



# Capgras Syndrome in a Child with Obsessive Compulsive Disorder: A Case Report

## Obsesif Kompulsif Bozukluğu Olan Bir Çocukta Capgras Sendromu: Bir Olgu Sunumu

İD Börte Gürbüz Özgür<sup>1</sup>, İD Hülya Kayılıoğlu<sup>2</sup>, İD Levent Sevinçok<sup>3</sup>

<sup>1</sup>Aydın Adnan Menderes University Faculty of Medicine, Department of Child and Adolescent Psychiatry, Aydın, Turkey

<sup>2</sup>Muğla Sıtkı Koçman University Faculty of Medicine, Department of Pediatrics, Division of Child Neurology, Muğla, Turkey

<sup>3</sup>Aydın Adnan Menderes University Faculty of Medicine, Department of Psychiatry, Aydın, Turkey

### ABSTRACT

Capgras syndrome, which is among the delusional misidentification syndromes, is rarely seen in childhood. In Capgras syndrome, the subject believes that original people and objects have been replaced by similar ones. In this article, an unusual appearance of Capgras syndrome in a child diagnosed with obsessive-compulsive disorder is presented. A 10-year-old female child had been experiencing fear about her parents, especially that they had changed and that her real mother had been replaced by a replica. She had compulsive behaviors such as controlling and asking again. In our case, Capgras delusion was determined as an obsessive/intrusive thought. As in our case, misidentification syndromes may occur in the form of unusual obsessive-compulsive symptoms in children and adolescents. Cognitive behavioral therapy (CBT) with fluoxetine was successfully used for treating this case. Therefore, we suggest that successful results can be obtained with the combination of CBT and serotonin reuptake inhibitors in the management of similar cases.

**Keywords:** Capgras syndrome, child, cognitive behavior therapy, misidentification syndrome, obsessive compulsive disorder

### ÖZ

Sanrısız yanlış tanıma sendromları arasında yer alan Capgras sendromu çocukluk çağında nadir görülmektedir. Capgras sendromunda kişi, insanların ve nesnelerin benzerleriyle değiştirildiğine inanır. Bu yazıda obsesif kompulsif bozukluk tanısı almış bir çocukta alışılmadık bir Capgras sendromu sunulmaktadır. On yaşında bir kız, özellikle ebeveynlerinin değiştikleri ve gerçek annesinin yerini bir kopyanın aldığına dair ebeveynleri hakkında bir korku yaşıyordu. Kontrol etme ve tekrar sorma gibi kompulsif davranışları vardı. Olgumuzda Capgras delüzyonu, obsesif/girici bir düşünce olarak belirlendi. Çocuk ve ergenlerde olağandışı obsesif kompulsif belirtiler şeklinde yanlış tanıma sendromları ortaya çıkabilir. Bu olgunun tedavisinde fluoksetin ile bilişsel davranışçı terapi (BDT) başarıyla uygulandı. Benzer olguların yönetiminde BDT ve serotonin geri alım inhibitörlerinin kombinasyonu ile başarılı sonuçlar alınabileceğini düşünmekteyiz.

**Anahtar Kelimeler:** Capgras sendromu, çocuk, bilişsel davranışçı terapi, yanlış tanıma sendromu, obsesif kompulsif bozukluk

## Introduction

Capgras syndrome, categorized under delusional misidentification syndrome, is a rare clinical condition in which the patient believes that people (usually family members or relatives) or objects in their environment have replaced or been replaced by others, or are apparently identical objects.<sup>1</sup> There are case reports in which Capgras illusion is seen as an obsession variant, and can be evaluated as over-estimated or intrusive thought, even if it is not on the border of psychosis.<sup>2</sup> Depending on whether this delusion occurs alone or as a comorbid condition

of a psychiatric disorder, the medication used in the treatment varies.<sup>3-6</sup>

Obsessive-compulsive disorder (OCD) is characterized as the presence of recurrent and persistent thoughts, urges, or impulses (obsessions) and/or repetitive behaviors or mental acts (compulsions) that cause clinically significant distress or impairment.<sup>7</sup> Children and adolescents with OCD may present with atypical symptoms that may be overlooked or misdiagnosed.<sup>8</sup> The unique factor of this case report is being the first case that was diagnosed with Capgras syndrome as a clinical

Address for Correspondence/Yazışma Adresi: Börte Gürbüz Özgür, Aydın Adnan Menderes University Faculty of Medicine, Department of Child and Adolescent Psychiatry, Aydın, Turkey

Phone: +90 533 620 00 48 E-mail: drborte@hotmail.com ORCID: orcid.org/0000-0002-9176-7359

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presentation of OCD at the age of 10 years and used cognitive behavioral therapy (CBT) plus fluoxetine in the treatment.

