

Case Report

The Role of Childhood Trauma in a Schizophrenic Patient

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Abstracts

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Introductions: Schizophrenia is a severe mental disorder. Many factors could increase someone's risk of schizophrenia, including childhood trauma. There are many kinds of childhood trauma, including abuse and neglect. This report aims to emphasize the unwanted effects of childhood trauma in a schizophrenic patient and, therefore, the importance of its screening. **Case:** A hospitalized male hebephrenic patient was admitted and observed in Dr. Soetomo General Hospital for almost a month. The patient came to the hospital with a chief complaint of rage and grandiose delusion. He could neither eat nor sleep for about 2 weeks. He also had a history of neglect by his parents during childhood. **Discussions:** The patient, in this case suffered an acute psychosis that progressed into hebephrenic schizophrenia. He had a history of childhood trauma that made him vulnerable when faced with meaningful stress in his early adulthood. He had the grandiose delusion that was quite resistant with second generation of anti-psychotics and responded better with first generation of anti-psychotics. He was discharged on the 29th day of hospitalization and continued to take his antipsychotic medication orally at home. **Conclusions:** Childhood trauma has a huge contribution in risk for schizophrenia. Someone with history of childhood trauma tends to have vulnerability to a stress in adulthood that could make him fall into a psychosis and even schizophrenia. Therefore a screening for history of a childhood trauma is important.

Keywords: Schizophrenia; Mental disorder; Childhood trauma.

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Introductions

Schizophrenia is a severe neuropsychiatric disorder that affects almost 1% population of the world. It is often seen in young adults between 20-30 years old [1]. First onset of schizophrenia is often seen in either late adolescent or early adulthood period [2].

Childhood trauma is one of risk factors for developing psychosis [3]. One of the possibilities is childhood trauma could affect neurodevelopmental growth, either biologically or psychologically, and caused vulnerability in pre-schizophrenic patient [4]. Childhood trauma itself could be referred as an unpleasant or traumatic experience during childhood, before the age of 13, in the form of physical abuse, emotional abuse, sexual abuse, physical neglect, or emotional neglect [5], [6].

Case

The patient was a Javanese male in his early 20's. He was a vocational high school graduate and was not married yet. He and his family had no history of mental disorder. He smoked 1 cigarette, once in a few days since he was 17 years old only when he was with his friends and stopped 1 year later. He denied coffee, alcohol, or other psychoactive substances consumption.

The patient was the only child, with one younger step sister. His father left his family while he was still in his mother's womb. He was raised mostly by his grandmother since he was born because his mother had to work hard to provide for them since he was 6 months old. His mother got remarried when he was 11 years old and lived with her new family while he stayed with his grandmother.

The patient was brought to the emergency room of Dr Soetomo General Hospital Surabaya on July 29th, 2020 by his mother because he was in a rage and couldn't be calmed down. He accused his mother stealing money from him using a shadow and even hit her. He said he had a lot of money and could change leaves into money because

he was The Almighty. He also said he already had 7 wives and 4 children and could communicate with them through inner eye. He often saw black shadow and heard humming voice and felt disturbed by them.

Two weeks before hospitalization, the patient heard that his ex-girlfriend was being engaged and he started to act strangely and talked by himself. He became easily irritated, ate once a day in small portion only after being forced. He had difficulty to sleep and sometimes did not even sleep for days.

During the examination, the patient was conscious. He was irritable and had shallow, incongruent affect. He had non-realistic thought form with grandiosity delusion. He also had auditory and visual hallucinations. He had a decreased volition and increased psychomotor that looked from the way he kept moving his head and his hands during the examination.

There were no abnormality from his vital signs and neurological examination. PANSS (Positive and Negative Syndrome Scale) assessment was done to the patient to measure the disease severity and his PANSS was 132 with P (Positive symptoms) 31, N (Negative symptoms) 40, dan G (General symptoms) 61 that indicated patient was severely ill. He suffered from hypokalaemia (potassium level was 3.0 mmol/l) probably due to his low intake while other routine blood test, liver and renal function test, and blood glucose were within normal limit.

We diagnosed the patient with acute schizophrenia-like psychotic disorder. On his first day of hospitalization the patient was angry and agitated with PANSS EC score of 29. We gave 5 mg of Haloperidol and 10 mg of Diphenhydramine both by intramuscular injection. We treated him with 2 mg of Risperidone orally, twice a day and 1 mg of Lorazepam orally at night when he had difficulty to sleep.

The patient was cooperative and willing to take his medicine regularly. However until 13th day of hospitalization he showed only little improvements. He still had grandiose

delusion, visual and auditory hallucinations, and difficulty to sleep. We added 5 mg of Olanzapine intramuscular injection for 3 days in a row.

