Episode 047: Schizophrenia Differential Diagnosis & DSM5

Joseph Wong (MS3), Ariana Cunningham, M.D., David Puder M.D.

This PDF is a supplement to the podcast "Psychiatry & Psychotherapy" found on **iTunes**, **Google Play**, **Stitcher**, **Overcast**, **PlayerFM**, **PodBean**, **TuneIn**, **Podtail**, **Blubrry**, **Podfanatic**

There are no conflicts of interest for this episode.

On today's episode of the podcast, I am interviewing with Dr. Ariana Cunningham. We cover the DSM5 criteria for schizophrenia and the differential diagnoses for schizophrenia.

Diagnosing schizophrenia

Doctors and therapists need to be able to rule everything else out before they can land on schizophrenia as an official diagnosis. The specific symptoms are known as "first-rank symptoms," which we will cover later in the article, that will help with diagnosing patients (Schneider, 1959). Eighty-five percent of people with schizophrenia endorse these symptoms, but be wary of jumping to conclusions, because they are not specific to schizophrenia and, in some studies, are also endorsed by bipolar manic patients (Andreasen, 1991).

DSM5 (Diagnostic and Statistical Manual of Mental Disorders 5th ed.)

Schizophrenia is a clinical diagnosis made through observation of the patient and the patient's history.

- There must be 2 or more of the characteristic symptoms below (Criterion A) with at least one symptom being items 1, 2 or 3. These symptoms must be present for a significant portion of time during a 1 month period (or less, if successfully treated).

Episode 047: Schizophrenia Differential Diagnosis & DSM5

Joseph Wong (MS3), Ariana Cunningham, M.D., David Puder M.D.

- The patient must have continuous, persistent signs of disturbance for at least 6 months, which includes the 1 month period of symptoms (or less, if successfully treated) and may include prodromal or residual periods.
    - For a significant portion of the time since the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations, or self-care, are markedly below the level achieved prior to the onset.
    - If the onset is in childhood or adolescence, there is failure to achieve expected level of interpersonal, academic, or occupational achievement.

Criterion A:

A. Positive symptoms (presence of abnormal behavior)

1. Delusions

2. Hallucinations

3. Disorganized speech (eg, frequent derailment or incoherence)

4. Grossly disorganized or catatonic behavior

B. Negative symptoms (absence or disruption of normal behavior)

5. Negative symptoms include affective flattening, alogia, avolition, anhedonia, asociality.

Development, Course and Risk Factors

Psychotic symptoms of schizophrenia typically occur in young adulthood (late teens to mid-30s) (American Psychiatric Association, 2013). About 80% of schizophrenia presents with acute onset, intermittent symptoms and few/no symptoms while about 20% present with insidious onset, continuous symptoms and poorer outcomes (Bleuler, 1978). In terms of age of onset, it has been well documented that males present earlier

than females (early to mid 20s for males vs late 20s for females) (Patel, Cherian, Gohil & Atkinson, 2014).

There are two key factors that have been associated with poorer prognosis. Earlier age of onset, which is highly associated with schizophrenia in males, has been well-documented to be associated with a poorer prognosis (Kao & Liu, 2010). The deficit form of schizophrenia (persistent negative symptoms of schizophrenia) have also been shown to be associated with a poorer prognosis (Kirkpatrick, 2008).

The highest risk factors for schizophrenia have been tied to genetic factors such as having an affected immediate family member or being the offspring of an immigrant from certain countries (Torrey, 2012). Molecular genetics have also been used to show that genetic inheritance is highly associated with schizophrenia, although it is not currently known how much genetic variation increases the risk for schizophrenia (Ripke, 2014). Non-genetic risk factors for schizophrenia include infectious causes such as Toxoplasmosis, living in an urban environment, birth seasonality and maternal exposure to influenza (Torrey, 2012).

Although functional recovery is rarer early on in the course of schizophrenia, the good news is that timely and intensive treatment can impact functional recovery early in the illness (Robinson, 2004). Patients who had more intensive intervention showed greater improvement in quality of life, higher functioning in school/work, and less psychopathology (Kane, 2016).

Differential diagnosis

When I see a patient that presents with these symptoms, the first thing I consider is substance use. I check if they had prior urine drug screens in their medical records, physical signs of substance use (e.g. poor dentition, track marks) and history of motor vehicle accidents. Even if history and physical condition do not suggest substance use, it's common practice to order a urine drug screen on anyone coming into an inpatient psychiatry unit and look at prior drug screens in the medical record.

Other considerations include psychosis due to another medical condition (e.g. Wilson's disease), personality disorder (long history of passive suicidal intent dating back to

adolescence for borderline personality disorder, odd beliefs associated with Cluster A personality disorders, etc.), mania (e.g. rapid talking, grandiosity, decreased need for sleep) or severe depression (long progressive history with eventual psychosis).

For patients manifesting with some, but not all of the symptoms of schizophrenia, here is a list of differential diagnoses. With schizophrenia being a diagnosis of exclusion, it is important to consider all possible diagnoses.

