•> CASE 5

A 14-year-old boy is brought to the emergency department after being found in the basement of his home by his parents during the middle of a school day. The parents came home after receiving a call from the school reporting that their son had not attended school for 4 days. The boy was furiously working on a project he claimed would solve the fuel crisis. He had stalled returning home from school after his parents left for work because his science teacher would no longer let him use the school laboratory after school hours. The patient was involved in an altercation with the school janitor after being asked to leave the school because it was so late. The boy claimed that the janitor was a foreign spy trying to stop his progress.

The parents are very proud of their son's interest in science but admit that he has been more difficult to manage lately. He can't stop talking about his project, and others cannot get a word in edgewise. His enthusiasm is now palpable. For the past few weeks, he reads late into the night and gets minimal sleep. Despite this, he seems to have plenty of energy and amazes his parents' friends with detailed plans of how he is going to save the world. His friends have not been able to tolerate his increased interest in his project. His train of thought is difficult to follow. He paces around the examination room, saying "(I am| anxious to get back to my project before it is too late." Although he has no suspects in mind, he is concerned that his life may be in danger because of the importance of his work.

- **What is the most likely diagnosis?**

- **What is the best treatment?**

ANSWERS TO CASE 5: Bipolar Disorder (Child)

Summary: A 14-year-old boy is brought to the emergency department by his parents because he has been skipping school to work feverishly on a project he says will save the world. The problem appears to have escalated over the past few weeks. He does not sleep, yet he has plenty of energy. His thoughts are disordered, and he has no insight into his intrusiveness or how much he annoys people with his excessive, incessant talking. He is irritable and labile. He has paranoid and grandiose thoughts.

- **Most likely diagnosis:** Bipolar I disorder, single manic episode, with psychotic features
- **Best treatment:** Mood stabilizer (such as valproic acid or lithium) and atypical antipsychotic agent. According to American Academy of Child and Adolescent Psychiatry (AACAP) guidelines, monotherapy with the traditional mood stabilizers lithium, divalproex, and carbamazepine or the atypical antipsychotics olanzapine, quetiapine, and risperidone is the first line treatment if no psychosis is present. **The majority of the guideline panel recommended lithium or divalproex as the first medication choice for nonpsychotic mania.** Given that this patient has signs of significant thought disorder and paranoia, he should be started on both a mood stabilizer and an atypical antipsychotic medication.

Analysis

Objectives

1. Understand the diagnostic criteria for bipolar disorder.
2. Understand the criteria for inpatient psychiatric treatment for this disorder.
3. Understand the initial plan for the treatment of bipolar disorder.

Considerations

The patient presents with grandiosity, inflated self-esteem, paranoia, a decreased need for sleep, an increased energy level, pressured speech, and an increased motor activity level. It seems as if the symptoms have been building for several weeks. The boy does not appear distressed and neither were his parents until his behavior became more troublesome, and his school performance was affected. It is unclear whether this is the first such episode for this patient. Although this patient presents with classical euphoric mania, it is important to remember that children with bipolar disorder often present with a mixed or dysphoric picture characterized by short periods of intense mood labiality and irritability. Is there a need for hospitalization? Yes. The patient does not appear to be an acute danger to himself or to others although he has

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Analysis

Objectives

1. Understand the diagnostic criteria for bipolar disorder.
2. Understand the criteria for inpatient psychiatric treatment for this disorder.
3. Understand the initial plan for the treatment of bipolar disorder.

Considerations

The patient presents with grandiosity, inflated self-esteem, paranoia, a decreased need for sleep, an increased energy level, pressured speech, and an increased motor activity level. It seems as if the symptoms have been building for several weeks. The boy does not appear distressed and neither were his parents until his behavior became more troublesome, and his school performance was affected. It is unclear whether this is the first such episode for this patient. Although this patient presents with classical euphoric mania, it is important to remember that children with bipolar disorder often present with a mixed or dysphoric picture characterized by short periods of intense mood labiality and irritability. Is there a need for hospitalization? Yes. The patient does not appear to be an acute danger to himself or to others although he has

clearly become increasingly difficult to manage. His parents were unaware that he had been leaving school early and are unsure what others activities he engaged in or where he might have been. The patient is at high risk for engaging in impulsive actions that have the potential for painful consequences (sexual indiscretions, buying sprees, or other pleasurable but risky behaviors). An inpatient setting would be ideal for starting treatment with medications rapidly and titrating to efficacy. Because the patient is a minor, his parents can sign him into a hospital voluntarily. After starting a mood stabilizer and atypical antipsychotic medication, the patient would be monitored closely. If there is only a partial response to therapeutic doses of the medications, then addition of another mood stabilizer would be indicated. If no response is seen then a switch to a new mood stabilizer would be the best course of action.

APPROACH TO BIPOLAR DISORDER (CHILD)

Definitions

Bipolar type I disorder: A syndrome with complete manic symptoms occurring during the course of the disorder.

Bipolar type II disorder: Hypomania: characterized by depression and episodes of mania that don"t meet the full criteria for manic syndrome. *See* Hypomania.

