



Spring 5-15-2020

Schizophrenia in Adolescents

Natasha Isaman

University of North Dakota, natasha.isaman@und.edu

[How does access to this work benefit you? Let us know!](#)

Follow this and additional works at: <https://commons.und.edu/nurs-capstones>



Part of the [Nursing Commons](#)

Recommended Citation

Isaman, Natasha, "Schizophrenia in Adolescents" (2020). *Nursing Capstones*. 356.
<https://commons.und.edu/nurs-capstones/356>

This Independent Study is brought to you for free and open access by the Department of Nursing at UND Scholarly Commons. It has been accepted for inclusion in Nursing Capstones by an authorized administrator of UND Scholarly Commons. For more information, please contact und.common@library.und.edu.

Schizophrenia in Adolescents

by

Natasha L. Isaman

Bachelor of Science in Nursing, Minnesota State University, 2017

An Independent Study

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Science

Grand Forks, North Dakota

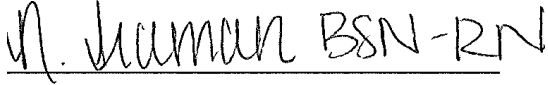
December

2019

PERMISSION

Title Schizophrenia in Adolescents
Department Nursing
Degree Master of Science

In presenting this independent study in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the College of Nursing and Professional Disciplines of this University shall make it freely available for inspection. I further agree that permission for extensive copying or electronic access for scholarly purposes may be granted by the professor who supervised my independent study work or, in her absence, by the chairperson of the department or the dean of the School of Graduate Studies. It is understood that any copying or publication or other use of this independent study or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my independent study.


Signature _____
Date 1/17/2020_____

Abstract

DQ is a 16-year-old African American male who suffers from the psychological effects of schizophrenia. He is currently not medication compliant which has caused his symptoms to worsen and has resulted in his family not feeling safe with the patient at home. DQ is paranoid and anxious and denies having a mental illness. He appears to be experiencing auditory hallucinations as he mumbles to himself and laughs inappropriately.

An overview of the literature supports starting the patient on Invega oral with hopes of switching to Invega Sustenna with the recommendations of therapy, both individual and family. There are also other medications beside Invega that can be effective in treating psychosis.

Background

A sixteen-year-old male patient presented to the psychiatric inpatient unit with significant paranoia, disorganized thoughts, auditory hallucinations, and increased anxiety. After a full psychiatric evaluation was completed this patient was diagnosed with undifferentiated schizophrenia and unspecified anxiety disorder. The focus is on undifferentiated schizophrenia as a first episode psychosis in adolescents. Approximately 100,000 adolescents and young adults in the United States experience FEP each year with a peak onset occurring between 15-25 years of age (Heinssen et al., 2014). Adolescent-onset psychosis is associated with more severe symptoms and poorer outcomes than adult-onset psychosis (Pyle et al., 2019). Effective treatment recommendations for schizophrenia are a combination of medication and therapy to manage symptoms of this disorder.

The prevalence of schizophrenia in the US is 0.3%, which makes schizophrenia somewhat rare (Pickar, 2018). Typically, men may experience symptoms earlier than women but the rate between men and women is equal. Up to one-third of patients with schizophrenia have

their first symptoms of psychosis before the age of 18 (Stentebjerg-Olesen, 2015). Adolescent-onset schizophrenia (AOS), which belongs to early-onset schizophrenia (EOS), is defined as the first episode of schizophrenia occurring between 13 and 18 years old (Wang et al., 2017).

Those who are diagnosed with schizophrenia have an increased risk of premature mortality. Schizophrenia is associated with decreased life expectancy of 15–25 years compared to the general population, with comorbid somatic diseases and cardiovascular diseases being a major cause (Dieset, Andreassen, & Haukvik, 2016). Dieset, Andreassen, & Haukvik (2016) indicate that there are other comorbidities in addition to cardiovascular diseases which include autoimmune disease, infections, chronic obstructive pulmonary disease (COPD) and cancers. Besides the medical comorbidities of schizophrenia there is also the risk for suicidality due to the unknown future.

