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Letter to Editor

A Rare Syndrome in Adolescents: Capgras Syndrome and Its Psychopharmacological Treatment

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ABSTRACT

In this letter to editor, while explaining the process leading to Capgras syndrome (CS), it will be tried to evaluate the psychodynamic, cognitive, neurological, and systemic factors as a result of the anamnesis and detailed examinations. Clinical aspects of the syndrome, psychopharmacologic agents to be used in the treatment process, and these agents' mechanisms of acts will be discussed. Y.B., a 16-year-old female patient, was admitted to our clinic by her family with complaints of restlessness, introversion, and voices in her ears. A psychiatric examination revealed that the patient had persecutory, referential, and somatic delusions and that her family was replaced with other families in her thought content. In the initial treatment of the patient, risperidone was preferred, and sertraline was added to her treatment after the regression in her symptoms was not at the desired level. CS is the most common type of misidentification syndrome. The patient believes that their parents, friends, or themselves have been replaced by people similar to them and may show strong hostility and distrust toward their environment. Although there is no single cause, biological and psychological factors are thought to play a role in its etiopathogenesis. When the literature is examined, it is seen that there are reports of CS in adults, and the number of case reports in adolescence is lower. It should be kept in mind that although rare, CS can be seen in the pediatric and young population and the addition of selective serotonin reuptake inhibitors may be beneficial in cases that do not respond to antipsychotic treatment.

Keywords: Capgras syndrome; adolescent psychiatry; psychotic disorders

Dear Editor,

Delusional misidentification syndromes (DMSs) are considered rare psychopathological phenomena encountered in psychiatric and neurological conditions. It is defined as a delusion in which the person believes that the people, places, objects, and events around him or her have changed or that the same ones have multiplied.[1] Capgras syndrome (CS) is the most common type of misidentification syndrome [1]. The patient believes that their parents, friends, or themselves have been replaced by people similar to them [2]. It is a rare psychiatric disorder characterized by a delusional belief that real and familiar people

have been replaced by mysterious, sometimes malicious, or morally reprehensible impostors [2]. In addition, it is considered a delusional disorder as patients are not expected to improve with explanation and decrease in symptoms over time [2]. Affected individuals have a clear consciousness, often with intact cognitive functions [3]. They may typically show strong hostility and distrust toward their environment [2,3]. Findings on prevalence are generally made from case series including psychotic disorders, and when the literature is examined, it is reported that the diagnosis of CS is higher, especially in male patients diagnosed with paranoid schizophrenia [4]. In a study conducted in the United States in 1983, all 4200 patients admitted to psychiatric emergencies were reviewed, and six cases were found to have a Capgras delusion (0.14% overall and 0.17% of psychotic disorder cases) [5]. There are studies reporting that the prevalence is 0.17/100,000 in adolescents and 0.0032/100,000 in children aged 2–12 years [6]. When the literature is examined, it is seen that there are reports of CS in adults, and the number of case reports in adolescence is lower. In this case, a 16-year-old girl with CS accompanied by somatic delusions, clinical aspects of the syndrome, and psychopharmacologic agents to be used in the treatment process will be discussed.

