Current PSYCHIATRY

CASES THAT TEST YOUR SKILLS

Ms. D says 'impostors' posing as family members have invaded her house, and 'stalkers' are out to get her. What is causing her paranoid delusions?

# When your brother becomes a 'stranger'



**Elizabeth Cerceo, MD**
Resident, department of medicine
University of Pennsylvania, Philadelphia

**Jeffrey Dunn, MD**
Professor

**Thomas Newmark, MD**
Professor

Department of Psychiatry
Robert Wood Johnson Medical School,
Cooper Hospital, Camden, NJ

## HISTORY 'THEY'RE MAKING ME CRAZY'

Ms. D, age 22, is brought to the emergency room by her older brother for psychiatric evaluation after a family argument. He tells us that his sister is out most nights, hanging out at nightclubs. When she's home, he says, she locks herself in her room and avoids him and his younger brother, who also lives with them.

Recently, her brother says, Ms. D signed a contract to appear in pornographic videos. When he found out, he went to the studio's producer and nullified the contract.

Ms. D, frustrated with her brother's interference, tells us she dreams of becoming a movie star and going to college, but blames him for "holding me back" and keeping her unemployed.

Worse, she says, he and her two sisters are impostors who are "trying to hurt me" and are "making me go crazy." She fears her "false brother" will take her house if she leaves, yet she feels unsafe at home because strangers—envious of "my beauty and intelligence"—peek into her windows and stalk her. She tells us her father is near and guards her—even though he died 4 years ago.

Ms. D, who lost her mother at age 2, began having psychotic episodes at age 19, a few months after her father's death. At that time, she was hospitalized after insisting that her father had faked his death because of a conspiracy against him. A hospital psychiatrist diagnosed bipolar disorder and prescribed a mood stabilizer, but she did not take the medication and her psychosis has worsened.

Ms. D's Mini-Mental State Examination score of 30 indicates that she is neither grossly confused nor has underlying dementia. However, she is emotion-

**How would you** handle this case?

Visit www.**currentpsychiatry**.com to input your answers and compare them with those of other readers

ally labile with grossly disorganized thought processes and paranoid and grandiose delusions.

We could not locate other family members, so Ms. D's family psychiatric history is unknown. She has casual relationships with men but does not have a boyfriend. She acknowledges that she frequents local nightclubs but denies using alcohol.

Blood work and other medical examination results are normal. Negative urine toxicology screen suggests she not abusing substances, and electrolytes and thyroid-stimulating hormone levels are normal. Negative rapid plasma reagin rules out tertiary syphilis. We do not order radiologic studies because her presentation does not suggest focal abnormality, and neurologic exam results are benign.

**Ms. D's symptoms suggest:**
**a) schizophrenia, paranoid type**
**b) pharmacologic intoxication/toxic encephalopathy**
**c) bipolar disorder with psychotic features**
**d) organic brain pathology**

**The authors' observations**

Patients with both paranoid delusions and manic features are challenging. Prognoses and treatment options for each group of symptoms differ substantially.

Ms. D's grandiosity, pressured speech, tangential flight of ideas, and hypersexuality strongly suggest bipolar disorder. We could not rule out schizophrenia, however, because of her prominent hallucinations and paranoia.

Pharmacologic intoxication was not likely based on laboratory results and the longstanding, progressive course of Ms. D's disorder. Organic pathology also was unlikely, given her normal neurologic examination and lack of other medical issues.

## TREATMENT TALK THERAPY

We tentatively diagnose Ms. D as having bipolar disorder type I with a manic episode and psychotic features. She does not meet DSM-IV-TR criteria for schizophrenia and lacks affective flattening, poverty of speech, avolition, and other negative symptoms typical of the disorder. We admit her to the inpatient psychiatric unit and prescribe lithium, 300 mg tid, and quetiapine, 50 mg bid.

An internal medicine (IM) resident visits Ms. D for 30 to 45 minutes daily during her hospitalization to check her medical status and to allow her to vent her frustration. A resident in psychiatry also interviews Ms. D for about one half-hour each day. The patient rarely interacts with other patients and speaks only with physicians and nurses.

