An 11-Year-Old Girl with Suicidal Thoughts, Hallucinations

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An 11-year-old girl had a minor fall at home and developed severe pain in her right hand and her left leg. She presented to a physical medicine and rehabilitation (PMR) clinic with severe pain and resultant gait disturbance. Due to the severity of her presentation, she was admitted to a PMR inpatient facility for intensive therapy and diagnostic workup. No underlying medical conditions were found and no medications were helpful. Physical therapy was not helpful in improving function.

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During the course of her 3-week rehabilitation hospitalization, she was diagnosed with conversion disorder and major depressive disorder. She was started on sertraline 25 mg during this hospitalization.

At age 9, she had been diagnosed with complex regional pain syndrome (CRPS) after a minor injury. That episode had improved gradually with physical therapy, gabapentin, and ibuprofen. She also had a history of ADHD diagnosis at age 8 and was taking atomoxetine and methylphenidate to control the symptoms. Family history was significant for major depression in the patient’s mother.

After discharge from the inpatient PMR service, the girl was referred to a child and adolescent psychiatry specialty clinic. She reported experiencing suicidal thoughts since discharge from the rehab facility. She had a plan to jump out her bedroom window or to stab herself. She had thought about timing these acts to avoid being observed by family. She reported hearing voices that she could not understand because they sounded like mumbling. She said the voices scared her. She reported that the voices had worsened since coming home from the rehab hospital.

Due to these symptoms, she was admitted to an inpatient psychiatric facility, where the sertraline was increased to 50 mg and the atomoxetine and methylphenidate were stopped. She continued to report suicidal ideation with plan throughout her 5-day inpatient stay. She continued to endorse auditory hallucinations and reported seeing “dead people” in her room at night.

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Her parents thought that they were able to provide adequate supervision to ensure her safety at home. She continued to endorse suicidal thoughts and plans, as well as auditory hallucinations after discharge. She had poor rapport with her outpatient psychotherapist and resisted psychotherapeutic intervention.

Sertraline was increased to 75 mg approximately 2 weeks after her psychiatric inpatient stay. The patient began to have significant difficulty initiating and maintaining sleep and was started on clonidine. She continued to have suicidal thoughts and hallucinations; she cut herself superficially on several occasions; and she had frequent episodes of extreme yelling and crying in response to limit-setting from parents. The patient became aggressive to her mother, slapping her in the face and biting her on two separate occasions. She had no prior history of aggression. The patient’s grandmother observed her masturbating in the living room. She was not able to return to school.

Her parents expressed concern that sertraline was causing her symptoms. They reported that she had never experienced suicidal or self-harm ideation or hallucinations before initiation of sertraline. The patient’s dosage of the drug was then tapered and discontinued. She was concurrently started on aripiprazole 2 mg daily.

Approximately 1 week later, her symptoms resolved. She reported that the auditory and visual hallucinations stopped, and she no longer had any suicidal or self-harm thoughts. She did not have any more aggression or emotional outbursts. Parents reported that her affect was calm and stable. She was able to go to school after missing approximately 2 months of classes. Five months later, she continued to have stable mood and no significant behavioral issues.
Behavioral activation (BA) and antidepressant-induced mania (AIM) are potential side effects of antidepressants in children. Behavioral activation is described as distinct from mania and has the following features: increased activity, aggression, sleep disturbance, disinhibition, and subjective feelings of increased energy. Studies estimate that BA occurs in approximately 8% to 17% of pre-adolescent children treated with selective serotonin reuptake inhibitors (SSRIs) compared with 3.4% receiving placebo. BA occurs in approximately 2% to 3% of adolescents treated with SSRIs compared with 1% with placebo. It is believed that pre-adolescent children are two times more likely than adolescents to experience BA. BA can occur anytime during treatment but most commonly presents during the first 2 weeks of use. Increasing the dose of antidepressant can also trigger BA in youth. For most youth who experience behavioral activation, withdrawal of SSRIs results in return to baseline symptoms of depression.

Certain populations of children also are considered to be at higher risk of BA. Youth with mental retardation, anxiety disorders, autism spectrum disorders, and tic disorders are at higher risk of developing BA. It is estimated that 20% of patients in these diagnostic groups treated with SSRIs will experience BA. One study found that 45% of children with anxiety spectrum disorders treated with fluvoxamine experienced some degree of BA compared with 4% treated with placebo.

In 2004, the Food and Drug Administration (FDA) issued a public health advisory and required a “black box” warning label due to the increased risk of suicidal thoughts and behavior associated with use of antidepressants in children and adolescents found in an FDA meta-analysis by Hammad et al. According to this study, youth who experienced BA were two to three times more likely to have suicidal ideation and self-harm behavior.

A meta-analysis estimated that criteria for mania and hypomania are met in 0% to 6% of youth treated with SSRIs versus 0% to 2% for placebo. The incidence of AIM was found to be higher, approximately 7%, in children with any psychiatric diagnosis who were treated as inpatients. One retrospective study found that 50% of children diagnosed with bipolar disorder had experienced AIM. This study also found that 25% of children with bipolar disorder experienced new onset suicidal ideation associated with antidepressant use. A chart review found that youth with bipolar disorder who were taking an SSRI were three times more likely to report manic symptoms at their next follow-up visit compared with bipolar youth not taking an SSRI. Approximately 60% of cases of AIM resolved upon withdrawal of medication. In many cases, medication was required for mood stabilization.

Several different theories have been proposed as the cause of BA and AIM in children. One is that...
these may be viewed as a medication side effect, not having any association with bipolar disorder and not conveying any increased risk. A competing theory is that children with bipolar disorder may initially present with depressive symptoms, and the antidepressant causes a switch to mania, much in the same manner as has been widely accepted to occur in adults with bipolar disorder. Others believe that the switch to mania may be unrelated to the use of antidepressant medication and may have occurred naturally due to the rapid cycling that occurs in bipolar youth. Some believe that the high rates of AIM and BA are due to increased monitoring for these symptoms in recent studies. Others believe these rates reflect to the use of broad criteria for BA and AIM that may not take into account the normal range of behavior in young children. The most controversial theories propose that the use of antidepressants in children may actually induce bipolar disorder in children who would not have otherwise been diagnosed with bipolar disorder.

This case demonstrates the severity of symptoms possible in BA and AIM and the difficulties associated with recognizing and treating it effectively. Similar to other patients who experience AIM, this patient should be monitored for future symptoms of bipolar disorder and other mood disorders.

REFERENCES