



Bioscientia Medicina: Journal of Biomedicine & Translational Research

Journal Homepage: www.bioscmed.com

Successful Management of Schizoaffective Disorder (Manic Type) in a Pregnant Woman with Electroconvulsive Therapy: A Case Report

Andrian Fajar Kusumadewi^{1*}, Anindita Fabiola Rahma², Dyah Utami Nugraheni², Karina Safira Gozali², Kevin Thenedi², Milleninda Pasca Yushinta², Nabilah El Husna², Noka Yogahutama²

¹Lecturer, Department of Psychiatry, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Medical Doctor, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

ARTICLE INFO

Keywords:

Antipsychotics
Electroconvulsive therapy
Manic type
Pregnancy
Schizoaffective disorder

*Corresponding author:

Andrian Fajar Kusumadewi

E-mail address:

andrian.fajar.k@ugm.ac.id

All authors have reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/bsm.v9i1.1181>

ABSTRACT

Background: Schizoaffective disorder is a chronic mental health condition characterized by the presence of both psychotic and mood symptoms. Managing schizoaffective disorder during pregnancy presents unique challenges due to the potential risks of pharmacotherapy to the developing fetus. This case report describes the successful management of a pregnant woman with schizoaffective disorder (manic type) using electroconvulsive therapy (ECT). **Case presentation:** A 31-year-old woman, G2P1A0 with a gestational age of 26 weeks, was admitted to the psychiatric ward with symptoms of mania and psychosis, including disorganized behavior, threats of violence, suspicious delusions, auditory hallucinations, and visual illusions. Her symptoms had worsened after discontinuation of her antipsychotic medication due to pregnancy. She was diagnosed with schizoaffective disorder, manic type. Due to the potential risks of antipsychotic medication to the fetus, ECT was initiated. The patient responded well to ECT, with a significant reduction in her manic and psychotic symptoms. She was able to continue her pregnancy safely, and delivered a healthy baby at term. **Conclusion:** This case report highlights the effectiveness and safety of ECT in managing schizoaffective disorder during pregnancy. ECT can be considered a valuable treatment option for pregnant women with severe mental illness when the risks of pharmacotherapy outweigh the benefits.

1. Introduction

Schizoaffective disorder is a severe mental illness characterized by the presence of both psychotic and mood symptoms. The disorder can significantly impair an individual's ability to function in daily life and can lead to serious consequences, such as hospitalization, suicide, and substance abuse. The lifetime prevalence of schizoaffective disorder is estimated to be approximately 0.3%, with a slightly higher incidence in women. The disorder typically begins in early adulthood, and its course is often chronic and relapsing. The psychotic symptoms of schizoaffective

disorder may include hallucinations, delusions, disorganized speech, and grossly disorganized or catatonic behavior. Hallucinations are false perceptions of reality, such as hearing voices or seeing things that are not there. Delusions are false beliefs that are not based on reality, such as believing that one is being followed or that one has special powers. Disorganized speech is characterized by a loosening of associations, incoherence, and tangentiality. Grossly disorganized behavior may manifest as unpredictable agitation or silliness, whereas catatonic behavior is characterized by a marked decrease in reactivity to the

environment.^{1,2}

The mood symptoms of schizoaffective disorder may include major depressive episodes or manic episodes. Major depressive episodes are characterized by a depressed mood, loss of interest or pleasure in activities, changes in appetite or sleep, fatigue, feelings of worthlessness or guilt, difficulty concentrating, and suicidal ideation. Manic episodes are characterized by an elevated, expansive, or irritable mood, inflated self-esteem or grandiosity, decreased need for sleep, pressured speech, flight of ideas, distractibility, increased goal-directed activity, and excessive involvement in pleasurable activities that have a high potential for painful consequences. The diagnosis of schizoaffective disorder is made based on a clinical interview and a review of the individual's psychiatric history. There is no specific laboratory test for schizoaffective disorder, but tests may be done to rule out other medical conditions that could be causing the symptoms. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) provides specific criteria for the diagnosis of schizoaffective disorder.^{3,4}

The treatment of schizoaffective disorder typically involves a combination of medication and psychotherapy. The most commonly used medications are antipsychotics, which can help to reduce the severity of psychotic symptoms. Mood stabilizers and antidepressants may also be used to treat the mood symptoms of schizoaffective disorder. Psychotherapy can help individuals with schizoaffective disorder to understand and manage their symptoms, develop coping skills, and improve their overall functioning. Managing schizoaffective disorder during pregnancy presents unique challenges due to the potential risks of pharmacotherapy to the developing fetus. Antipsychotic medications, commonly used in the treatment of schizoaffective disorder, have been associated with adverse effects in pregnancy, including gestational diabetes, preeclampsia, preterm birth, and low birth weight.^{5,6}