Three days after Olanzapine injection, the patient had neither visual nor auditory hallucination. He was willing to do his activities of daily living independently although he still had his grandiose delusion. We added 2.5 mg of Haloperidol orally, once a day at night, in consideration of his persistent delusion and increased it the next day into 5 mg orally, once a day at night.

On his 22nd day of hospitalization there was still no improvement of the patient's grandiose delusion so we increased the Haloperidol dose into 5 mg orally, twice a day, and decreased the Risperidone dose into 2 mg orally, once a day. The patient showed noticeable improvement in his thinking process since, and 5 days later he didn't have his grandiose delusion anymore. He could remember that he once believed he already had wives and children and realized that those weren't true. Within the next 2 days the patient was discharged and got 2 mg of Risperidone orally, once a day and 5 mg of Haloperidol orally, twice a day for his routine treatment at home. We finally diagnosed him with hebephrenic schizophrenia.

Discussions

In this study, we will discuss a case of hebephrenic schizophrenia patient with a history of childhood trauma. Most schizophrenia typically manifests in late adolescence or young adulthood but the first onset is more often seen at younger age in male than female patients [7], [8]. In this case, our patient was having his first onset in his early 20's which is consistent with the theory mentioned before. Schizophrenia therapy itself could be divided into first generation (D2 receptor antagonists) and second generation (multiple receptor antagonists with higher 5-HT_{2A} receptor antagonism than D2 receptor) [9]. We decided to give Risperidone first in consideration that our patient was still young to prevent cognitive deterioration.

A meta-analysis in China showed the prevalence of physical abuse, mental abuse, sexual abuse, and neglect in children are 26.6%, 19.6%, 8.7%, dan 26% [10]. Another meta-analysis study showed that schizophrenic patients had 2.72 times bigger chance of having a history of childhood trauma even though the relationship is not clear yet [3], [4], [11]. It is believed that childhood trauma has a role in brain's neural changing mainly in hypothalamus-pituitary-adrenal axis, catecholamines dysregulation, and other related systems that could create hypersensitivity to a stress and also an increased risk of psychosis [12]. An exposure to a loss of family, stress, and also becoming a victim of either childhood abuse or neglect have been studied as risk factors of a psychosis with Odd Ratio (OR) 2.78 in a meta-analysis [13].

Childhood neglect, which might happen more often than abuse, seem to be more potential factors related to aggressivity in older age [14]. Symptoms of schizophrenia are often divided into positive and negative symptoms [15]. Childhood abuse is often related with positive symptoms while childhood neglect with negative symptoms. Other than negative effects, childhood trauma may also have positive impact called resilience. Resilience is heritable (30-50%) and could be described as an ability to maintain mental health despite the traumatic event someone has experienced [16]. Our patient was left by his father since he was in his mother's womb. His mother was also busily working to support their life so he was kind of neglected emotionally during his childhood. This could be an important factor that contribute to his schizophrenia later when he had no resilience from the neglect he experienced.

Two important things in childhood trauma are age and gender. The older someone gets the more chance of him to experience a trauma. Women are said to have 3-4 times higher chance to experience trauma, especially sexual abuse [17]. Our patient started showing psychotic symptoms after he heard

about his ex-girlfriend's engagement. This engagement could be a meaningful stressor for him considering his mother also left him after she got remarried to live with her new family. He felt he was abandoned for the umpteenth time.

Childhood trauma often causes unwanted impact both in physical and mental health that could last a long life with prevalence of childhood neglect itself is 26% [10]. A person with childhood trauma that experience another traumatic event in the adulthood would have a higher chance of showing psychotic symptoms due to his increased vulnerability to a stress [18]. Childhood trauma is also related to younger age of first hospitalization and bigger chance of having hallucination or delusion [12]. This could be the reason why our patient had such a strong and persistent grandiose delusion that was quite resistant and finally responded to Haloperidol instead.

Considering the high prevalence of childhood trauma, screening for it should be done for every patient. We could use CAP (Consider, Ask and act, Plan and provide) method which consists of: Consider whether a patient has a history of childhood trauma, ask about the history of childhood trauma and act accordingly, and plan and provide therapeutic intervention for it [19]. It is important especially for psychotic children patient to determine whether they're currently living in a harmful environment [20].

Conclusions

Schizophrenia is a severe neuropsychiatric disorder that is often seen in young adult. There are many contributing factors to schizophrenia and one of them is history of childhood trauma. A person who has a history of childhood trauma tends to have vulnerability to a stress in adulthood. When he is faced with a meaningful stress later, this could make him fall into a psychotic state that could continue into schizophrenia. Therefore a screening for history of a childhood trauma is important and should be done

for every psychiatric patient.

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