate or comorbid conditions when he or she fails

to achieve behavioral goals.

Of the rating scales reviewed above, I consider the P-GBI and the P-YMRS useful in risk stratification. However, screening instruments are less useful when a disease is rare (as with childhood bipolar disorder). Children with hyperactivity and impulsivity may have a range of conditions from hyperthyroidism to anxiety disorders, but we must listen to the history, observe the patient, and proceed with an evaluation based on the likelihood of disease.

Adam J. Zolotor, MD, MPH
University of North Carolina at Chapel Hill

Evidence summary

Retrospective analysis of 2 large cohort studies of adults with bipolar disorder indicated that at least 50% of these patients had an onset of illness before age 19, establishing support for the pres-

ence of bipolar disorder among children and adolescents.¹ The criteria in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) cannot be easily applied to most children and adolescents with bipolar disorder

**TABLE****Likelihood ratios for 3 screening tools you can use in the office**

| | For ages 5–10* | | | | For ages 11–17† | | | |
|--|--------------------------------------|----------|------|-----------|--|----------|------|-----------|
| | IF THE SCORE IS... | | | | IF THE SCORE IS... | | | |
| | LOW | MOD. LOW | HIGH | VERY HIGH | LOW | MOD. LOW | HIGH | VERY HIGH |
| | THEN THE LR FOR THE INSTRUMENT IS... | | | | THEN THE LR FOR THE INSTRUMENT IS... | | | |
| P-YMRS | 0.08 | 0.48 | 6.94 | 8.92 | 0.20 | 0.32 | 4.07 | 7.41 |
| P-GBI | 0.10 | 0.48 | 4.90 | 6.29 | 0.06 | 0.25 | 4.82 | 9.21 |
| CBCL | 0.07 | 0.47 | 3.15 | 3.52 | 0.04 | 0.53 | 2.65 | 4.29 |
| * Population studied had a 50.3% prevalence of bipolar disorder. | | | | | † Population studied had a 40.7% prevalence of bipolar disorder. | | | |

because most do not meet the criteria for Bipolar I or II, but fall into the less well-defined category Bipolar NOS (not otherwise specified).^{2,3}

Compared with adults, children and adolescents are more difficult to diagnose because they are less likely to have discrete episodes of mania, and instead present with severe irritability, rapid cycling, or mixed mania.^{2,4} In addition, symptoms progress and evolve as children and adolescents grow.¹ Comorbid disorders such as ADHD, oppositional defiant disorder, conduct disorder, and learning disorders are common in this population, further complicating diagnosis.²

Screening instruments are imperfect

Different versions of the KSADS have been used in most research studies on this disorder.² Despite this, concerns about the validity of the instrument still exist because of lack of sufficient testing, vagueness of the diagnostic criteria, and the subjective nature of the test.^{5,6} Because specialized training is required to administer the test and testing can last a full day, its use in most office settings is impractical. It is also not meant as a stand-alone test, but to be used in conjunction with a clinical evaluation by a trained mental health professional.⁷

In a general clinical setting, family history and selected screening instru-

ments may help to increase or decrease clinical suspicion for the disorder and guide referral for more specialized evaluation by a child mental health provider. In addition, a meta-analysis found that children or adolescents who have a biologic parent with bipolar disorder have 2 to 10 times the odds of being diagnosed with bipolar disorder.⁷

Three screening tests (CBCL, P-GBI, and P-YMRS) available for the office setting use parent-reported scores, and perform best when compared with KSADS as the standard.³ These instruments were associated with likelihood ratios that significantly improved the odds of diagnosis and could allow clinicians to stratify patients as high or low risk (TABLE).³

Recommendations from others

Two consensus conferences, a Canadian guideline, and a National Institute of Mental Health roundtable all concluded that there is currently no ideal test for the diagnosis of child and adolescent bipolar disorder, but that such an instrument needed to be developed.^{2,5,6,8} One consensus conference further concluded that the diagnosis is best made by childhood mental health specialists based on multiple informants, such as the child and parents, with symptoms present in at least 2 settings or by direct observation.⁶

A Canadian consensus conference proposed screening patients with depres-

FAST TRACK

Children with bipolar disorder present with severe irritability, rapid cycling, or mixed mania



Bipolar diagnosis CONTINUED FROM PAGE 839

sive symptoms for a history of hypomanic or manic symptoms, and consider an underlying mood disorder in those with vague or nonspecific somatic symptoms or reverse vegetative symptoms (eg, hypersomnia and hyperphagia). Their recommendations also emphasized screening for family history of bipolar disorder when there were clinical concerns.⁸ ■