Case Report

DQ is a 16-year-old African American male who lives at home with his biological mom, sister, and niece. He admits voluntarily to the inpatient setting with psychotic symptoms. His chief complaint is, “my mom wanted me here.” DQ had recently become non-compliant with his medications which eventually caused his psychotic symptoms to return. His mom felt that he was not safe at home and brought him to the emergency department (ED) for further evaluation. Per ED records, DQ made a suicidal statement and so the provider did not feel that he was able to return home at this time. The provider instead recommended that DQ be admitted inpatient for further psychiatric evaluation.

Upon evaluation significant paranoia is present as DQ refuses to answer assessment questions or leave his room to meet with the provider and other staff. When he does answer

questions, the answers are inappropriate to the questions asked. Significant cognitive issues are present at this time. When informed of who his provider is, he is unable to verbalize who his provider is within minutes. DQ appears to be significantly anxious at this point. He cannot track conversations as he goes off topic and is tangential upon admission.

DQ has a history of inpatient hospitalizations as well as a long-term residential stay. DQ sees providers at the county medical center outpatient. He was previously prescribed Risperdal for psychosis and his symptoms returned once he stopped taking this medication. Per records it appears that his outpatient psychiatrist referred him to an assertive community treatment (ACT) team recently which he had not followed up with yet due to this hospitalization.

DQ was previously diagnosed with attention deficit hyperactivity disorder (ADHD) and schizophrenia. Besides Risperdal it appears that his medication reconciliation also consists of Benadryl, Vistaril, and an albuterol inhaler for asthma. He has had no known suicide attempts or self-injurious behaviors. We have been unable to contact DQ's mother for collateral information at this time. DQ is currently in 11th grade with an IEP with below average grades. According to previous records testing was completed and the patient's intelligence quotient (IQ) is 73. He denies substance abuse but there are records that indicate that he may have used cannabis in the past. There is a possible history of abuse and/or trauma as it appears there may have been some possible neglect when growing up and possible sexual abuse when patient ran away in the past.

The patient is uncooperative and evasive. His speech is a decreased rate, with normal volume, and is spontaneous and slowed. Loosening of associations is present. Patient's fund of knowledge is below average but language is intact. Patient's attention span and concentration is

poor. Patient's rate of thought is bradyphrenic and disorganized. Paranoid delusions appear present. Auditory hallucinations are likely present based on patient laughing inappropriately and likely responding to internal stimuli. Patient's motor activity is slightly hypoactive. His affect is flat and his mood is slightly irritable. DQ's orientation is to person, we are not able to fully evaluate place or time due to his significant psychotic behaviors. Deficits to his recent and remote memory appear present as he is not able to answer questions related to events leading up to admission and past events from his life. His insight and judgement are impaired as he does not feel he has a psychiatric illness and has not been taking his prescribed medications.

DQ's diagnoses are as follows: undifferentiated schizophrenia, chronic, unspecified anxiety disorder, cannabis use disorder, unable to determine severity, treatment noncompliance, and borderline intellectual functioning. This case study will review the treatment options in the literature for pharmacological agents that could help assist in decreasing psychosis for this case study patient. Recommendations for treatment in the meantime include discontinuing the patient's Risperdal and starting the patient on oral Invega in hopes of starting a long acting (LA) injectable, Invega Sustenna with an estimated length of inpatient stay of seven to ten days. The goal of inpatient treatment is to stabilize the patient so that he is able to return home with outpatient providers on a LA injectable antipsychotic medication.

Literature Review

The National Institute for Clinical Excellence (NICE) recommend that adolescents with first episode psychosis (FEP) should be offered a combination of antipsychotic medication (APs), cognitive behavioral therapy (CBT) and family intervention (FI) (Pyle et al., 2019). The end goal is remission which refers to a period of at least 6 months with mild to no symptoms.