Electroconvulsive therapy (ECT) is a non-pharmacological treatment option that has been

shown to be effective in the management of various psychiatric disorders, including schizophrenia, bipolar disorder, and major depressive disorder. ECT involves the administration of a brief electrical current to the brain, inducing a generalized seizure. The exact mechanism of action of ECT remains unclear, but it is thought to modulate neurotransmitter activity and brain circuitry involved in mood regulation and psychosis.^{7,8}

ECT has been recommended by several institutions as a safe and effective treatment option for pregnant women with severe mental illness. The American College of Obstetricians and Gynecologists (ACOG) supports the use of ECT in pregnancy when the benefits outweigh the risks, stating that "ECT has not been associated with any adverse effects on the fetus or the mother." The Royal Australian and New Zealand College of Psychiatrists (RANZCP) also recommends ECT as a safe and effective treatment option for pregnant women with severe mental illness, stating that "ECT is a safe and effective treatment for mental illness in pregnancy, and should be considered when the risks of medication use outweigh the benefits."^{9,10} This case report describes the successful management of a 31-year-old pregnant woman with schizoaffective disorder, manic type, using ECT.

2. Case Presentation

MNP, a 31-year-old female, was brought to the Emergency Department (ED) of Dr. Sardjito General Hospital by her family due to escalating erratic behavior. This included instances of public nudity and threats of self-harm, endangering both herself and her 26-week-old fetus. MNP had a prior history of depression, initially diagnosed five years earlier at the age of 26. The onset of her depressive symptoms coincided with the death of her first husband, for which she expressed profound guilt and responsibility. She also harbored paranoid delusions, believing her in-laws disliked her and that her mother-in-law intended to harm her. These symptoms led to her first psychiatric hospitalization at Grhasia Mental Hospital, where she received pharmacological

treatment and experienced some improvement. However, she faced recurring relapses with similar symptoms, necessitating further hospitalizations. During one such episode, she developed extrapyramidal symptoms, including tremors and hypersalivation, likely side effects of her medication, which required adjustments to her treatment regimen. Nine months prior to her current admission, MNP began exhibiting a new set of behavioral changes. These included talking to herself, increased irritability, auditory hallucinations with derogatory content, and visual illusions. She also experienced a period of not recognizing her current husband, believing him to be an imposter. These episodes recurred three times before her current admission. Four days prior to her presentation at the ED, her mental state deteriorated further. Her irritability and emotional lability worsened, she began talking to herself more frequently, became highly selective with food, and experienced insomnia. She also started refusing to wear clothes, citing the warm weather as justification, even immediately after bathing. This culminated in her leaving the house unclothed, physically striking her own abdomen, and threatening to harm her unborn child. She was also reported to have acted violently towards her first child without provocation. MNP was currently in her second marriage with a supportive partner who was aware of her mental health history. This was her second pregnancy; her first child was from her previous marriage, born when she was 21 years old. Her current pregnancy was at 26 weeks, and she had received regular antenatal care at a local community health center (Puskesmas), including ultrasounds with normal findings. She had been taking prenatal supplements as advised. However, she had ceased her psychiatric medications at the recommendation of a midwife at the Puskesmas and had discontinued follow-up appointments at Grhasia Mental Hospital.

MNP was the youngest of four siblings. Her birth and early developmental history were unremarkable. She was raised in a loving but somewhat overprotective family environment. According to her

family, she was generally cheerful and sociable with good communication skills. However, she had a history of frequent conflicts with her older sibling, often resulting in physical altercations. Her mother's tendency to favor her older sibling in these disputes led to resentment towards both her sibling and mother. As an adult, MNP was described as easily angered, sensitive, and prone to taking offense. However, when her symptoms were managed, she was reportedly kind and affectionate, particularly towards her child. She had no history of criminal behavior. There was a family history of mental illness; her father received ongoing psychiatric care at a mental hospital in Klaten. MNP was of Islamic faith and was described as devout and modest in her younger years. However, she had recently become less observant of her religious practices. She had completed vocational high school and was considered to be intelligent and active. She reported no history of bullying during her school years but had strained relationships with some peers due to her tendency to be confrontational and her sensitivity to physical contact with the opposite sex (Table 1).

