

# A paranoid, violent teenager

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Ms. V, age 16, believes her sister is poisoning her food. After her paranoia increases she kills her sister with a hammer. Could this tragedy have been prevented?

## CASE Sleepless and paranoid

Ms. V, age 16, is referred to our psychiatric hospital from a juvenile detention center after she is charged with killing her sister with a hammer. She reports paranoid delusions, including believing that her sister was poisoning her food. Ms. V's troubling behavior increased in the 6 months before the murder. She began to ask her mother to smell her food for possible poison. Her school grades dropped and she experienced decreased sleep and appetite. According to her mother, Ms. V's insomnia worsened recently because of her paranoid thinking, which was evident when she noticed that her daughter slept with a hammer. Ms. V stopped socializing with her peers and no longer went to the gym.

Ms. V's mother describes her daughter's negative symptoms as consisting of social isolation and a flat affect. There was no evidence of auditory or visual hallucinations. After noticing the change in her daughter's behavior, Ms. V's mother attempted to schedule an appointment with a mental health professional, but there was a 2-month waiting list.

Ms. V cleaned her room before the murder, which was uncharacteristic of her routine behavior. On the day of the murder, Ms. V approached her sister while she was sleeping on the sofa and struck her on the head several times with a hammer. After the sister died, neighbors spotted Ms. V washing blood off her hands in their backyard with a sprinkler. Soaked in blood, she

approached one of the neighbors and said that someone had been killed in the house. The neighbors called the police and Ms. V was arrested. She did not express remorse. She did not exhibit physical aggression toward others before the murder. Ms. V's sense of entitlement and grandiosity persisted after the murder.

## The authors' observations

Paranoid delusions are fixed false beliefs with severe fears of others that may impair functioning at school or work, in personal relationships, and in other social dimensions. Paranoid thinking can have diverse presentations, ranging from social concerns such as fear of rejection to severe threat perceptions of people trying to cause substantial physical harm.<sup>1</sup> Paranoid thoughts can be a result of misinterpretation of language, a personality disorder, anxiety, or psychosis.

Feelings of low self-esteem<sup>2</sup> and anger<sup>1</sup> may develop in a patient experiencing paranoid ideations. When anger begins to escalate, it may erupt into violent behavior. In Ms. V's case, her paranoid ideations increased until she killed her younger sister.

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## Box

## Tucson, AZ mass shooting: Could it have been prevented?

On January 8, 2011, a mass shooting occurred near Tucson, AZ that killed 6 and wounded 13. The suspect, 22-year-old Jared Lee Loughner, refused to cooperate with authorities by invoking his right to remain silent.<sup>3</sup> Although the motives behind this crime remain undisclosed, mental illness appears to be a contributing factor.

Reports indicate that Mr. Loughner was abusing drugs and those close to him had noticed personality changes.<sup>4,5</sup> The college he was attending advised Mr. Loughner to undergo a mental health evaluation, but he refused and dropped out of school.<sup>4,5</sup> While

in custody after the shooting, Mr. Loughner was diagnosed with paranoid schizophrenia, deemed incompetent to stand trial, and ordered to receive psychiatric treatment.<sup>6</sup>

This tragic mass shooting and similar incidents have led to questions regarding the adequacy of the mental health care infrastructure in United States. Experts suggest that this tragedy could have been prevented with more aggressive psychiatric prevention and intervention. Critical analysis of similar recent cases and expert opinions are needed to address this problem effectively.

## Clinical Point

Paranoid thoughts can be a result of misinterpretation of language, a personality disorder, anxiety, or psychosis

Ms. V's case is similar to a mass shooting near Tucson, AZ on January 8, 2011 in that it possibly could have been prevented with earlier psychiatric intervention (*Box*).<sup>3-6</sup>

## EVALUATION Remorseless

At admission, Ms. V's affect is restricted and, at times, inappropriate. She is guarded about discussing the homicide but describes paranoid thoughts about her sister poisoning her. She is eager to learn if the police had found poison in her food. Her speech is soft with good articulation. Based on her presentation, her intelligence is average. She shows no evidence of remorse and is preoccupied with her sister poisoning her.

The Rorschach Inkblot Technique reveals positive evidence for a severe thought disorder. Ms. V's thinking seems regressed. Ms. V's medical workup, including MRI, electroencephalogram, and laboratory tests, are all within normal limits.

In the 5th grade, Ms. V's primary care provider prescribed amphetamine and dextroamphetamine for attention-deficit/hyperactivity disorder, but she discontinued the drug after 1 year. Ms. V has never been hospitalized for psychiatric illness. She had no chronic medical conditions and no developmental delays.

Ms. V also has a history of periodic temper problems characterized by verbal aggression

such as threatening the assistant principal at her school, and throwing her cellphone at her mother a few weeks before the murder, but no other aggressive episodes. Ms. V's history does not suggest conduct disorder. She has no history of suicidal ideation or suicide attempts. Ms. V has used alcohol since age 15, but her mother reports that she was not a heavy or frequent user. Her last reported alcohol use was 10 days before the murder. A maternal uncle had been diagnosed with schizophrenia.