Patient Information

Y.B., a 16-year-old female patient, was brought to our outpatient clinic by her mother with a complaint of restlessness. According to the history taken from the patient and her family, her complaints started 1.5 years ago, she talked to her middle school mathematics teacher, and she said that her exam paper had been changed in the high school entrance exams, so she could not be placed in the high school she wanted. She repeated the same sentences, and she was not satisfied with the high school she attended. When she told her family that she wanted to investigate this issue and claim her rights, she could not get enough support from them. As a result, she became introverted, especially in the last 1 year; her introversion worsened; she tried to talk to her former middle school mathematics teacher for the last 6 months without her family's knowledge; and she had a sleep disorder in the last few months in the form of not being able to sleep at night and spending the day sleeping. It was learned that she had been saying "You are not my real parents" for the last 3 weeks because her family did not help her in the process of trying to contact her math teacher, and that this situation, which her family initially thought she said in anger, worsened over time, and for the last 10 days she's been saying "My parents live in England; you are not my real parents; you are copies of them." In her psychiatric evaluation, it was determined that she had persecutory delusions that her family and friends were constantly trying to prevent her from being placed in the high school she wanted; grandiose delusions that she was smarter than her other friends and family members; referential delusions that her math teacher's social media posts gave messages about the plans they had prepared to prevent her from being placed in the high school she wanted; somatic delusions that her skin and eye color were changed by her fake family while her skin was normally white and her eyes were blue because she was British; and she had peripheral speech in the thought process. It was learned that the patient heard voices commenting on her delusions during the day. A preliminary diagnosis of "Schizophrenia" was made for the patient whose mood was euthymic and whose affective state was inappropriate, and an electroencephalogram examination, a radiological examination, extensive biochemical examinations, and hormonal examinations were additionally ordered for a differential diagnosis in terms of organicity. All the tests were determined to be within normal limits, and no findings were found on the radiologic examination of the patient. There were no additional findings on the physical and neurologic examinations. In her medical history, it was learned that she was born with a normal birth in the hospital with the help of a midwife, there was no delay in language development, her parents separated during her early childhood and her grandmother took care of her during this period, she had no academic difficulties at the beginning of primary school, and she generally had above-average success at school. No psychotic disorder was reported in the psychiatric family history, and there was no family member with a psychiatric admission. At the time of the patient's first admission, the Clinical Global Impressions Scale severity score was 6 and the Positive and Negative Syndrome Scale (PANSS) score was 116. Organicity was ruled out, and risperidone was gradually started at 2 mg/day. After 1 week, the patient was seen at the follow-up visit and was reported to have anxious and aggressive behaviors. Lorazepam (1 mg/day) was added to her treatment. The patient's symptoms started to regress in the second week of treatment. In the 3rd week of follow-up, it was learned that her delusions and discourses toward her family continued significantly; risperidone treatment was increased to 3 mg/day; the lorazepam dose was decreased; and sertraline 50 mg was added. In the 4th week of follow-up, the patient's persecutory and referential delusions decreased, and somatic delusions improved in the 5th week of follow-up. In the 6th week of follow-up, the patient's delusions improved significantly with 3 mg risperidone and 50 mg sertraline, and according to the information obtained from

her family, there was a decrease in her previous discourse. At the end of the second month, the patient's delusions significantly decreased, no hallucinations were observed, and the PANSS score was 82. The patient's follow-up with the current treatment continues.

DISCUSSION

In this case, we have described CS in a 16-year-old patient with psychosis and somatic delusions. The literature review revealed that there are limited numbers of case reports of adolescents compared to adult case reports, and therefore our case report will contribute to the existing literature. CS, which is one of the DMSs and was first described in an article written by Joseph Capgras, a French psychiatrist, and named after him, was defined as a syndrome that progresses with delusions that the close environment, especially family members, have been changed and replaced by other people [1,7]. In Cotard's Syndrome, one of the DMSs that has common characteristics with CS, such as misidentifying objects and events, the patient has nihilistic delusions in the form of denial of his/her entire being or a part of his/her body, while in Fregoli's Syndrome, the patient has delusions that people he/she knows have become strangers [8-10]. CS, which is the most common DMS, can be secondary to some psychiatric disorders, such as psychotic and mood disorders, as well as some neurological disorders, including traumatic brain injury, epilepsy, stroke, and dementia, or systemic disorders such as pseudohypoparathyroidism, copper poisoning, and hypothyroidism [11]. In addition, there are studies reporting delirium, dementia, or mental retardation in patients with an organic cause [11]. However, the imaging and extensive biochemical examinations performed to screen organicity did not reveal any findings in our case.