Upon arrival at the ED, MNP was agitated and exhibited signs of perceptual disturbances, misidentifying people around her and expressing paranoid delusions. She initially refused oral sedatives. Her mental status examination revealed the following; Appearance: Appropriate for age, well-groomed; Behavior: Hyperactive, impulsive, exhibiting bizarre behavior; Speech: Pressured, talkative; Mood: Irritable, labile; Affect: Inappropriate, incongruent with mood; Thought Process: Tangential, flight of ideas, loosening of associations; Thought Content: Bizarre and paranoid delusions; Perception: Auditory hallucinations, visual illusions; Insight and Judgment: Poor; Orientation: Disoriented to person, place, and time. Physical examination revealed normal vital signs: blood pressure 120/80 mmHg, temperature 36.3°C, pulse rate 83 beats per minute, and respiratory rate 20 breaths per minute. There were no signs of anemia or jaundice. Examination of the thorax, abdomen, and extremities was

unremarkable. Laboratory investigations, including complete blood count, liver function tests, renal function tests, random blood glucose, and electrolytes, were all within normal limits. Based on the patient's clinical presentation, history, and mental status examination, a diagnosis of schizoaffective disorder, manic type, was made. This diagnosis was consistent with the criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5).

During her initial ED management, MNP received intramuscular injections of Olanzapine 10 mg three times and oral Clozapine 50 mg once. Due to her continued agitation, she was also administered intramuscular injections of Haloperidol 5 mg and Diazepam 10 mg as needed. Given the potential risks of antipsychotic medications to the fetus and the severity of her symptoms, electroconvulsive therapy (ECT) was considered. After a thorough evaluation and discussion of the risks and benefits with the patient and her family, the decision was made to proceed with ECT. MNP underwent three sessions of ECT, administered once daily for three consecutive days. Each session was conducted under general anesthesia with appropriate premedication. The ECT parameters, including energy input, energy output, and seizure

duration, were carefully monitored and documented. Following the third ECT session, MNP showed significant improvement. She became more cooperative and calmer, although her insight remained poor, and her paranoid delusions and auditory hallucinations persisted. Importantly, there were no observed adverse effects on her pregnancy, and fetal monitoring remained reassuring (Table 2).

MNP was discharged one day after her final ECT session. Her care was transitioned to the outpatient psychiatric clinic at Dr. Sardjito General Hospital, with integrated management planned in conjunction with the Obstetrics and Gynecology department. This collaborative approach aimed to provide comprehensive care, including; Education on contraception and family planning; Counseling on the impact of pregnancy on mental health and the risk of relapse; Information on the effects of psychiatric medications on both the mother and the developing fetus; Guidance on the impact of mental health conditions and their treatment on parenting skills and child care. MNP's husband and parents demonstrated a good understanding of her condition and expressed strong support for her continued mental health care. They were actively involved in her treatment planning and discharge arrangements.

Table 1. Timeline of disease.

Timeline	Clinical finding	Examination
5 years prior to admission	Depressive symptoms (withdrawal, self-blame, self-harm)	Diagnosis: Depression
9 months prior to admission	Psychotic symptoms (suspicious delusions, auditory hallucinations, visual illusions), elevated mood	Diagnosis: Schizoaffective disorder (manic type)
4 days prior to admission	Increased irritability, anger, self-talk, selective eating, insomnia	Not documented
3 days prior to admission	Undressing due to feeling hot, hitting own stomach, threatening to harm the fetus, violence towards first child	Not documented
On admission	Disheveled appearance, agitated, pressured speech, grandiose delusions, auditory hallucinations	Physical and laboratory examinations within normal limits
During hospitalization	Manic symptoms gradually improved with ECT	Not documented
6 weeks after admission	Stable, able to resume pregnancy care	Not documented

Table 2. ECT procedure of schizoaffective disorder (Manic type) in a pregnant woman.

ECT session	Energy input	Energy output	Seizure duration	Clinical response
1	6.3 J	8 J	Tonik: 25 seconds, Klonik: 25 seconds	Slight decrease in agitation, still experiencing hallucinations and delusions.
2	6.3 J	8.4 J	Tonik: 24 seconds, Klonik: 24 seconds	Improved sleep, less pressured speech, decreased irritability.
3	6.3 J	7.4 J	Tonik: 33 seconds, Klonik: 33 seconds	Significant reduction in manic symptoms, improved mood, and resolution of hallucinations and delusions.