A. Based on timeline of symptoms (American Psychiatric Association, 2013):

- **Brief Psychotic Disorder:** Presence of ≥ 1 positive symptom lasting 1 day to 1 month .
    - Can be precipitated by stressors or have peripartum onset.
- **Schizophreniform**: Same diagnostic criteria as schizophrenia, except lasting for at least 1 month, but less than 6 months. May be the start of schizophrenia, but not all patients with schizophreniform go on to be diagnosed with schizophrenia.
    - Social and occupational decline do not need to be present like they do in schizophrenia.

B. Presence of mood disorder features (APA, 2013)

- **Schizoaffective:** Meets criteria for schizophrenia as well as major mood disorder (manic episodes or significant depressive episodes that have occurred at different times in the person's life).
    - Schizoaffective disorder is differentiated by major mood disorder with psychotic features by the presence of > 2 weeks of psychotic symptoms without major mood episode.
- **Bipolar Mood Disorder**: Bipolar I: Meets criteria for current or past manic episode that could be preceded or followed by hypomanic or major depressive episodes. Bipolar II: Meets criteria for current or past hypomanic episode and major depressive episode.

    - Typically, a manic patient will take a few days to fall asleep when they are in an episode even when on significant medications.
- **Major Depressive Disorder Severe with Psychotic Symptoms:** Psychotic symptoms (e.g. delusions or hallucinations) exclusively occur during a major depressive or manic episode, which is differentiated by schizoaffective disorder, which is characterized by > 2 weeks of psychotic symptoms with major mood episode.
    - There is a long period of depression leading up to the psychotic symptoms. The patient usually by the time they have psychosis has been depressed for months if not years. The psychosis and depression will not change in 2-3 days like they can in someone hospitalized with borderline personality disorder.

C. Personality Disorders (APA 2013):

- **Borderline Personality Disorder (Cluster B)**: Long-standing pattern of unstable interpersonal relationships, impulsive behavior (e.g. sexual or self-harming), and mood instability (e.g. feelings of emptiness, intense dysphoria) .
    - A borderline personality disorder patient will have negative inner “voices” that will lead them to fear they are hearing things, but they can put on a social veneer and appear put together. A schizophrenic patient cannot put on a social veneer when in a disorganized and psychotic state.
    - These patients also have a history of passive suicidality dating back to adolescence.
- **Schizotypal personality (Cluster A)**: Long-standing pattern of odd or eccentric beliefs and/or perceptual disturbances that do not rise to the level of delusions or hallucinations.
    - Shares many similar symptoms as schizophrenia, but schizotypal personality disorder can be distinguished from schizophrenia as the personality disorder is present before the onset of psychotic symptoms and persists even when the psychotic symptoms vs. a period of persistent psychotic symptoms in schizophrenia.
- **Schizoid personality (Cluster A):** Long-standing pattern of little interest in social relationships or intimacy.

- Shares similar symptoms as schizophrenia such as flattened affect, but does not present with psychosis.
- Schizoid personality disorder can be distinguished from schizophrenia as the personality disorder is present before the onset of psychotic symptoms and persists even when the psychotic symptoms vs. a period of persistent psychotic symptoms in schizophrenia.

D. Other considerations:

- **Substance-induced psychosis**: Symptoms occur during intoxication or acute withdrawal and do not persist after the individual is sober.
  - The people who are coming off of methamphetamines typically want to sleep the first few days and are irritable coming off of meth, while people with schizophrenia will talk with you for a bit, and be awake during the day (although sometimes lying in bed doing nothing).
  - THC has been associated with an increased risk of developing psychosis. A meta-analysis of 18 studies involving 66,816 individuals gave an OR of 3.90 (95% CI 2.84 to 5.34) for the risk of schizophrenia and other psychosis-related outcomes among the heaviest cannabis users compared to nonusers (Marconi, 2016).
- **Psychosis due to a general medical condition or medication**: Symptoms can occur with other medical conditions such as CVA or TBI, Wilson's disease, porphyria, or syphilis infection (watch for it in HIV patients) as well as medications (e.g. steroids) and certain dietary supplements.
- **Delusional disorder**: One or more delusions (false belief system) that are fixed and persistent, lasting for > 1 month.
  - Can be differentiated from schizophrenia by the lack of other symptoms besides delusions. An exception to this is that patients may have olfactory or tactile hallucinations consistent with the delusion, but they won't have auditory hallucinations that is most commonly associated with schizophrenia (Chaudhury, 2010; Opjordsmoen, 2014).
  - Functioning is also not impaired compared to schizophrenia.

Episode 047: Schizophrenia Differential Diagnosis & DSM5

Joseph Wong (MS3), Ariana Cunningham, M.D., David Puder M.D.

- **Pervasive developmental disorders**: May present with symptoms resembling psychosis or negative symptoms; however, an important factor to consider before diagnosing schizophrenia is the patient's developmental pattern.
    - For example, for a 3 - 5 year old child, imaginary friends are common for that developmental stage and shouldn't be instantly labelled as a visual hallucination- so when you listen to their vocabulary consider what age they are even if they look physically much older (Taylor & Mottweiler, 2008).
    - "An additional diagnosis of schizophrenia should only be made in a patient with autism spectrum disorder or communication disorders if psychotic symptoms are present for at least a month" (APA 2013).

For more on schizophrenia check out these other episodes:

Schizophrenia with Dr. Cummings: Controversies, Brain Science, Crime, History, Exercise, Successful Treatment

The History and Use of Antipsychotics with Dr. Cummings