

# Capgras Syndrome Presenting in an Adolescent Girl in the Caribbean

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## ABSTRACT

*The case of a 16-year old Jamaican girl who presented to the psychiatric service of a general hospital with features of Capgras syndrome is presented. Her history, treatment, progress and relevant psychodynamic and neurocognitive issues are explored. This is the first known published case of an adolescent with Capgras syndrome from the Caribbean. The case highlights that the syndrome may occur in different cultural contexts and that clinicians should be sensitive to its existence in order to avert under-diagnosis or misdiagnosis.*

**Keywords:** Adolescent, Capgras syndrome, Caribbean

# El Síndrome de Capgras en una Adolescente del Caribe

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## RESUMEN

*Se presenta el caso de una joven jamaicana de 16 años que acudió al servicio de psiquiatría de un hospital general con los rasgos del síndrome de Capgras. Se explora su historia, tratamiento, progreso, problemas neurocognitivos y psicodinámicos relevantes. Éste es el primer caso publicado de que se tenga noticias, de una adolescente con el síndrome de Capgras en la región del Caribe. El caso pone de relieve que el síndrome puede ocurrir en diferentes contextos culturales, y que los médicos deben de estar sensibilizados con su existencia a fin de evitar un subdiagnóstico o un diagnóstico erróneo.*

**Palabras claves:** Adolescente, síndrome de Capgras, Caribe

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## INTRODUCTION

Capgras syndrome is a psychiatric disorder in which the affected individual has the delusional belief that a parent, friend, or other closely related person has been replaced by an identical-looking imposter. It is rarely seen in adolescents (1) and prevalence in a psychiatric inpatient population has been reported as 3.1% with a median age of onset of 29 years (2). The disorder was first reported just over 80 years ago in adults and has presented in the context of schizophrenia and other psychotic disorders as well as in cases of dementias and cerebral lesions (3). A single unitary aetiology, common to all presentations of Capgras syndrome, has not been identified. However, both biological and psychological factors have been proposed as playing critical roles in the pathogenesis of the

condition. Psychodynamic concepts have predominated the psychological theories about Capgras syndrome while fronto-temporal cerebral anomalies have also been identified in a number of persons with the disorder (4).

The case described in this report is that of an adolescent girl in the Caribbean who presented with features of Capgras syndrome to the psychiatric service at a general hospital. A review of the literature has failed to identify any previously published cases of the syndrome from the Caribbean. We describe the case and discuss relevant psychodynamic issues which encompass the patient's relationship with her parents. Neurocognitive implications are also explored.

## CASE REPORT

TR is a 16-year old girl whose parents had separated prior to her being born but they continued to live in the same home. She was the only child for both her parents. When she was 11 years old, her parents' divorce was finalized and all three con-

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tinued to live in the matrimonial home for two more years until TR and her mother emigrated from Jamaica to Canada. She witnessed several arguments between her parents and had never experienced living with them as a loving couple.

Shortly after moving to Canada, TR's mother was diagnosed with bipolar disorder. They subsequently returned to Jamaica and were living in an affluent neighbourhood for several months until her mother had a relapse of her bipolar disorder and in the aftermath could no longer afford to live independently. Because of the financial challenges, she and her mother moved back to her father's house which was located in a lower income community. By this time, TR's father was in a happy relationship with another woman, but he suspected that TR wanted to see her parents reunited. He also observed that TR refused to have friends, who had visited her at her previous home, come to see her at his home where she now lived.

Her parents described her as a private, quiet, caring and homely adolescent girl. She was also reportedly strong-willed, very opinionated and competitive. Her homeroom teacher noted that although she was a private person, she would interact with her fellow classmates, was lady-like and got along well with everyone. She was a high achiever academically and had as role models, in this regard, some cousins whom she aimed to emulate and supersede academically. Both of her parents thought she was worried about her mother's illness although she seemed reluctant to express how she felt to them. She was reasonably well until December 2010 when, after receiving a failing grade (59%) on a mathematics test, she became very upset and tearful and began to call herself a failure. She had no past psychiatric history and this was noted to be very unusual behaviour for her. She had also missed another test at school, and when arrangements were made for her to do this test at another time, she refused, stating that she would be 'different from the other students' and that her 'academic performance would be questioned'. She also began sending messages *via* an internet-based social network to her father stating that she was sorry to have disappointed him and that she did not want to let him down.

At about this time, other changes in her behaviour were observed. She was reportedly sleeping very little at nights, was pacing about the house, and was crying a lot. She was overheard saying that she was a disappointment, and would never be able to go to university. She also began to have episodes of shaking of her body suddenly. She was taken to see a private psychiatrist who prescribed quetiapine 50 mg once daily, sodium valproate 500 mg once daily and imipramine 50 mg once daily. Of note, her mother had an episode of bipolar disorder commencing five months prior to TR's presentation. Her mother had gradually improved and had finally returned to her usual level of functioning at about the same time that TR's symptoms began.