Before the murder, Ms. V lived with her sister and mother. Her parents were divorced. At age 9, Ms. V was sexually abused by a soccer coach; however, she denied symptoms of posttraumatic stress disorder related to the sexual abuse. She had no criminal history before the murder.

## Which diagnosis does Ms. V's history and presentation suggest?

- delusional disorder
- psychotic disorder due to a general medical condition
- schizophrenia, paranoid type
- schizophreniform disorder

## The authors' observations

Based on Ms. V's presentation and history, schizophrenia, paranoid type seems to be the most likely diagnosis because of her negative symptoms, including affective flattening, positive family history for schizo-

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## Table

**DSM-IV-TR criteria for schizophrenia**

A. Characteristic symptoms: $\geq 2$ of the following, each present for a significant portion of time during a 1-month period: <ol style="list-style-type: none"> <li>1. Delusions</li> <li>2. Hallucinations</li> <li>3. Disorganized speech</li> <li>4. Grossly disorganized or catatonic behavior</li> <li>5. Negative symptoms, ie, affective flattening, alogia, or avolition</li> </ol>
B. Social/occupational dysfunction: For a significant portion of the time since the onset of the disturbance, $\geq 1$ major areas of functioning such as work, interpersonal relations, or self-care are markedly below the level achieved prior to the onset
C. Duration: Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms that meet Criterion A and may include periods of prodromal or residual symptoms
D. Schizoaffective and mood disorder exclusion: Schizoaffective disorder and mood disorder with psychotic features have been ruled out because either (1) no major depressive, manic, or mixed episodes have occurred concurrently with the active-phase symptoms; or (2) if mood episodes have occurred during active-phase symptoms, their total duration has been brief relative to the duration of the active and residual periods
E. Substance/general medical condition exclusion: The disturbance is not due to the direct physiological effects of a substance or a general medical condition
F. Relationship to a pervasive developmental disorder: If there is a history of autistic disorder or another pervasive developmental disorder, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations are also present for at least 1 month
<b>Diagnostic criteria for paranoid type:</b> A type of schizophrenia in which the following criteria are met: <ol style="list-style-type: none"> <li>A. Preoccupation with <math>\geq 1</math> delusions or frequent auditory hallucinations</li> <li>B. None of the following are prominent: disorganized speech, disorganized or catatonic behavior, or flat or inappropriate affect</li> </ol>
<b>Source:</b> Reference 7

phrenia, and paranoid delusions leading to dysfunction (*Table*).<sup>7</sup> Delusional disorder seems less likely because Ms. V is young and has negative symptoms. Because she is generally healthy and her medical workup is negative, psychotic disorder due to a general medical condition is ruled out. She does not appear to be over-reporting, malingering, or exaggerating symptoms. In the context of psychosis, adolescent psychopathy does not seem likely even though there is evidence of grandiosity and a lack of remorse.

**What treatment would you consider for Ms. V?**

- a) cognitive-behavioral therapy (CBT) to address her delusions
- b) pharmacotherapy with an atypical antipsychotic
- c) hospitalization to ensure her safety
- d) all of the above

**The authors' observations**

Various treatments can be used for paranoia with aggression, but the severity of the paranoia should be assessed before initiating treatment. Although categorizing paranoid ideations as mild, moderate, and severe is mainly a clinical judgment, Freeman et al<sup>1</sup> have attempted to design a paranoia hierarchy from social concerns to severe threats. CBT<sup>8</sup> and antipsychotic medication may help reduce mild to moderate paranoid delusions, particularly those associated with schizophrenia or mood disorders. For severe paranoia, hospitalization should carefully be considered.

