

The Child Network: A New Tool for Parents to help Pediatricians Track Mood and Behavioral Disorders.

Robert M Post

Professor of Psychiatry, George Washington University School of Medicine, Bipolar Collaborative Network, 5415 W. Cedar Lane, Suite 201-B, Bethesda, MD 20814, USA.

Abstract

Childhood mood and behavioral disorders are increasingly common in the United States, but are often not recognized and treated in a timely fashion. Pediatricians and other primary care providers are urged to play a key role in monitoring and fostering children's mental as well as physical health, but time constraints are often limiting. One way of facilitating interactions in this domain, is to have parents provide the longitudinal tracking of their child's mood and behavior on a weekly basis on a secure website. The ratings can then be printed out and brought to the physician for a more detailed assessment of symptom fluctuations, need for treatment, and degree of response. The informed consent for such a system is available for parents at www.bipolarnews.org (click on Child Network). We hope physicians will encourage parents to join the Child Network, as this should help facilitate earlier recognition and treatment of a wide range of psychiatric disorders presenting in childhood.

Keywords: Behavioral disorders, Mood.

Accepted January 11, 2016

Introduction

Two recent publications highlight the importance of more systematic tracking of children's mood and behavioral disorders. An article by Anderson et al [1] indicated that one third of children with mental disorders were seen by primary care providers (PCPs). Axelson et al [2] reported that 74.2% of the offspring of a parent with bipolar disorder had a major psychiatric disorder upon 6.7 years of prospective follow up. This included a wide variety of diagnoses, such as anxiety in 39.9%; depression in 32.0%, ADHD in 30.7%; disruptive behavioral disorder in 27.4%; oppositional defiant disorder in 25.3% and bipolar spectrum disorder in 19.2%. Even the child of the community controls (whose parents did not have a bipolar disorder) had a major childhood psychiatric disorders in an astounding high 48.4%. These data and a meta-analysis by Rasic et al [3] indicate that a very high percentage of offspring of a parent with a major mental disorder or even the children of community controls are a very high risk of diverse psychiatric disorders.

Problem

Childhood onset bipolar disorders are even more common in the US than in many European countries [4-6]. A year of birth or cohort effect is also driving an increased incidence and earlier age of onset of depression, bipolar disorder, and

substance abuse [7], as well as ADHD. However, there is a shortage of child psychiatrists in the US and many other countries such that a very large segment of these children are being seen by PCPs and pediatricians [1]. Often these physicians have limited time and/or do not feel confident in diagnosis and treatment of these childhood disorders. Only about 1/4 of the children are referred to a psychiatrist. Merikangas et al [8] found that only a small minority (about 20%) of children and adolescents (aged 13-18) with a bipolar spectrum diagnosis were in any kind of treatment. Early onset mood disorders are associated with long delays to first treatment, and both early onset and treatment delay are associated with a poor outcome in adulthood [9].

One Solution: The Child Network

One way of enhancing diagnostic and treatment decisions by PCPs is to have parents of young children rate their child on a once a week basis so that symptom severity and fluctuations are easily visualized. The weekly ratings can be printed out by the parent longitudinally and shown to clinicians. This will also help in the tracking of the need for treatment and the response to any psychosocial or pharmacological treatments given. The informed consent for this network can be accessed at www.bipolarnews.org, (click on Child Network). Parents can rate their child (aged 2-12) on a secure web site each week under

a protocol approved by the Johns Hopkins School of Medicine in collaboration with Robert Findling who is the principle investigator. After a short demographics form and a detailed symptom checklist, the weekly ratings of the symptoms of depression, anxiety, ADHD, oppositional behavior, and mania take just a few minutes to complete.

Advantages of the Child Network

These ratings not only clarify the course of the child's symptoms, they do it without taking time away from the physician who can readily use the information in his/her assessment and treatment. The 5 symptoms rated on a once-a-week basis cover almost all of the diagnostic areas that commonly occur in young children and are just the ones cited by Anderson et al [1] that are most frequently seen by PCPs, specifically ADHD (in 64.7% of the children), mood disorders (24.3%), and anxiety disorders (19.0%), and to a lesser extent pervasive developmental disorder (6.9%), other disorders (7.2%), psychoses (1.3%), and alcohol and substance disorders (0.3%).