## Case Report

A 10-year-old female child attending the 4<sup>th</sup> grade, was referred to the child psychiatry outpatient clinic by her parents upon the onset of “sudden fears”. For the past few years, she had been experiencing fear about her parents, especially that they had changed and that her real mother had been replaced by a replica. She was afraid that her mother would change if her mother was no longer with her. As soon as they were reunited after the separation, she asked her mother some questions to ensure that her mother was still the same (e.g., “Are you the same? Have you been changed?”). Her mother’s answers would not convince her, and the next day she asked questions in the morning to see if her mother had changed during the night, such as what they had eaten together for dinner the previous day. She would also check for moles on her mother’s body to see if they were still there. It was learned from her parents that she was very nervous when she woke up in the mornings and cried a lot as a result. Two weeks before she was transferred to our department, the parents were late to pick her up from school after an exam. This event acted as a trigger that gives rise to the fear of losing her family. She used to watch her mother swimming in swimming lessons and worried that she might change at any moment if she did not take care of her. Our case was the only child in the family. Her 36-year-old mother had a fear of being alone at night and was also afraid of thunder. Her mother slept with our case during the nights when her husband, a 44-year-old police officer, was on duty. The mother’s brother had a history of major depressive disorder, and her father had a history of panic disorder. After a normal pregnancy, the developmental stages had progressed normally. The babysitters of our case changed frequently until the age of 5. The case had been to kindergarten for three years, and her performance at school was at the level of her class. In her psychiatric examination, her mood and affect were found to be anxious. There was an increase in the psychomotor activity. Her speech was clear and purposeful. Thought associations were regular, and there was evidence of over-valued and obsessive thoughts (for example, her mother not being real but a copy instead). There was no perception disorder. She had compulsive behaviors such as controlling and asking again. Her intelligence was clinically normal. She had no sleeping disorder. Although she had no appetite, she had not lost weight.

In her psychometric evaluation, it was shown that the thought content was related to fears in the Sentence Completion Test. The Child Anxiety-Related Emotional Disorders (SCARED) scale consisting of 41 items to screen for anxiety disorder symptoms.<sup>9</sup> The Children’s Depression Inventory (CDI) self-report scale that assesses depression symptoms.<sup>10</sup> The Positive and Negative Syndrome Scale (PANSS) consisting of 30 items was applied to assess the severity of schizophrenia symptoms.<sup>11</sup> It was 22 points from SCARED (below the cut-off value), 6 points from CDI (below the cut-off value), and 40 points from PANSS (positive, 11; negative, 7). The Children’s Yale-Brown Obsessive

Compulsive Scale (CY-BOCS) score was 40 points, which was considered severe.<sup>12</sup> Physical and neurological examinations and laboratory evaluations and cranial magnetic resonance imaging, and electroencephalography were normal. The patient was diagnosed with OCD. There was no evidence of cognitive impairment caused by psychosis. In our case, Capgras delusion was determined as an obsessive/intrusive thought. In addition to compulsive behavior patterns such as controlling the mother to neutralize the discomfort caused by this obsession, it was thought that there were emotional/behavioral consequences indicating anxiety. Her treatment was started with 10 mg/day of fluoxetine and was gradually increased to 20 mg/day. According to the patient’s case formulation in terms of CBT, it was determined that the trigger was the anxiety caused by not being able to see her parents after the exam. The predisposing cause was deemed the psychiatric disorders in the mother and her family. The maintaining factors were mother’s trying to persuade her daughter and supporting the assurance-seeking behaviors by answering the questions asked, the parents’ efforts to prove to the patient that the food is edible by tasting it, the mother’s feeding of the patient herself, and the mother’s sleeping with her at night. The goals of the therapy were to provide psychoeducation on CBT and to remove maintenance factors, to work on the mother’s own anxieties, and to end the patient’s assurance-seeking behaviors. Seven 45-minute sessions were applied. In the first session, psychoeducation was given about emotions, thoughts and behaviors, and anxiety. In the next session, the patient and her parents were informed about what OCD is and the CBT model to be applied in treatment. A sample emotion-thought-behavior diagram was shown based on her own symptoms. In the third session, a family interview was made, and information was given about the sustaining factors. Homework about family care was given. Behavioral tasks were studied between 3-6 sessions. These tasks consisted mainly of exposure and response prevention. The exposure was planned and applied together with the patient, and proceeded with the step that caused the least anxiety. The duration of the sessions was adjusted according to the motivation of the child, as strict practices such as those with adults were not performed in the child age groups. The parents were also interviewed after the sessions for assessment. In each session, the previous interview was discussed, the exercises were checked, and the agenda of the session was determined. Cognitive distortions were studied in conjunction with behavioral tasks. A maintenance session was performed to evaluate the patient’s achievements and to evaluate the use of skills in the long term. In the 2<sup>nd</sup> month of the therapy, it was observed that the patient’s thoughts about whether her mother changed or not decreased to once a week, her daily functions increased, and she sometimes ate food by first tasting it to her parents. At the 6<sup>th</sup> month, it was observed that she did not let her parents taste food, no intrusive thoughts, and assurance-seeking behaviors, and that she regained her former functionality. She got 12 points from SCARED, 2 points from CDI, 1 point from CY-BOCS, and 30 points from PANSS. A decrease in symptom severity was observed in all scales. 20 mg/day fluoxetine treatment was terminated in the 1<sup>st</sup> year. She