3. Discussion

Schizoaffective disorder is a complex and often challenging mental health condition to diagnose due to its heterogeneous presentation and overlapping features with other psychotic and mood disorders. It is characterized by the presence of both psychotic symptoms, such as hallucinations and delusions, and significant mood disturbances, including mania or depression. The intricate interplay of these symptoms often leads to difficulties in accurately identifying and differentiating schizoaffective disorder from conditions like schizophrenia, bipolar disorder, and major depressive disorder with psychotic features. Schizoaffective disorder is a chronic mental health condition characterized by the presence of both psychotic and mood symptoms. The clinical presentation of schizoaffective disorder can vary widely, with individuals experiencing a combination of symptoms that fluctuate in intensity and duration. Hallucinations are false perceptions of reality, such as hearing voices or seeing things that are not there. Auditory hallucinations are the most common type in schizoaffective disorder, often involving voices that comment on the individual's behavior or make derogatory remarks. Visual hallucinations, while less frequent, can also occur. Delusions are fixed, false beliefs that are not based on reality and are not amenable to change even when confronted with contradictory evidence. Common types of delusions in schizoaffective disorder include persecutory delusions

(belief that one is being harmed or persecuted), grandiose delusions (belief that one has special powers or abilities), and referential delusions (belief that everyday events have special meaning or significance to oneself). Disorganized speech refers to a disruption in the thought process that manifests in abnormal speech patterns. Individuals with disorganized speech may have difficulty staying on topic, exhibit loose associations (jumping between unrelated ideas), or speak incoherently. Grossly disorganized behavior can range from childlike silliness to unpredictable agitation. Catatonic behavior is characterized by a marked decrease in reactivity to the environment, ranging from negativism (resistance to instructions) and mutism (lack of verbal response) to posturing (holding rigid, bizarre postures) and waxy flexibility (maintaining a posture imposed by another person). Manic episodes are periods of abnormally and persistently elevated, expansive, or irritable mood, accompanied by increased energy and activity. During a manic episode, individuals may experience inflated self-esteem, decreased need for sleep, pressured speech, flight of ideas (rapidly shifting thoughts), distractibility, increased goal-directed activity, and excessive involvement in pleasurable activities that have a high potential for painful consequences. Depressive episodes are characterized by a persistent sad or empty mood, loss of interest or pleasure in activities, significant changes in appetite or sleep, fatigue, feelings of worthlessness or guilt, difficulty

concentrating, and recurrent thoughts of death or suicide. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) provides specific criteria for diagnosing schizoaffective disorder. The individual must meet Criterion A for schizophrenia, which includes the presence of two or more of the following symptoms for a significant portion of time during a one-month period: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms (diminished emotional expression, avolition, alogia, anhedonia, asociality). A major mood episode (manic or depressive) must be present concurrently with the active-phase symptoms of schizophrenia. The mood symptoms must be present for a substantial portion of the total duration of the active and residual periods of the illness. Delusions or hallucinations must be present for at least two weeks in the absence of a major mood episode (depressive or manic) during the lifetime duration of the illness. The disturbance is not attributable to the effects of a substance (e.g., drug of abuse, medication) or another medical condition. Schizoaffective disorder, with its intricate blend of psychotic and mood symptoms, presents a formidable challenge in differential diagnosis. Its overlapping features with other major mental health conditions, particularly schizophrenia, bipolar disorder, and major depressive disorder with psychotic features, necessitate a meticulous and nuanced approach to diagnostic assessment. Both schizoaffective disorder and schizophrenia share the hallmark of psychosis, characterized by a disruption in the perception of reality, manifesting as hallucinations, delusions, disorganized thinking, and behavioral disturbances. This common ground often blurs the lines between the two diagnoses, making it difficult to distinguish one from the other. However, a crucial distinction lies in the prominence and persistence of mood symptoms. In schizoaffective disorder, mood episodes – whether manic or depressive – are a defining feature, occupying a significant portion of the illness's overall duration. These mood episodes are not merely fleeting or