References

1. Post R, Kowatch R. The health care crisis of childhood-onset bipolar illness: some recommendations for its amelioration. *J Clin Psychiatry* 2006; 67:115-125.
2. National Institute of Mental Health research roundtable on prepubertal bipolar disorder. *J Am Acad Child Adolesc Psychiatry* 2001; 40:871-878.
3. Youngstrom E, Findling R, Calabrese J, et al. Comparing the diagnostic accuracy of six potential screening instruments for bipolar disorder in youths aged 5 to 17 years. *J Am Acad Child Adolesc Psychiatry* 2004; 43:847-858.
4. Weckerly J. Pediatric bipolar mood disorder. *J Dev Behav Pediatr* 2002; 23:42-56.
5. Coyle J, Pine D, Charney D, et al. Depression and bipolar support alliance consensus statement on the unmet needs in diagnosis and treatment of mood disorders in children and adolescents. *J Am Acad Child Adolesc Psychiatry* 2003; 42:1494-1503.
6. Carlson G, Jensen P, Findling R et al. Methodological Issues and Controversies in Clinical Trials with Child and Adolescent Patients with Bipolar Disorder: Report of a Consensus Conference. *J Child Adolesc Psychopharmacol* 2003; 13:13-27.
7. Youngstrom E, Findling R, Youngstrom J, Calabrese J. Toward an evidence-based assessment of pediatric bipolar disorder. *J Clin Child Adolesc Psychol* 2005; 34:433-448.
8. Yatham L, Kennedy S, O'Donovan C, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the management of patients with bipolar disorder: consensus and controversies. *Bipolar Disord* 2005; 7(Suppl 3):5-69.

Insomnia CONTINUED FROM PAGE 837

logs and a behavioral health provider offered patients a condensed education on sleep hygiene, stimulus control, and sleep restrictions strategies. The study was limited because of small sample size (<25). Generalizability to practice is restricted because sessions were conducted by a behavioral health provider, not a family physician.

Recommendations from others

The Agency for Healthcare Research and Quality recommends CBT as an effective treatment in the management of chronic insomnia.⁸ It also recommends that further large-scale RCTs be conducted to establish CBT's effectiveness across subsets of the population of individuals with chronic insomnia (ie, gender, age, shift workers, and those with psychiatric illnesses).

The American Psychological Association (APA) recommends CBT as the "treatment of choice" for chronic insomnia, with 70% to 80% of patients showing a treatment response.⁹ ■

Acknowledgments

The opinions and assertions contained herein are the private views of the authors and not to be construed as official, or as reflecting the views of the US Air Force Medical Service or the US Air Force at large.

References

1. NIH State-of-the-Science Conference Statement on Manifestations and Management of Chronic Insomnia in Adults. NIH Consensus Science Statement. 2005; 22(2). Available at: consensus.nih.gov/2005/2005InsomniaSOS026main.htm. Accessed on September 4, 2007.
2. Ohayon M. Epidemiology of insomnia: What we know and what we still need to learn. *Sleep Med Rev* 2002; 6: 97-111.
3. Morin CM. Cognitive-behavioral approaches to the treatment of insomnia. *J Clin Psychiatry* 2004; 65 Suppl 16:33-40.
4. Smith MT, Neubauer DN. Cognitive behavioral therapy for chronic insomnia. *Clinical Cornerstone* 2003; 5:1-9.
5. Morin CM, Bootzin RR, Buysse DJ, Edinger JD, Espie CA. Psychological and behavioral treatment of insomnia: Update of the recent evidence (1998-2004). *Sleep* 2006; 29:1398-1413.
6. Smith MT, Perlis ML, Park A, et al. Comparative meta-analysis of pharmacotherapy and behavior therapy for persistent insomnia. *Am J Psychiatry* 2002; 159:5-11.
7. Edinger JD, Sampson WS. A primary care "friendly" cognitive behavioral insomnia therapy. *Sleep* 2003; 26:177-182.
8. Buscemi N, Vandermeer B, Friesen C, et al. Manifestations of chronic insomnia in adults. Evidence report/technology assessment No. 125. (Prepared by the University of Alberta Evidence-based Practice Center, under Contract N. C40000021.) AHRQ Publication No. 05-E021-1. Rockville, Md: Agency for Healthcare Research and Quality. June 2005. Available at: www.ahrq.gov/downloads/pub/evidence/pdf/insomnia/insomnia.pdf. Accessed on September 4, 2007.
9. American Psychological Association Web site. Getting a good night's sleep with the help of psychology. Available at: www.psychologymatters.org/insomnia.html. Accessed on September 4, 2007.

FAST TRACK

The APA recommends cognitive behavioral therapy as the treatment of choice for chronic insomnia