Hypomania: Symptoms are similar to those of mania, although they do not reach the same level of severity or cause the same degree of social impairment. Although hypomania is often associated with an elated mood and very little insight into it. patients do not usually exhibit psychotic symptoms, racing thoughts, or marked psychomotor agitation.

Rapid-Cycling Bipolar Disorder: Occurrence of at least four episodes—both retarded depression and hypomania/mania—in a year.

Labile: A mood and/or affect that switches rapidly from one extreme to another. For example, a patient can be laughing and euphoric one minute, followed by a display of intense anger and then extreme sadness in the following minutes of an interview.

Clinical Approach

The *Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV)* criteria for a diagnosis of bipolar disorder in children (see Table 5-1) are the same as those for adults. **However, current child psychiatric literature suggests that many juveniles with bipolar disorder have a presentation of severe mood dysregulation with multiple intense, prolonged mood swings every day consisting of short periods of euphoria followed by longer periods of irritability.** These children can average between 3 to 4 cycles per day. *As* a *result,* the clinician can see youth diagnosed with bipolar disorder

Table 5-1
DIAGNOSTIC CRITERIA FOR BIPOLAR DISORDER IN CHILDREN*

A distinct period of abnormally and persistently elevated, expansive, or irritable mood lasting at least 1 week (or any duration if hospitalization is required). Three or more of the following symptoms during this period: inflated self-esteem or grandiosity; decreased need for sleep: greater talkativeness than usual or pressure to keep talking; flight of ideas or subjective experience that thoughts are racing; distractibility; increase in goal-directed activity or psychomotor agitation; excessive involvement in pleasurable activities with a high potential for painful consequences:

A. Criteria for a mixed episode are not met.
B. Disturbance is severe enough to cause impairment in normal functioning.
C. Symptoms are not caused by the effect of a substance or a medical condition.

*The current *Diagnostic and Statistical Manual of Mental Disorders* diagnosis for bipolar disorder does not have any modifications for the disorder in children.

who do not meet the *DSM-1V* criteria. The incidence of mood disorders increases with increasing age until adulthood. They are rare in pre-school-age children. The rate of occurrence of bipolar I disorder is 0.2% to 0.4% in prepubertal children. Because the symptoms of mania rarely occur before adolescence, it can take years to diagnose a child with bipolar disorder who presents with childhood depressive symptoms. The prevalence of adolescent bipolar disorder in the general population is about 1%.

Mood disorders tend to cluster in families. The rate of mood disorders in the children of adults with these disorders is at least three times the rate seen in the general population with a lifetime risk of 15% to 45%. The finding that identical twins have a concordance rate of 69% for bipolar disorder compared to a 19% rate for dizygotic twins indicates a strong genetic component but also suggests an effect of psychosocial issues on the development of mood disorders.

Bipolar I disorder is rarely diagnosed before puberty because of the absence of episodes of mania. Usually, an episode of major depression precedes an episode of mania in an adolescent with bipolar I. Mania is recognized by a definite change from a preexisting state and is usually accompanied by grandiose and paranoid delusions and hallucinatory phenomena. **In childhood, episodes of mania consist of extreme mood variability, cyclic aggressive behavior, high levels of distractibility, and a poor attention span. In adolescence, episodes of mania are often accompanied by psychotic features,** and hospitalization is frequently necessary. Hypomania must be differentiated from attention-deficit/hyperactivity disorder (ADHD), which is characterized by distractibility, impulsivity, and hyperactivity that is present on a daily basis consistently since before the patient was 7 years old. Children with ADHD

will frequently develop oppositional defiant disorder (ODD), where the patient defiantly opposes the wishes of others and breaks minor rules, or conduct disorder (CD), where the youth defiantly breaks major social rules. A youth who has both ADHD and ODD or CD can present with a pattern of distractibility. motor agitation, and impulsive anger outbursts that can be mistaken for bipolar disorder. The history of the behavior in the preschool age then becomes a key piece of information, as bipolar disorder is extremely rare in this age range whereas ADHD and ODD are very common.

Differential Diagnosis

The psychomotor agitation or increase in activity level often associated with bipolar disorder must be carefully differentiated from the symptoms of ADHD, especially if the child also has ODD or CD. If the episode occurring is a depressive one, other mood disorders must be ruled out. including major depression or an adjustment disorder with a depressed mood. Mood disorders related to substance intoxication, anxiety disorders, the side effects of a medication. or a general medical condition must also be excluded.

Working with Children and Their Families

Treatment guidelines of the AACAP note that the family is essential in providing the detailed past history and current observations needed to make an accurate diagnosis. In the process of taking a history, it is critical to consider if the parents or other family members have been diagnosed as having bipolar disorder or if the family members have undiagnosed or untreated bipolar disorder. In such cases, assuring that the family members are receiving adequate treatment for their illness can have major beneficial effects on the child's environment. Finally, it is critical to make sure that the families fully understand what bipolar disorder is, its clinical course, how it can be effectively treated. and the availability of bipolar disorder support groups.