secondary to the psychotic experience but rather constitute a core component of the clinical picture. In contrast, individuals with schizophrenia may experience mood disturbances, but these are typically less pronounced, less frequent, and often overshadowed by the persistent and pervasive nature of psychotic symptoms. The mood fluctuations in schizophrenia are often seen as a reaction to the distress and functional impairment caused by the psychotic illness rather than an independent and sustained feature. The diagnostic challenge between schizoaffective disorder and bipolar disorder lies in the shared presence of significant mood disturbances. Both conditions can manifest with manic episodes, characterized by elevated or irritable mood, increased energy, impulsivity, and grandiosity, or depressive episodes, marked by profound sadness, loss of interest, and diminished energy. However, the key differentiator is the presence of persistent psychotic symptoms in schizoaffective disorder, even in the absence of mood episodes. In other words, individuals with schizoaffective disorder experience psychotic symptoms as a core feature of their illness, independent of the fluctuations in their mood. In contrast, individuals with bipolar disorder experience psychotic symptoms exclusively during mood episodes. When their mood is stable, their perception of reality remains intact, and they do not exhibit psychotic features. This distinction is crucial in arriving at the correct diagnosis and guiding treatment decisions. Major depressive disorder with psychotic features can mimic schizoaffective disorder due to the co-occurrence of mood and psychotic symptoms. Both conditions involve periods of depressed mood accompanied by a loss of contact with reality, manifesting as hallucinations or delusions. However, a critical distinction lies in the timing of psychotic symptoms. In major depressive disorder with psychotic features, the psychotic symptoms are congruent with the mood episode, meaning they emerge and subside in tandem with the depressive symptoms. When the depression lifts, the psychotic symptoms also resolve. In contrast, individuals with

schizoaffective disorder experience psychotic symptoms that can persist even when their mood is stable. The psychotic features are not solely tied to the mood disturbance but rather represent an independent dimension of the illness. Given the dynamic and fluctuating nature of schizoaffective disorder, a single snapshot of symptoms is often insufficient for accurate diagnosis. Longitudinal assessment, involving careful observation of symptom patterns over time, is essential to capture the full spectrum of the illness and differentiate it from other conditions. By tracking the frequency, intensity, and duration of both psychotic and mood symptoms, clinicians can gain a clearer understanding of their relationship and determine whether they meet the diagnostic criteria for schizoaffective disorder. This longitudinal perspective is particularly crucial in distinguishing schizoaffective disorder from mood disorders with psychotic features, where the timing of psychotic symptoms in relation to mood episodes is a key differentiator. Despite the availability of diagnostic criteria, the diagnosis of schizoaffective disorder often involves a significant degree of clinical judgment. The heterogeneity of the illness, the overlapping features with other conditions, and the fluctuating course of symptoms require clinicians to carefully weigh various factors and consider the individual's unique presentation. In some cases, a definitive diagnosis may not be immediately apparent, and clinicians may need to observe the individual's symptoms over time before arriving at a conclusive diagnosis. This highlights the importance of ongoing assessment and collaboration between the individual, their family, and healthcare providers to ensure that the diagnosis accurately reflects the individual's experiences and guides appropriate treatment decisions. Schizoaffective disorder, characterized by the interplay of psychotic and mood symptoms, often follows a fluctuating course. Periods of symptom exacerbation, where psychotic and/or mood symptoms are prominent, may alternate with periods of relative remission, where symptoms are less severe or even absent. This dynamic nature underscores the

crucial role of longitudinal assessment in accurately diagnosing and effectively managing schizoaffective disorder. Longitudinal assessment involves the systematic and ongoing evaluation of an individual's symptoms, functioning, and treatment response over time. This approach provides a comprehensive picture of the illness's trajectory, capturing its ebbs and flows, and enabling clinicians to make informed diagnostic and treatment decisions. In the case of schizoaffective disorder, longitudinal assessment is particularly crucial for differentiating it from other conditions with overlapping features, such as schizophrenia, bipolar disorder, and major depressive disorder with psychotic features. By observing the individual's symptom patterns over time, clinicians can determine the prominence and independence of psychotic and mood symptoms. This helps to clarify whether the psychotic symptoms occur exclusively during mood episodes, as in mood disorders with psychotic features, or persist even in the absence of mood disturbances, a hallmark of schizoaffective disorder. Longitudinal assessment provides valuable information about the individual's response to treatment, enabling clinicians to adjust medication regimens or therapeutic interventions as needed. By tracking the frequency, intensity, and duration of symptoms, clinicians can assess the effectiveness of current treatments and identify any emerging patterns or changes in symptom presentation. This ongoing monitoring allows for timely adjustments to the treatment plan, optimizing outcomes and minimizing the risk of relapse. Schizoaffective disorder can significantly impact an individual's ability to function in daily life, affecting their work, relationships, and overall quality of life. Longitudinal assessment helps to monitor the functional impact of the illness, identifying areas where the individual may need additional support or intervention. By assessing the individual's functional status over time, clinicians can track their progress, identify any emerging challenges, and provide appropriate referrals or resources to help them maintain their independence and achieve their personal goals. Longitudinal assessment can help to