Psychodynamic methods have been used to explain Capgras syndrome. In the first psychodynamic explanation, it was thought that it might be a defense against aggressive desires that could be attributed to oedipal conflicts in women and a manifestation of latent homosexuality in men [7], but in the following period, it was thought that it was based on anxiety and a cognitive and emotional regression that develops due to this anxiety [12]. When the detailed anamnesis obtained after ruling out organic causes in our patient was examined, it was observed that the first symptoms of persecutory delusions and psychotic processes started when she failed to achieve the desired success in high school entrance exams. The patient, who could not receive the support she expected from her family, had a one-year separation period in her early childhood, and she lived with her grandmother during this period. It is known that the mother's inability to act as a "shield of protection" will lead to the child receiving a high amount of impulse-based stimuli from the inner world and perceptually overwhelming input from the outside world as well [13]. It was thought that the patient, who could not receive the support she expected from her family after the high school transition exam, was cognitively and emotionally regressed, and that the patient had feelings of alienation and unacceptable bad feelings and images. When the literature is examined, it is reported that the patients stated that the replacement person almost perfectly resembles the original, but they had a significant deficit in forming bonds that would allow them to establish intimacy with the misidentified person [14]. Similar to the literature, based on the fact that her real family would not treat her in such a way, through compartmentalization mechanisms, our patient thought that the people who aroused such thoughts in her could not be the people she previously cared for and loved; they could only be imposters who replaced them, and her real family would support her. Even if a psychodynamic explanation can be made for CS developing in the background of psychosis, as in our case, detailed neuropsychiatric evaluation and psychopharmacologic treatment should be initiated. Because of the low number of cases, especially in children and adolescents, a specific treatment study could not be performed. However, in addition to this, it was observed that antipsychotic drugs were more preferred as the first choice in case reports in the literature, and therefore risperidone treatment was initiated in our patient [15]. When the literature is reviewed, there are case reports of improvement with the addition of antidepressants such as selective serotonin reuptake inhibitors (SSRI) and mirtazapine in cases of delayed response to antipsychotics [16]. In our case, similarly, risperidone treatment was started, and sertraline was added to the treatment because of the lack of expected decrease in symptoms during the follow-up period. After the addition of sertraline treatment, her symptoms decreased. The effects of atypical antipsychotics are due to their blockade of dopamine (DA) 2 receptors, which improves positive symptoms but has little effect on negative symptoms, cognitive impairment, and depressive symptoms [17]. The addition of sertraline in the absence of response to atypical antipsychotics is related to the effects of sertraline on the serotonin (5-HT) system. The combination of sertraline may act on negative symptoms associated with insufficient activation of DA and 5-HT neurons in the prefrontal cortex by means of selective inhibition of serotonin reuptake by sertraline. In particular, sertraline also increases dopaminergic activity by blocking DA transporters

and reuptake [18,19]. These mechanisms may explain how sertraline improves negative and cognitive symptoms. Although our patient did not have these symptoms, we added sertraline to the treatment. Positive symptoms in patients with psychotic disorders are closely associated with central DA hyperfunction [20]. Increased central 5-HT levels may further alleviate patients' positive symptoms by inhibiting DA activity [21]. This latest mechanism may also explain that sertraline enhanced the recovery of positive symptoms, although our patient did not have negative symptoms, depression or cognitive impairment. During treatment, caution should be exercised, especially in terms of metabolic side effects and extrapyramidal symptoms. However, no metabolic side effects were observed in our patient at the end of the third month.

CONCLUSION

In this case, while trying to explain the process leading to CS, we tried to evaluate psychodynamic, cognitive, neurological, and systemic factors as a result of the anamnesis and detailed examinations. We think that our case will contribute to the literature since the development of the condition at a young age is rare. As in our case, patients who are thought to have DMS should be examined in detail in terms of their organic etiology. A holistic evaluation seems to be more valuable in conceptualizing cases than establishing a single model. It is known that a holistic perspective is more valuable in the evaluation of cases. In the treatment of our patient, it was observed that the SSRI group of drugs added to antipsychotic drug treatment accelerated symptomatic improvement, which is consistent with the literature. It was thought that the combination of antipsychotic treatment with SSRIs should be considered in these patients. In addition, it should be kept in mind that CS may also be seen in the pediatric and young populations, although it is rarer. There is a need for more case reports on the clinical presentation and treatment of CS in children and adolescents.

Regards,

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