Ms. D appears to trust the IM resident and confides in her about her brother. During their first meeting, she appears most disturbed that a man who "claims" to be her brother is sabotaging her life. She does not fear that this "impostor" will physically harm her but still distrusts him. She repeatedly reports that her late father is nearby or in the room above hers. She adds that she feels much safer in the hospital, where the "stalkers" cannot reach her.

At times, Ms. D tells the IM resident she has a twin. Other times, she believes her family is much larger than it is, and she sometimes laments that she is losing her identity. She often perseverates on Judgment Day, at which time she says her "fake" relatives will answer for their actions against her.

Ms. D's delusions of grandiosity, tangentiality, circumferential speech, and flight of ideas persist

through 4 days in the hospital. Her affect is extremely labile and occasionally inappropriate. She sometimes cries when discussing her father's death, then stops, thinks a moment, and begins laughing. At this point, we increase lithium to 600 mg tid and quetiapine to 100 mg tid. She is suffering no side effects and infrequently requires haloperidol as a demand dose only.

**Ms. D's symptoms now indicate:**
**a) bipolar disorder**
**b) schizophrenia**
**c) another disorder associated with paranoia**

### The authors' observations

A patient such as Ms. D who lives in a minimally supportive environment and has paranoid delusions could fabricate an explanation for what she perceives as family members' incongruent behavior. She could create a reality in which these relatives are impostors.

Although this behavior is not unusual, Ms. D's extreme reaction toward her siblings suggests Capgras syndrome, a rare misidentification disorder (*Box*). The syndrome is often missed in clinical practice, and its prevalence has not been quantified.

Capgras syndrome is seen most often in patients with paranoid schizophrenia—the highest functioning and most preserved schizophrenia patients. This association may indicate that both neurologic dysfunction and psychological background are necessary to produce the syndrome.

The belief that family members are impostors could point to a conspiracy theory or paranoid delusion. Ms. D's suspicion and distrust toward her older brother indicate a paranoid state, and her other delusions—such as her belief that others are stalking her—suggest that her Capgras symptoms are another manifestation of paranoia.

**Capgras' causes.** Capgras delusions can occur secondary to neurologic lesions and often appear to have an organic cause, such as abnormal focal paroxysmal discharges.[1] These delusions can occur secondary to systemic infections, thyroid dysfunction, seizures, concussion, intoxication dementia, toxic encephalopathy, or head trauma.[1,2] Theories vary as to physiologic, structural, and neurologic causes (*Table, page 76*).

For Ms. D, structural brain deficits probably interacted with her psychosocial milieu to create Capgras delusions, though we did not perform confirmatory brain imaging or functional neurologic testing. Whereas right cortical lesions might impair recognition while preserving familiarity, Capgras syndrome preserves recognition but

Box

## Capgras syndrome: A disorder that distorts identity

Capgras syndrome—named for Jean Marie Joseph Capgras, a French psychiatrist who first described the disorder—is characterized by paranoid delusions that close friends or relatives are impostors or "doubles" for the family member/friend or are somehow feigning their identity.

Depersonalization and derealization symptoms are common, as is inability to endorse the verity of another's identity. Misidentifications—defined as misperceptions with delusional intensity—can also involve people who do not prompt negative or ambivalent feelings or even inanimate objects.

Capgras syndrome may be neurologically and structurally similar to prosopagnosia—which describes inability to recognize familiar faces—but may also be a variation of a paranoid delusion in which the patient seeks to explain affective experiences. The disorder's coexistence with paranoid delusions also suggests an association with schizophrenia.