Treatment

Medications play a significant role in the treatment of bipolar disorder, and AACAP treatment algorithms should be consulted when providing care to juveniles with bipolar disorder. Often **mood-stabilizing agents such as lithium carbonate, carbama/.epine, and divalproex** can be helpful in preventing and treating manic phases. All must have blood levels monitored to assure dosing in a therapeutic range. Treatment guidelines developed by the AACAP note the lack of good research data in treating depressed bipolar youth but do note that lithium can be recommended as a treatment option in youth with bipolar depression. Selective serotonin reuptake inhibitors and buproprion can also be considered based on the AACAP guidelines, and lamotrigine and

divalproex are other treatment options noted. **Many antidepressants are believed to be able to trigger or "unmask" mania,** and so they should be used carefully, and patients should be observed closely for emergent manic-symptoms. Patients on lithium need to have thyroid and kidney function monitored on a regular basis, whereas those on carbamazepine need close monitoring for rare aplastic anemia or agranulocytosis. In addition to monitoring for liver function and platelet levels if the patient is on divalproex, a number of studies have suggested a high rate of polycystic ovarian syndrome in women with epilepsy who are treated with divalproex, raising concerns about the long-term used of divalproex in young women with bipolar disorder. Many mood stabilizers have shown evidence of **teratogenic effects.** For this reason, pregnancy tests should be performed on all females of childbearing age before prescribing these drugs. **Atypical antipsychotics such as olanzapine, risperidone, and quetiapine** have **also been used as monotherapy to control episodes of mania.** Patients placed on atypical antipsychotics should be carefully monitored for development of a metabolic syndrome consisting of weight gain, diabetes mellitus. and hypercholesterolemia. **Tardive dyskinesia** is a possible side effect of the atypical antipsychotics, and an assessment of abnormal movements should be done at baseline and regular intervals using the Abnormal Involuntary Movement Scale (AIMS).

The treatment of bipolar disorder in childhood can be very difficult. There are numerous comorbid psychiatric diseases, particularly ADHD. If treatment of the bipolar disorder is adequate, but any comorbid psychiatric disorders are not addressed, the child will continue to have academic and functional impairment. The lack of recognition of the high degree of comorbidity could lead to false assumptions about treatment success and repeated, unnecessary medication trials.

The **treatment of bipolar disorder in children involves both psychotherapy and psychopharmacotherapy.** The school and the family should be included in the treatment, as the ramifications of bipolar disorder in an individual can have far-reaching effects. **Cognitive therapy** is often an important component of treatment and focuses on **reducing negative thoughts and building self-esteem. Family therapy** can be indicated in situations where lamih dynamics mighi be a factor contributing to the symptoms.

Comprehension Questions

[5.**1**] Which of the following medications is used to treat episodes of mania?

A. Accutane (isotretinoin)
B. Beclomethasone
C. Clindamycin
D. Divalproex
E. Erythromycin

[5.2] Which of the following statements is true regarding bipolar disorder in childhood?

A. Current research suggests that many children with bipolar disorder do not present in the same manner as adults.
B. Youth presenting with bipolar mania with psychotic features should initially be treated with either a mood stabilizer or an atypical antipsychotic.
C. The incidence of prepubertal bipolar disorder is the same as in adolescents. both being about 1%.
D. Psychotherapy has little role in the treatment of bipolar disorder.
E. Lithium, divalproex, and carbamazepine can be administered without concern to pregnant women.

|5.3] Which of the following statements is most accurate regarding mood disturbances in childhood and adolescence?

A. Mood-Stabilizing agents are relatively safe during pregnancy.
B. Atypical antipsychotic agents can be used to control acute manic symptoms without fear of long-term side effects.
C. The incidence of mood disorders increases with increasing age during childhood and adolescence.
D. Lithium is not always useful for treating the depressive symptoms of bipolar disorder.
E. Hypomania is generally more dangerous than mania.

Answers

[5.1] D. Mood stabilizers are used to treat bipolar disorder. Divalproex is the only mood stabilizer listed among these medications.

[5.2] A. Current child psychiatric literature suggests that many juveniles with bipolar disorder have a presentation of severe mood dysregulation with multiple intense, prolonged mood swings every day consisting of short periods of euphoria followed by longer periods of irritability that is different from adults.

[5.3] C. The incidence of mood disorder increases with increasing age during childhood and adolescence. Mood-stabilizing agents such as lithium and divalproex have significant teratogenic effects. Atypical antipsychotic agents can cause metabolic syndrome or permanent tardive dyskinesia.

CLINICAL PEARLS

Current child psychiatric literature suggests that many juveniles with bipolar disorder have a presentation of severe mood dysregulation with multiple intense, prolonged mood swings every day consisting of short periods of euphoria followed by longer periods of irritability that is different from adults.

The majority of the AACAP treatment guideline panel recommended lithium or divalproex as the first medication choice for nonpsychotic mania.

There is a high degree of psychiatric comorbidity in bipolar disorder in childhood.

Mood-stabilizing agents have a significant risk for teratogenicity.

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