had no complaints at six months after the discontinuation of pharmacological treatment.

## Discussion

Capgras syndrome is etiologically associated with limbic encephalitis, hypothyroidism, stroke, Parkinsonism, and drug toxicity.<sup>13-17</sup> In the laboratory evaluations and neurological examination of our case, an organic etiology explaining psychiatric findings was not found. A recent systematic study reviewed 255 published cases in the English literature and showed that the underlying diagnoses in most patients were schizophrenia and other psychotic disorders. According to this review, only 3 patients were reported to be diagnosed with OCD.<sup>18</sup> In another article, one of two treatment-resistant OCD cases with delusional misidentification syndromes was reported as a paranoid personality disorder, and the other as a pervasive developmental disorder, not otherwise specified.<sup>19</sup> Sevincok et al.<sup>20</sup> presented an adult male who repeatedly misidentifies people and places to eliminate or control the intrusive obsessional thoughts. When OCD is seen with misidentification, these patients may be misdiagnosed as psychotic. Publications on misidentification syndromes in children and adolescents are limited. Volz and Heyman<sup>21</sup> also underlined this issue and stated that unusual obsessions can be confused with other diagnoses in children and adolescents. Recently, it has been reported that an 11-year-old patient had obsessive fear that his parents could have been replaced by clones and was treated with behavioral interventions.<sup>22</sup> Additionally, Capgras syndrome has also been reported in a pediatric case as a phenomenon of the pediatric acute-onset neuropsychiatric syndrome.<sup>23</sup> In our case, a differential diagnosis was made with one of the unusual obsessions called transformation obsession. While “transformation obsession” there is a fear of transforming into someone or something else or acquiring undesirable characteristics.<sup>21</sup> There is a belief in Capgras that people or objects around the person replace their like. We made detailed assessment interviews to reveal the differential diagnoses in our case. Therefore, patients with such unusual symptoms should not rush to treatment before the diagnosis is clear. Considering other differential diagnoses, due to the absence of delusions and hallucinations, the normality of reality testing, and the regularity of thought associations, schizophrenia spectrum, and other psychotic disorders were excluded. Although she was worried when she was separated from her parents, we excluded separation anxiety disorder due to the lack of repetitive fear of being separated from the people she was attached to, and the absence of separation anxiety about what would happen to her parents or herself. We attributed the fear of separation from parents to the intrusive thought that they will be changed.

Different pharmacological agents have been tried for treating Capgras syndrome.<sup>5,24-26</sup> Generally, the drugs used differ according to the comorbid psychiatric diagnoses. In our case, we only applied CBT with fluoxetine. Volz and Heyman<sup>21</sup> applied CBT with or without medication to patients with transforming obsession and stated that the patients benefited from the

treatment. Similarly, we suggest that the OCD patients with misidentification obsession benefit from CBT.

## Conclusion

Here, we present the youngest case of OCD presenting with misidentification syndrome. Although antipsychotics are used as pharmacological agents for treating Capgras syndrome, good results were obtained with fluoxetine treatment and CBT in our case. CBT interventions included cognitive distortions, removal of maintaining factors, positive self-reinforcements, and Socratic questioning. This case contributes to the literature by demonstrating that misidentification syndrome can also occur with the appearance of OCD and that CBT and selective serotonin reuptake inhibitors can be used in its treatment.

## Ethics

**Informed Consent:** The patient and her parents were informed about what OCD is and the CBT model to be applied in treatment.

**Peer-review:** Informed consent was obtained.

## Authorship Contributions

Surgical and Medical Practices: B.G.Ö., Concept: B.G.Ö., L.S., Design: B.G.Ö., H.K., L.S., Data Collection or Processing: B.G.Ö., H.K., Analysis or Interpretation: B.G.Ö., H.K., L.S., Literature Search: B.G.Ö., Writing: B.G.Ö., L.S.

**Conflict of Interest:** No conflict of interest was declared by the authors.

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