Another effective treatment for first episode psychosis is a team-based approach called Coordinated Specialty Care (CSC). There are six components involved in CSC which include: case management, family support and education, psychotherapy, medication management, supported education and employment, and peer support. Therapy is essential in treating psychosis with common therapies including cognitive behavioral therapy (CBT), supportive psychotherapy, cognitive enhancement therapy (CET), family psychoeducation and support, and peer support and support (NAMI, 2019).

In treating children and adolescents for schizophrenia symptoms three atypical neuroleptic medications, olanzapine, risperidone, and clozapine are among those that have been studied in this population. Adolescents with schizophrenia treated with olanzapine achieved the majority of symptomatic improvement during the first 1–2 weeks of treatment (Stentebjerg-Olesen et al., 2015).

In a study published in 2009, Brown University (2009) shared that olanzapine treated patients showed significantly greater improvements on the Clinical Global Improvement of Illness Scale, the total and positive scores of the Positive and Negative Syndrome Scale, and physical aggression toward others on the Overt Aggression Scale (OAS). With this also showed significant side effects such as weight gain, liver function, cholesterol, prolactin, and uric acid which can cause health risks if not treated properly or if medication is not discontinued. Due to these possible side effects of antipsychotic medications certain monitoring is required. This monitoring includes drawing labs of cholesterol and triglycerides, blood glucose, white cell and neutrophil counts, liver function, urea and electrolytes, and prolactin levels every month for the first three months and once every three months thereafter. Pediatric guidelines recommend

clozapine be started after two failed trials, the results showed that patients had as many as 10 previous antipsychotic trials before clozapine was started (Brown University, 2018).

Another medication prescribed for the management of symptoms of schizophrenia includes paliperidone ER also known as Invega. The EU approval of paliperidone ER in adolescents aged 15–17 years was based on the results of three phase 3 clinical trials, which indicated that paliperidone ER improves the symptoms and severity of acute schizophrenia in this patient population, with improvements being maintained with long-term treatment (Lyseng-Williamson, 2014). Another study showed that Invega is effective in improving psychopathology, cognitive impairment, and overall functioning scores and is well tolerated (Kang et al, 2016).

Gardner & Bostwick (2012) state that if patients do not respond to treatment within the first two weeks of an acute exacerbation, clinicians should consider switching antipsychotic agents, unless this is a patient with first-episode psychosis, for whom a longer trial of the initially prescribed therapy appears to be appropriate. Evidence shows that the medications with the fastest onset of symptom improvement are Risperdal, Invega, and Latuda with the onset of symptoms improvement being 3-4 days (Gardner & Bostwick, 2012). Medications with the longest onset of symptom improvement are listed as Abilify, Haldol, and Saphris (Gardner & Bostwick, 2012).

Antipsychotic agents are the first-line treatment for patients with schizophrenia which include the two general types of antipsychotic drugs: first-generation (typical) and second-generation (atypical) agents (Holder & Wayhs, 2014). Antipsychotic medications should be

started as soon as possible with consideration to adverse effects, benefits and evidence-based practice.

Implications

Implications in research include limited data referring to antipsychotic use in adolescents diagnosed with schizophrenia. It seems that most research is completed with adults as the primary patients prescribed antipsychotic medications. Clozapine, the drug of choice for treatment-resistant schizophrenia in adults, has only limited research supporting its use in children and adolescents (Brown University, 2018).

The education needed for patient who are prescribed these antipsychotic medications include effects, side effects, and the importance of medication compliance. It is important to discuss with patients and their families the need for monitoring of certain labs which include cholesterol and triglycerides, blood glucose, white cell and neutrophil counts, liver function, urea and electrolytes, and prolactin levels.