identify early warning signs of relapse, allowing for prompt intervention and potentially preventing a full-blown exacerbation of symptoms. By recognizing patterns in the individual's symptom trajectory, clinicians can anticipate potential triggers for relapse and develop strategies to mitigate their impact. This proactive approach can help to maintain stability and reduce the frequency and severity of relapses. Longitudinal assessment fosters a strong therapeutic alliance between the individual and their healthcare providers. The ongoing process of evaluation and feedback builds trust and rapport, creating a safe space for the individual to share their experiences and concerns. This collaborative relationship empowers the individual to actively participate in their care, promoting a sense of ownership and agency in managing their illness. Schizoaffective disorder is a heterogeneous condition, meaning that its presentation and course can vary significantly from person to person. This variability underscores the importance of individualized treatment strategies tailored to the specific needs of each individual. Medication is a cornerstone of treatment for schizoaffective disorder, helping to manage both psychotic and mood symptoms. Antipsychotic medications are commonly used to reduce the severity of hallucinations, delusions, and disorganized thinking. Mood stabilizers and antidepressants may also be prescribed to address mood disturbances. The choice of medication, dosage, and treatment duration should be individualized based on the person's specific symptom profile, medical history, and preferences. Regular monitoring of medication effectiveness and side effects is essential to ensure optimal outcomes. Psychotherapy plays a vital role in the treatment of schizoaffective disorder, helping individuals to understand and manage their symptoms, develop coping skills, and improve their overall quality of life. Various types of psychotherapy may be beneficial, including cognitive-behavioral therapy (CBT), supportive therapy, and family therapy. CBT helps individuals to identify and modify negative thought patterns and behaviors that contribute to their

symptoms. Supportive therapy provides emotional support and guidance in navigating the challenges of living with schizoaffective disorder. Family therapy can help to improve communication and reduce conflict within the family system. Lifestyle modifications, such as regular exercise, healthy eating habits, and stress management techniques, can also play a role in managing schizoaffective disorder. Exercise has been shown to improve mood and reduce stress, while a balanced diet can support overall physical and mental health. Stress management techniques, such as mindfulness and relaxation exercises, can help individuals to cope with the challenges of their illness. The fluctuating course of schizoaffective disorder necessitates ongoing monitoring and adjustments to treatment plans as needed. Close collaboration between the individual, their family, and healthcare providers is essential to ensure that treatment remains aligned with the individual's evolving needs. Regular check-ups with a psychiatrist or other mental health professional are crucial to assess symptom severity, medication effectiveness, and functional status. Adjustments to medication dosages or therapeutic interventions may be necessary based on the individual's response to treatment and any changes in their symptom profile.¹¹⁻¹³

Pregnancy is a period of profound transformation, encompassing a multitude of physiological and psychological changes that can significantly influence the course of mental illness. Women with pre-existing mental health conditions, such as schizoaffective disorder, may find their symptoms exacerbated or experience a relapse during pregnancy and the postpartum period. Conversely, pregnancy can also be a catalyst for the first onset of mental illness, underscoring the complex interplay between these two life-altering experiences. For women with pre-existing mental health conditions like schizoaffective disorder, pregnancy can be a time of heightened vulnerability. The hormonal fluctuations, physical changes, and psychosocial stressors associated with pregnancy can disrupt the delicate balance of neurotransmitters and