In the ensuing days after the initiation of psychopharmacological treatment, TR's mother observed that her behaviour began to deteriorate, as she began to express the following delusional thoughts:

- \* Both she (TR) and her mother were dead, and they were both in purgatory
- \* People were not who they said they were, and they were using voice editing techniques to disguise their voices
- Hidden cameras were in the bathroom
- \* Their domestic helper was performing obeah (witchcraft) on her and wanted to take her soul
- \* There were forces trying to control and hurt her mother

She was taken back to the private psychiatrist who increased her quetiapine to 200 mg once daily. However, TR refused to take the medication, stopped talking and began to stare into the distance for prolonged periods of time. Her mother was then advised to take TR to the emergency room of the University Hospital of the West Indies (UHWI) for further management.

On the day of presentation to the UHWI, TR was observed to be an appropriately attired, overweight adolescent girl, who sat with a staring gaze. She had a blunt affect and a depressed mood. She displayed poverty of speech and answered questions by nodding her head. She denied having any hallucinations or illusions. She, however, expressed ideas of reference and persecutory delusions. She had limited insight. Physical examination, including neurological findings, was normal. Investigations revealed normal findings on a computed tomography scan of her brain, as well as from the following blood investigations: complete blood count, serum urea, electrolytes, liver enzymes, thyroid function tests, calcium and phosphorus.

TR was admitted to hospital and treated with quetiapine 100 mg twice daily and benzotropine 1 mg twice daily. She complained of hidden cameras being present on the ward and that she had been experiencing a great amount of stress from the preparations which she had been making for external examinations at school. She was observed walking aimlessly about the ward, occasionally mumbling to herself, was reluctant to participate in interviews and refused to talk to others. Significant mental status examination findings included negativism, uncooperative behaviour with minimal speech and apparent responses to auditory hallucinations.

Four days after being admitted, she began speaking more. She reported that she was feeling sad that her parents were divorced, and that she had disappointed everyone. She admitted that she experienced auditory hallucinations, but could not say exactly what the voices were saying. On the following day, she exhibited echolalia, especially in relation to questions she was being asked during clinical interviews. By day six, however, she refused to speak. Her speech remained minimal to nil for the next seven days. Her interaction with staff members as well as other patients also stopped over this period.

About two weeks after being admitted, TR expressed that her family members were not alive, that they were all dead. She also said that she did not have a home and that the people

who came to visit her (her actual parents) had been programmed. She also reported that she was “no longer bright” as she had neglected her responsibilities in school. Although her parents visited frequently, her delusions about them being dead and her minimal speech continued until about day 30 of admission at which time she also began pulling out her hair, stating that it was ‘bad’.

Gradually, she became more ambivalent about the idea of her parents being dead although she still initially maintained that the woman who visited her was not really her mother. Her medications over this period included quetiapine and benzotropine for a total of 23 days, without any apparent therapeutic effect. Her antipsychotic was then switched to olanzapine, which was slowly increased to a maximum of 15 mg daily. It was after 14 days of olanzapine that she began to recall where her current home was. On day 41 of admission, she was given a weekend pass, and then admitted to the day hospital service. She attended sessions there on nine occasions, but gradually deteriorated, again claiming that her parents were not real and also expressing suicidal ideas. She was subsequently readmitted as an inpatient, and the antidepressant sertraline was added at a dosage of 25 mg once daily to the olanzapine that she was taking. The olanzapine was also increased from 15 to 20 mg daily.

She spent another month on the ward, as she voiced suicidal ideas for at least three weeks. She also threatened to jump off a four-storey building which neighboured the psychiatric ward on the hospital compound. She voiced that the people who came to visit her were pretending to be her parents. While in the hospital, she did not recognize them to be real, but thought that when she heard them on the telephone they sounded real. She also reported that her mother appeared to be returning to normal although her father remained a clone. After a meeting with her parents, the patient was discharged from inpatient care and remained on her medications at home. She made further improvement at home and became completely asymptomatic a few weeks later.

## DISCUSSION

This 16-year old girl has experienced an unstable home environment characterized by a loveless relationship between her parents and shifting between households across two countries. By nature, she is quiet and perfectionistic as manifested by her demure interactions with peers, her high academic achievement and her quest to supersede the academic performance of her cousins. This perfectionist tendency may have been an attempt to compensate for a somewhat chaotic home environment. The disruptiveness and potential stigma of her mother’s mental illness and the downward social drift which was associated with the financial implications of the mother’s illness severely challenged her ability to cope and compensate. This challenge was intensified by her recent failing grade at school which may itself have been related to an inability to focus on her studies given the prevailing stressors already identified. Compounding the situation was the tense emotional environ-

ment of being in a household with two parents who had never been able to get along. As her challenges and stressors intensified, so too did her coping mechanism of pursuing perfectionism where she could. This perfectionism took on delusional proportions: by believing her parents to be dead, she was able to disconnect herself from the chaos which separately or together they had brought into her life. If they were not her parents, then what they did or who they were could have no bearing on her. In essence, she created a perfect world.