References

- Clozapine effectiveness assessed in RCTs of children and adolescents. (2018). *Brown University Child & Adolescent Psychopharmacology Update*, 20(12), 1–3. <https://doi-org.ezproxy.library.und.edu/10.1002/cpu.30351>
- Dieset, I., Andreassen, O. A., & Haukvik, U. K. (2016). Somatic comorbidity in schizophrenia: Some possible biological mechanisms across the life span. *Schizophrenia Bulletin*, 42(6), 1316–1319. <https://doi-org.ezproxy.library.und.edu/10.1093/schbul/sbw028>
- Gardner, K. N., & Bostwick, J. R. (2012). Antipsychotic treatment response in schizophrenia. *American Journal of Health-System Pharmacy*, 69(21), 1872–1879. <https://doi-org.ezproxy.library.und.edu/10.2146/ajhp110559>
- Heinssen, R., Goldstein, A., & Azrin, S. (2014). Evidence-based treatment for first episode psychosis: Components of coordinated specialty care. Recovery after an initial schizophrenia episode. Retrieved from https://www.nimh.nih.gov/health/topics/schizophrenia/raise/nimh-white-paper-csc-for-fep_147096.pdf
- Holder S., Wayhs A. (2014). Schizophrenia. *Am Fam Physician*. 90(11). 775–782. Retrieved from <https://www.aafp.org/afp/2014/1201/p775.html>
- Kang, N. I., Koo, B. H., Kim, S. W., Kim, J. H., Nam, B., Lee, B. J., ... Chung, Y. C. (2016).

- Efficacy and tolerability of paliperidone extended-release in the treatment of first-episode psychosis: An eight-week, open-label, multicenter trial. *Clinical psychopharmacology and neuroscience : The official scientific journal of the Korean College of Neuropsychopharmacology*, 14(3), 261–269. doi:10.9758/cpn.2016.14.3.261
- Lyseng-Williamson, K. (2014). Paliperidone extended release: A guide to its use in schizophrenia in adolescents aged ≥ 15 years. *Drugs & Therapy Perspectives*, 30(11), 380–385. <https://doi-org.ezproxy.library.und.edu/10.1007/s40267-014-0157-x>
- National Alliance on Mental Illness (NAMI). (2019). Early psychosis and psychosis. Retrieved from <https://www.nami.org/Learn-More/Mental-Health-Conditions/Early-Psychosis-and-Psychosis/Treatment>
- Olanzapine improves youths' symptoms, but with significant adverse effects. (2009). *Brown University Child & Adolescent Psychopharmacology Update*, 11(2), 1–7. Retrieved from <https://search-ebSCOhost-com.ezproxy.library.und.edu/login.aspx?direct=true&db=ccm&AN=105631233&site=ehost-live>
- Pickar, D. (2018). The prevalence of schizophrenia in the US. *Psychiatric Times*, 35(4), 5. Retrieved from <https://search-ebSCOhost-com.ezproxy.library.und.edu/login.aspx?direct=true&db=ccm&AN=128758539&site=ehost-live>
- Pyle, M., Broome, M. R., Joyce, E., MacLennan, G., Norrie, J., Freeman, D., ... Birchwood, M. (2019). Study protocol for a randomized controlled trial of CBT vs antipsychotics vs both in 14-18-year-olds: Managing adolescent first episode psychosis: A feasibility study

(MAPS). *Trials*, 20(1), N.PAG. <https://doi-org.ezproxy.library.und.edu/10.1186/s13063-019-3506-1>

Stentebjerg-Olesen, M., Ganocy, S., Findling, R., Chang, K., DelBello, M., Kane, J., Correll, C.

(2015). Early response or nonresponse at week 2 and week 3 predict ultimate response or nonresponse in adolescents with schizophrenia treated with olanzapine: results from a 6-week randomized, placebo-controlled trial. *European Child & Adolescent Psychiatry*, 24(12), 1485–1496. <https://doi-org.ezproxy.library.und.edu/10.1007/s00787-015-0725-1>

Wang, S., Zhan, Y., Zhang, Y., Lv, L., Wu, R., Zhao, J., & Guo, W. (2017). Abnormal functional

connectivity strength in patients with adolescent-onset schizophrenia: A resting-state fMRI study. *European Child & Adolescent Psychiatry*, 26(7), 839–845. <https://doi-org.ezproxy.library.und.edu/10.1007/s00787-017-0958-2>