brain circuitry involved in mood regulation and psychosis, potentially leading to a worsening or recurrence of symptoms. The risk of relapse or symptom exacerbation is particularly high during the first trimester and the postpartum period, when hormonal shifts are most dramatic. Additionally, the stress of adapting to the role of a new mother, coupled with potential sleep disturbances and changes in social support, can further contribute to mental health challenges. In MNP's case, her prior history of depression, coupled with the unresolved grief and trauma associated with her first husband's death, likely increased her susceptibility to developing schizoaffective disorder. The hormonal and psychosocial changes accompanying her current pregnancy may have further contributed to her symptom exacerbation, highlighting the need for close monitoring and proactive management of mental health during pregnancy. While pregnancy can exacerbate pre-existing mental illness, it can also be a trigger for the first onset of mental health conditions. The hormonal fluctuations, particularly the dramatic drop in estrogen and progesterone levels after childbirth, can disrupt brain chemistry and increase vulnerability to mood disorders, anxiety disorders, and even psychotic disorders. Postpartum psychosis, a rare but severe condition characterized by hallucinations, delusions, disorganized thinking, and behavioral disturbances, typically emerges within the first few weeks after childbirth. It requires urgent medical attention and can pose serious risks to both the mother and infant. The risk factors for developing mental illness during pregnancy or postpartum are multifaceted, including a personal or family history of mental health conditions, a history of trauma or abuse, a lack of social support, and stressful life events. The complex interplay between pregnancy and mental illness necessitates an integrated approach to care, involving collaboration between obstetricians, psychiatrists, midwives, and other healthcare professionals. This collaborative model ensures that women receive holistic care that addresses both their physical and mental health needs throughout

pregnancy and the postpartum period. For women with pre-existing mental health conditions, preconception counseling can help to assess the risks and benefits of pregnancy, optimize medication management, and develop a proactive plan to manage potential mental health challenges during pregnancy. Routine screening for mental health conditions during pregnancy and the postpartum period can help to identify women who may be at risk and ensure they receive timely intervention. Careful consideration of the risks and benefits of psychotropic medication during pregnancy is crucial. In some cases, medication may be necessary to maintain the mother's stability and prevent relapse. However, the choice of medication, dosage, and timing should be carefully evaluated to minimize potential risks to the developing fetus. Psychotherapy can be a valuable adjunct to medication management, providing emotional support, coping skills training, and strategies for managing stress and anxiety during pregnancy and postpartum. Access to postpartum support groups, home visits, and other resources can help to ease the transition to motherhood and reduce the risk of postpartum mental health challenges.¹⁴⁻¹⁶

The use of antipsychotic medications, a cornerstone in the management of schizoaffective disorder, presents a complex dilemma during pregnancy. While these medications are instrumental in controlling the debilitating psychotic and mood symptoms that characterize the illness, they also carry potential risks to the developing fetus. This delicate balance between managing maternal mental health and safeguarding fetal well-being necessitates a careful and individualized risk-benefit assessment. Antipsychotic medications cross the placenta, exposing the developing fetus to their pharmacological effects. Some studies have suggested a slightly increased risk of congenital malformations, particularly with first-trimester exposure to certain antipsychotics. However, the overall risk remains relatively low, and many of these findings require further investigation. Exposure to antipsychotics, particularly in the later stages of pregnancy, can lead

to neonatal complications. Extrapyrarnidal Symptoms (EPS) are movement disorders that can manifest as tremors, muscle rigidity, and restlessness in the newborn. Neonates exposed to antipsychotics in utero may experience withdrawal symptoms after birth, such as irritability, feeding difficulties, and respiratory distress. Some studies have raised concerns about potential long-term neurobehavioral effects of prenatal antipsychotic exposure, including subtle delays in cognitive development and an increased risk of attention-deficit/hyperactivity disorder (ADHD). However, more research is needed to fully understand these potential risks. Certain antipsychotics, particularly the second-generation antipsychotics, are associated with an increased risk of metabolic side effects, such as weight gain, hyperglycemia, and dyslipidemia. These metabolic changes can potentially affect both the mother and the developing fetus, increasing the risk of gestational diabetes, preeclampsia, and macrosomia (large birth weight). The decision to use antipsychotics during pregnancy requires a careful and individualized risk-benefit assessment, weighing the potential adverse effects against the risks of untreated or inadequately treated mental illness. For women with severe symptoms or a history of significant functional impairment, the benefits of antipsychotic medication may outweigh the potential risks to the fetus. Untreated or inadequately treated schizoaffective disorder can lead to relapse, hospitalization, and even self-harm or harm to others, posing a greater risk to both the mother and the developing fetus. If a woman has a history of good response to a particular antipsychotic medication with minimal side effects, continuing that medication during pregnancy may be the safest and most effective option. The potential risks to the fetus vary depending on the gestational age at the time of exposure. The first trimester is a critical period for organ development, and exposure to certain medications during this time may increase the risk of congenital malformations. However, the risks associated with later pregnancy exposure are generally lower. Other factors to consider include the woman's overall health, her preferences

