

GENETIC SYNDROMES AS A CAUSE OF TREATMENT RESISTANCE IN SCHIZOPHRENIA: A CASE WITH TRIPLE X SYNDROME

ŞİZOFRENİDE TEDAVİYE DİRENÇ NEDENİ OLARAK GENETİK SENDROMLAR: TRIPLE X SENDROMLU BİR OLGU

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ABSTRACT

Triple X syndrome (47, XXX) is a numerical chromosomal alteration that affects 1/1.000 females, in which the individual is born with an extra X chromosome. Trisomy X is a relatively common but under-recognized chromosomal disorder associated with characteristic cognitive and behavioural features of varying severity. We report a 16-year old patient with Triple X syndrome and resistant schizophrenia. It is remarkable that genetic syndromes may be associated with resistance to treatment of psychiatric problems. Therefore in cases with treatment resistance, the genetic analysis should absolutely be examined.

Keywords: Schizophrenia, treatment resistance, Triple X syndrome

INTRODUCTION

Triple X syndrome is a relatively frequent cytogenetic condition occurring in one in 1000 females, with a high variety of physical and behavioral phenotypes. Components of the syndrome are learning disabilities, delays in motor and language development, dysmorphic facial appearances and cardiac and urogenital system anomalies. Over-dosage of some X-linked escapee genes was suggested to cause psychiatric disorders (1). To the best of our knowledge there is only one published data on

ÖZET

Amaç: Triple X sendromu (47, XXX), kadınlarda ekstra bir X kromozomunun varlığı ile karakterize, 1/1.000 kişide bir görülen bir sendromdur. Trizomi X, değişken şiddette bilişsel ve davranışsal özelliklerle karakterize bir kromozomal hastalıktır. Bu olgu sunumunda; Triple X sendromlu ve dirençli şizofreni tanısı alan 16 yaşında bir vaka sunuyoruz. Genetik sendromların psikiyatrik problemlerin tedavisinde tedaviye dirençle ilişkili olabileceği ve bu nedenle tedaviye dirençli olgularda genetik analizlerin mutlaka yapılması gerektiği göz önünde bulundurulmalıdır.

Anahtar Kelimeler: Şizofreni, tedaviye direnç, Triple X sendrom

psychosis with triple X syndrome (2). In this case, we report a 16-year-old girl with triple x syndrome and treatment-resistant schizophrenia who does not respond to two different atypical antipsychotic drugs.

CASE STUDY

A 16-year-old girl was referred to the outpatient clinic with various symptoms including self-talk, hostility towards her mother and uncle as well as constant cursing. These symptoms started to occur about 1 year ago and

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increased in the last 2 months. After mental examination, we detected that her cooperation and orientation was normal, she seemed hostile and angry, she had a dysphoric mood and poor language content. We also determined persecution delusions against her mother and uncle. Visual and auditory hallucinations were the other prominent symptoms. Her abstraction was insufficient and she was in complete denial of her illness. In her physical examination, it was found that she had greater than usual or standard length and extremities, and had a dysmorphic face. In addition, her neurological examination was normal. The patient was diagnosed with schizophrenia and intellectual disability according to The Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5) diagnostic criteria. The initial Positive and Negative Syndrome Scale (PANSS) Score was 123. The risperidone treatment was started and the dose was gradually enhanced to 5 mg/day in 8 weeks. Risperidone was stopped due to lack of response and then aripiprazole was administered. With regard to her phenotypic features (ex. height) and drug-resistance with risperidone, the genetic test was studied. As a result of the genetic test, an extra X chromosome was determined and she was diagnosed with Triple X syndrome. After adequate time (8 weeks) and dosage (30 mg/day) of aripiprazole, the patient did not exhibit any change in PANSS points. Olanzapine was prescribed and had a partial response to the psychotic symptoms. Clozapine treatment was planned if the olanzapine treatment resistance occurred.

DISCUSSION

X chromosome plays an important role in the development of psychiatric disorders (3). Over-dosage of X-linked escapee genes due to an extra X chromosome was suggested to contribute to the development of psychiatric symptoms in Triple X syndrome (XXX). The most common psychiatric disorders present among individuals with Trisomy X included anxiety disorders, (40%), Attention-Deficit Disorder (17%), and depressive disorders (11%) (4). It is remarkable that genetic syndromes may be associated with resistance to treatment of psychiatric problems. Psychiatric symptoms may be affected by gene polymorphisms in genetic syndromes, which may complicate treatment compliance. At the same time, genetic diseases may remodel receptor regulation and cause resistance to treatment. We have tried to illustrate the fact that the diagnosis of schizophrenia may be co-occurred by triple x syndrome and that treatment resistance may be encountered. Therefore, the genetic analysis, especially in treatment-resistant cases, may be suggested.

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