Assistance with Diagnosis and Treatment Evaluation

A key diagnostic element for PCPs caring for very young children is to distinguish pure ADHD occurring in very large numbers of children from the ADHD that is often comorbid with childhood onset bipolar disorder. In making this distinction, symptoms that are typical of bipolar disorder and are not consistent with a pure ADHD diagnosis are: brief or extended periods of inappropriate euphoria; decreased need for sleep; more extreme behavioral dyscontrol and aggression than would ordinarily occur in ADHD (such as suicidal or homicidal threats and behavior); jumping out of a moving car; hypersexuality (such as propositioning a teacher); and hallucinations or delusions (which are definitely not consistent with ADHD) [10]. In the presence of these characteristics, one should consider a bipolar diagnosis and treat the child with anticonvulsant mood stabilizers, lithium, or atypical antipsychotics [11,12] prior to use of stimulants for any residual ADHD symptoms.

The occurrence of depression, disruptive behavioral disorder, and abbreviated/rapid fluctuation bipolar mood symptoms (called bipolar not otherwise specified; BP-NOS) are predictors of the later development of bipolar disorder in the offspring of a parent with bipolar disorder [2]. In those at risk for bipolar disorder because a parent has bipolar disorder and the child already has depression, anxiety, or sub threshold bipolar disorder, offering psychotherapy such as Family Focused Therapy (FFT) has been shown to be more effective than treatment than usual (TAU) [13]. Thus, referral for family psychotherapy and psychoeducational work may be a very valuable place to start as one is considering safe and well tolerated interventions, such as omega-3-fatty acids, N-acetylcysteine, and vitamin D3 as well as the use of more typical pharmacological treatments noted above

[14]. Encouragement of maintaining a regimen of good diet, exercise, and sleep hygiene may also be helpful in preventing elements of the metabolic syndrome to which children with bipolar disorder are particularly prone. When expert care is given early, the course of bipolar disorder can be dramatically altered. Kessing et al [15] randomized young patients with a first hospitalization for mania to either comprehensive specialty clinic treatment or TAU for two years. Not only did those receiving specialty clinic treatments experience many fewer relapses than those with TAU, but the differences persisted and were magnified over the next four years even though all patients had returned to TAU.

We hope pediatricians will encourage parents to join the Child Network for better tracking and follow up of their child's mood and behavioral disturbances, as better monitoring of illness markers as proved so valuable in extending wellness and longevity in diabetes, rheumatoid arthritis, cardiovascular disease, and AIDS. Ciccone et al [16] have shown the very positive effects of a case manager in facilitating comprehensive care and patient engagement in adults with chronic medical disorders. While such an approach would be ideal for children with difficult chronic psychiatric and medical problems, this type of a case manager is not always available, and parent engagement, with the help of the Child Network, may be a first step. Parents and physicians can also access the latest information on the presentation and treatment of childhood onset bipolar disorder and its multiple comorbidities in the Bipolar Network Newsletter (BNN) that is written by this author at least quarterly and updated almost weekly at www.bipolarnews.org.

Conclusion

We heartily agree with Shonkoff and Garner [17] recommendations that pediatricians become the guardians of children's mental as well as physical health, especially since adversity in childhood (verbal, physical, and sexual abuse and neglect) is the precursor to later development of a very wide range of physical as well as psychological problems in adolescence and adulthood. Early recognition of a range of common child psychiatric disorders [1-3,8,18] particularly in those at extra high risk by virtue of a positive family history of mood disorders and/or the occurrence of psychosocial adversity in childhood [6,17], should help ameliorate some of the long term adverse consequences when these disorders are inadequately recognized and treated.

References

1. Anderson LE, Chen ML, Perrin JM, Van Cleave J. Outpatient Visits and Medication Prescribing for US Children with Mental Health Conditions. *Pediatrics* 2015; 136: e1178-1185.
2. Axelson D, Goldstein B, Goldstein T, Monk K, Yu H, et al. Diagnostic Precursors to Bipolar Disorder in Offspring of Parents With Bipolar Disorder: A Longitudinal Study. *Am J Psychiatry* 2015; 172: 638-646.