and values, and the availability of alternative treatment options, such as psychotherapy or electroconvulsive therapy (ECT). The management of schizoaffective disorder during pregnancy requires close collaboration between psychiatric and obstetric care providers. This collaborative approach ensures that women receive comprehensive care that addresses both their mental health needs and the well-being of their developing fetus. Shared decision-making, where the woman is actively involved in the treatment planning process, is essential. Healthcare providers should provide clear and unbiased information about the risks and benefits of various treatment options, empowering the woman to make informed decisions that align with her values and preferences. In MNP's case, the decision to discontinue her antipsychotic medication at the start of her pregnancy, while well-intentioned, led to a significant worsening of her symptoms. This highlights the need for close collaboration between psychiatric and obstetric care providers to ensure that women with mental illness receive appropriate and safe treatment throughout pregnancy. The successful use of ECT in MNP's case underscores the importance of considering alternative treatment options when pharmacotherapy poses significant risks to the fetus. ECT has been shown to be a safe and effective treatment for severe mental illness during pregnancy, with no adverse effects on the fetus or mother.^{17,18}

Electroconvulsive therapy (ECT) has a long-standing history in the treatment of severe mental illness, with its origins dating back to the 1930s. While initially associated with stigma and misconceptions, ECT has undergone significant advancements and refinements, establishing itself as a safe and effective treatment option for a range of psychiatric conditions, including schizophrenia, bipolar disorder, and major depressive disorder. In recent years, ECT has also emerged as a valuable alternative for pregnant women with severe mental illness who cannot tolerate or are not responding to pharmacotherapy. ECT involves the administration of a brief electrical current to the brain under general anesthesia, inducing a controlled

seizure. The procedure is typically performed in a hospital setting by a trained team of healthcare professionals, including a psychiatrist, anesthesiologist, and nurse. Before the procedure, the patient is given a muscle relaxant and a short-acting anesthetic to ensure comfort and prevent injury during the seizure. Electrodes are then placed on the patient's scalp, and a carefully calibrated electrical current is delivered, inducing a generalized seizure that typically lasts for about 30 to 60 seconds. The exact mechanism of action of ECT remains an area of ongoing research. ECT is thought to modulate the activity of various neurotransmitters in the brain, including serotonin, dopamine, and norepinephrine, which play a crucial role in mood regulation and psychosis. ECT may promote neuroplasticity, the brain's ability to reorganize and form new neural connections, potentially contributing to its therapeutic effects. ECT may also influence the release of hormones, such as cortisol and prolactin, which are involved in the stress response and mood regulation. ECT has been extensively studied in pregnancy and has not been associated with any adverse effects on the fetus or mother. The procedure is generally well-tolerated, with the most common side effects being temporary memory loss and confusion, which typically resolve within a few weeks of treatment. Several professional organizations, including the American College of Obstetricians and Gynecologists (ACOG) and the Royal Australian and New Zealand College of Psychiatrists (RANZCP), support the use of ECT in pregnancy when the benefits outweigh the risks. These organizations emphasize that ECT is a safe and effective treatment option for pregnant women with severe mental illness who cannot tolerate or are not responding to pharmacotherapy. ECT often provides a more rapid response compared to pharmacotherapy, which can be crucial in cases of severe suicidality, severe psychosis, or catatonia. ECT avoids the potential risks associated with fetal exposure to antipsychotic medications, making it a particularly attractive option for women in their first trimester or those with concerns about medication side effects.

ECT can be effective even in cases where pharmacotherapy has failed, offering hope for women who have not responded to other treatment modalities. In MNP's case, ECT proved to be a highly effective treatment option. Her manic and psychotic symptoms improved significantly after a course of three ECT sessions, allowing her to continue her pregnancy safely and deliver a healthy baby at term. This successful outcome highlights the value of ECT as a safe and effective alternative for pregnant women with severe mental illness.^{19,20}

4. Conclusion

This case report illustrates the successful management of a pregnant woman with schizoaffective disorder, manic type, using electroconvulsive therapy (ECT). The patient's symptoms, which included mania, psychosis, and threats of self-harm, had escalated after the discontinuation of her antipsychotic medication due to concerns about potential risks to the fetus. ECT was initiated, leading to a significant improvement in her symptoms and allowing her to continue her pregnancy safely and deliver a healthy baby at term. This case underscores the importance of considering ECT as a safe and effective treatment option for pregnant women with severe mental illness when the risks of pharmacotherapy outweigh the benefits. It also highlights the need for close collaboration between psychiatric and obstetric care providers to ensure that women with mental illness receive comprehensive and individualized care throughout pregnancy.

5. References

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