## Psychodynamic conceptualization

We begin with the formation of TR’s personality structure in childhood and the impact of a high conflict environment on her psychosocial development. She has never observed a loving relationship between her parents, so we can hypothesize that as she was going through the phallic stage of development, she never resolved her Electra complex (“in love” with her father and feeling envy towards her mother and finally resolving this and bonding with mother). Being stuck in this phase of development, she would maintain unfulfilled and unacceptable desires toward her father as an adolescent (hence her initial feeling of having disappointed him when she failed the mathematics test) while still holding feelings of envy toward her mother. She also developed a strong superego by which she held herself to rigid standards of acceptable behaviours which we see again as part of her personality structure. Her attachment with both parents would also have been disrupted based on both the family conflict and her mother’s bipolar disorder. Persons reared in families where constant conflict exists learn that love means frequent anger with each other. Children do not always understand what parents or adults fight about, but they can certainly recognize anger and upset feelings when they are exposed to them. It is not uncommon for children raised in an atmosphere of loud angry voices, recriminations and accusations to try to avoid conflict at any cost. They may be unwilling, or even unable, to voice their own emotions or opinions that are negative or different from that of others and may feel a need to pursue perfection in an effort to please these “angry, difficult” parents. This may help to explain why TR behaved like such a compliant and willing child, with a rigid superego, yet with some levels of stubbornness and opinionated behaviours.

As TR continued to grow in this environment filled with conflict, her mother was diagnosed with a bipolar illness, thus further affecting her bonding and attachment. Failing the mathematics test becomes an important trigger for her illness as it results in exposing a defect in her carefully crafted armour/defence. She can no longer be “perfect” in her compartmentalized academic world, her family world has already been disrupted and so she reaches her breaking point and begins to catastrophize as she no longer sees any hope in her situation. This sets the stage for her Capgras delusions, which then manifest as her newly formed defence mechanism and as her outlet for the anger and resentment, toward both herself and her parents, which she has kept so carefully repressed.

With these delusions is manifested a denial of her parents who have brought much conflict and turmoil to her life and they (*ie* the delusions) function to reduce her levels of anxiety and guilt about these unacceptable feelings in the “real” world.

Erikson’s theory of psychosocial development (5) also has relevance when conceptualizing this case. With the high levels of conflict and disruption in attachment, it is clear that TR’s sense of trust, autonomy and initiative have all been distorted. These are typically obtained in the early stages of psychosocial development and hence she is vulnerable to feelings of mistrust, shame and doubt and guilt. All these emotions were manifested in her Capgras delusions, in her disappointment in herself and projected disappointment of her parents (because of her failing math grade).

### Neurocognitive conceptualization

In recognition of the growing tendency toward biological explanations for Capgras syndrome, a neurocognitive conceptualization of TR’s case is also presented. According to cognitive models, Capgras syndrome cannot be exclusively conceptualized as a dysfunction in facial recognition; rather, the patient is unable to acknowledge the legitimacy of a person they clearly are familiar with (3). Feelings of familiarity are non-existent due to the inability to integrate continuous episodic memories, thus generating a double image of the person in accordance to the patient’s needs or motives. In the case of TR then, because of her disruptive childhood experiences with constant conflict, she was unable to integrate her parents into a whole with “good” and “bad” parts and, instead, has split them and made them impostors. From the neuropsychiatric point of view, Capgras delusions arise from ambivalent feelings/emotions regarding the identity of the person. This may result from disconnection between frontal lobes and right temporo-limbic regions (hippocampus), in addition to bilateral frontal damage (3). Delusions are usually associated with right hemisphere lesions, as suggested by neuropsychological research and neuroimaging evidence, because of the impairment of several

functions such as self-monitoring, reality testing, memory, face recognition and processing, and feelings of familiarity (3, 6).

Capgras delusions are relatively rare, occurring mainly in the context of schizophrenia, and have traditionally been considered to have their origins in psychodynamic conflict. More recently, however, it has been estimated that between 25 and 40% of cases are associated with organic disorders, which include dementia, head trauma, epilepsy and cerebrovascular disease (6). In the case of TR, there were no hard neurological signs nor were there any brain abnormalities visible on her CT scan. However, neurocognitive deficits cannot be entirely ruled out on this basis.

### CONCLUSION

Psychodynamic and neurocognitive issues are relevant considerations in cases of Capgras syndrome. The case of TR demonstrates that Capgras syndrome may occur in cultural settings not previously described in the literature and highlights the importance of being sensitive to the existence of the condition in order to avert underdiagnosis or misdiagnosis. The case presented also illustrates the profound impact that dysfunctional family relationships may have on children and adolescents.

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