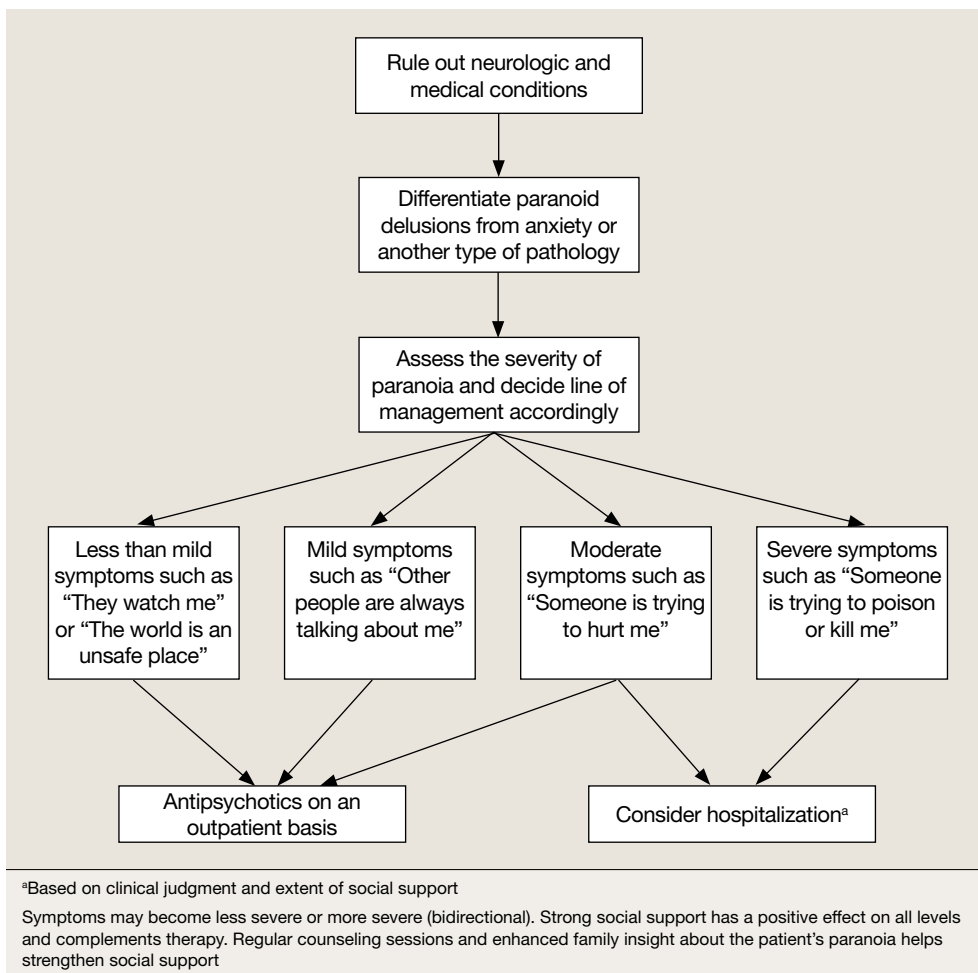
When a patient exhibits moderate paranoia, the probability of progressing to severe symptoms or improving to mild symptoms depends on several

**Clinical Point**

CBT and antipsychotics may help reduce mild to moderate paranoid delusions; consider hospitalization for severe paranoia

Figure

## Paranoia: A suggested approach to treatment

**Clinical Point**

Clinicians can help patients improve their reality testing after gathering sufficient evidence contrary to the delusion

variables. Pharmacologic treatment, family insight, and social support may be important variables in such circumstances. Psychoeducation for the family is vital.

In patients experiencing paranoia, violence may be prevented by proper assessment and treatment. The patient's family should be educated about paranoid ideation and the need for treatment to improve symptoms and ensure safety. The long-term effects of untreated paranoia and types of treatment modalities available should be discussed with the family and the patient. During these teaching sessions, focus on improving the overall insight of the family and the patient about

the psychotic illness to improve treatment adherence.<sup>9</sup> This step may be challenging if the family is resistant to the patient receiving mental health treatment.

Gaining a detailed clinical history of a patient's paranoia is important. A clinician should look for changes in behavior, such as the patient becoming quieter or more hostile, and impaired academic or social functioning. After gathering sufficient evidence contrary to the delusion, clinicians can help patients improve their reality testing.

Rule out medical and neurologic conditions that may be contributing to paranoia and aggression.

**TREATMENT** Some improvement

Ms. V is started on risperidone, 1 mg/d, which leads to a partial response. She starts interacting more with staff and her peers on the unit, but her delusions of her sister poisoning her persist. Given the severity of the crime, Ms. V is sent to adult court, where she is found not guilty by reason of insanity and committed to a state hospital.

**The authors' observations**

New-onset paranoia is a serious symptom that requires immediate evaluation and treatment. We recommend an approach presented in a flowchart (*Figure*) that highlights the importance of early intervention and aggressive treatment.

The MacArthur Violence Risk Assessment Study<sup>10</sup> indicated that a “suspicious” attitude toward others can be a precipitating cause for increased violence in some cases. In light of ongoing controversy regarding the link between violence and mental illnesses such as schizophrenia,<sup>10-12</sup> addressing an individual’s psychiatric illness early is preferable to prevent possible complications such as violent crimes. Because patients with paranoid ideations may have severely impaired ego control, they may be at risk for acting out aggressive and/or destructive urges. Therefore, new-onset paranoia should be thought of as a medical emergency similar to chest pain. Although accurately predicting and preventing violence may be impossible, in Ms. V’s case, earlier mental health treatment and intervention may have been able to prevent a murder.

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**Related Resource**

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**Drug Brand Names**

Amphetamine and dextroamphetamine • Adderall      Risperidone • Risperdal

**Disclosures**

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Personal and clinical details of this case were altered to maintain patient confidentiality.

**Clinical Point**

**A ‘suspicious’ attitude toward others can be a precipitating cause for increased violence in some cases**

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**Bottom Line**

New-onset paranoia should be conceptualized as a medical emergency similar to chest pain. Identifying symptoms of psychosis at earlier stages and intervening immediately is necessary and can be facilitated by proper education of families and patients.