3. Rasic D, Hajek T, Alda M, Uher R. Risk of mental illness in offspring of parents with schizophrenia, bipolar disorder, and major depressive disorder: a meta-analysis of family high-risk studies [Meta-Analysis Research Support, Non-U.S. Gov't]. *Schizophr Bull* 2014; 40: 28-38.
4. Bellivier F, Etain B, Malafosse A, Henry C, Kahn JP, et al. Age at onset in bipolar I affective disorder in the USA and Europe [Comparative Study Research Support, Non-U.S. Gov't]. *World J Biol Psychiatry* 2014; 15: 369-376.
5. Etain B, Lajnef M, Bellivier F, Mathieu F, Raust A, et al. Clinical expression of bipolar disorder type I as a function of age and polarity at onset: convergent findings in samples from France and the United States [Research Support, Non-U.S. Gov't]. *J Clin Psychiatry* 2012; 73: e561-566.
6. Post RM, Altshuler L, Kupka R, McElroy S, Frye MA, et al. More pernicious course of bipolar disorder in the United States than in many European countries: implications for policy and treatment [Research Support, Non-U.S. Gov't]. *J Affect Disord* 2014; 160: 27-33.
7. Kessler RC, Angermeyer M, Anthony JC, Demyttenaere K, Gasquet I, et al. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry* 2007; 6: 168-176.
8. Merikangas KR, He JP, Brody D, Fisher PW, Bourdon K, et al., Prevalence and treatment of mental disorders among US children in the 2001-2004 NHANES [Comparative Study]. *Pediatrics* 2010; 125: 75-81.
9. Post RM, Leverich GS, Kupka RW, Keck PE Jr., McElroy SL, et al. Early-onset bipolar disorder and treatment delay are risk factors for poor outcome in adulthood [Research Support, N.I.H., Extramural Research Support, Non-U.S. Gov't]. *J Clin Psychiatry* 2010; 71: 864-872.
10. Post R, Findling R, Luckenbaugh D. Number, severity, and quality of symptoms discriminate early onset bipolar disorder from ADHD. *Psy Annals* 2014b; 44: 416-422.
11. Geller B, Luby JL, Joshi P, Wagner KD, Emslie G, et al. A randomized controlled trial of risperidone, lithium, or divalproex sodium for initial treatment of bipolar I disorder, manic or mixed phase, in children and adolescents [Randomized Controlled Trial Research Support, N.I.H., Extramural]. *Arch Gen Psychiatry* 2012; 69: 515-528.
12. Kowatch RA, Fristad M, Birmaher B, Wagner KD, et al. Treatment guidelines for children and adolescents with bipolar disorder [Guideline Practice Guideline Research Support, Non-U.S. Gov't]. *J Am Acad Child Adolesc Psychiatry* 2005; 44: 213-235.
13. Miklowitz DJ, Schneck CD, Singh MK, Taylor DO, George EL, et al. Early intervention for symptomatic youth at risk for bipolar disorder: a randomized trial of family-focused therapy [Randomized Controlled Trial Research Support, N.I.H., Extramural Research Support, Non-U.S. Gov't]. *J Am Acad Child Adolesc Psychiatry* 2013; 52: 121-131.
14. Post RM, Chang K, Frye MA. Paradigm shift: preliminary clinical categorization of ultrahigh risk for childhood bipolar disorder to facilitate studies on prevention [Research Support, Non-U.S. Gov't]. *J Clin Psychiatry* 2013; 74:167-169.
15. Kessing LV, Hansen HV, Hvenegaard A, Christensen EM, Dam H, et al. Treatment in a specialised out-patient mood disorder clinic v. standard out-patient treatment in the early course of bipolar disorder: randomised clinical trial [Randomized Controlled Trial Research Support, Non-U.S. Gov't]. *Br J Psychiatry* 2013; 202: 212-219.
16. Ciccone MM, Aquilino A, Cortese F, Scicchitano P, Sassara M, et al. Feasibility and effectiveness of a disease and care management model in the primary health care system for patients with heart failure and diabetes (Project Leonardo) [Evaluation Studies Multicenter Study]. *Vasc Health Risk Manag* 2010; 6: 297-305.
17. Shonkoff JP, Garner AS. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics* 2012; 129: e232-246.
18. Post RM. The perfect storm of childhood onset bipolar disorder. *Psy Annals* 2009; 39:879-886.

Correspondence to:

Robert M Post
 Professor of Psychiatry
 George Washington University School of Medicine
 Bipolar Collaborative Network
 5415 W. Cedar Lane, Suite 201-B
 Bethesda, MD 20814
 USA
 Tel: (301)530-8245, (240)888-1317
 Fax: (301)530-8247
 E-mail: robert.post@speakeasy.net