Table

## Proposed causes of Capgras syndrome

**Physiologic**

Frontal lobe damage may distort visual stimuli monitoring, thus impairing facial recognition.[4]

Disruption of neuronal connections within the right temporal lobe scrambles memories needed for facial recognition.[5]

**Neurologic**

Disconnection between brain hemispheres lead to cognitive but not affective recognition.[6]

Bifrontal pathology or other organic cause blurs "judgment of individuality or uniqueness," as in prosopagnosia.[3]

Dorsal pathway impairment alters affective response to faces.[7]

Dissociation in the amygdala may distort affective response to faces.[8]

**Psychological***

In depression, misidentification develops secondary to rationalizing feelings of guilt and inferiority.[9]

"Two-armed recognition"—one automatic and almost instantaneous, the other attentive and mnemonic—begins to falter.[10]

Suspicion, preoccupation with details leads to "agnosia through too great attention."[11]

Avoidance of unconscious desires leads to recognition problems.[12]

Patient "projects and splits" family member into two persons; directs love toward real person and hate toward imagined impostor.[13]

In schizophrenia, world is viewed through primitive mechanisms, such as doubles and dualism.[14]

*Dependent on psychiatric comorbidity

deadens the emotion that makes faces seem familiar. When focal lesions are found to cause Capgras delusion, however, the right hemisphere—specifically the frontal cortex—usually is affected.[2,3]

**How would you diagnose Capgras syndrome?**

**a) thorough patient interview**

**b) neurologic examinations**

**c) discussion with trusted family members**

### The authors' observations

When interviewing a patient with paranoid delusions, get as much detail as possible about his or her close relationships. Try to interview one or two family members or friends. The information can help determine whether Capgras symptoms underlie paranoia.

Brain imaging might uncover pertinent abnormalities, but the cost could outweigh any benefit. No evidence supports use of CT to diagnose Capgras syndrome. Some evidence supports use of brain MRI, but more research is needed.

No specific treatment exists for Capgras delusions apart from using antipsychotics to treat the psychosis based on clinical suspicion and constellation of symptoms.

Studies have shown no difference in response to atypical antipsychotics between

continued on page 81

continued from page 76

patients with schizophrenia and comcomitant Capgras symptoms and those with schizophrenia alone. In clinical practice, we have found that treating Capgras symptoms does improve schizophrenia's course.

Adjunctive psychotherapy has not been studied in Capgras syndrome, and directed, insight-guided therapy might not resolve deeply rooted delusions for some patients. With Ms. D, however, "talk therapy" helped us build rapport and gave us insight into her strained familial relationships. Establishing a therapeutic alliance with the patient and encouraging healthy relationships with his or her family and friends can mitigate the effects of Capgras paranoia.

## CONTINUED TREATMENT GRADUAL CHANGE

Day by day Ms. D's mania subsides gradually, though she still fears that a stranger posing as her brother is stalking her. She talks about her brother less frequently, though she is clearly holding fast to her delusional beliefs.

We discharge Ms. D after 10 days. Although her symptoms have not resolved, she is markedly less manic and less agitated than at admission. We arrange treatment with outpatient psychiatry. She does not follow up with her original psychiatrist and is lost to follow-up.

**Capgras syndrome can underlie paranoid delusions and can manifest as suspicion toward family and friends. Although its impact on outcomes has not been established, clinical experience suggests that recognizing Capgras symptoms and gaining the patient's trust can improve his or her course.**

**Bottom Line**

continued

**References**

1. Chatterjee A, Farah M. The cognitive architecture of the brain revealed through studies of face processing. *Neurology* 2001; 57:1151-2.
2. Fleminger S, Burns A. The delusional misidentification syndromes in patients with and without evidence of organic cerebral disorder: a structured review on case reports. *Biol Psychiatry* 1993;33:23-32.
3. Cutting J. Delusional misidentifications and the role of the right hemisphere in the appreciation of identity. *Br J Psychiatry* 1991; 159(Suppl 14):70-5.
4. Rapcsak S, Nielsen L, Littrell L, et al. Face memory impairments with frontal lobe damage. *Neurology* 2001;57:1168-75.
5. Hudson A, Grace G. Misidentification syndromes related to face specific area in the fusiform gyrus. *J Neurol Neurosurg Psychiatry* 2000;69:645-8.
6. Joseph A. Focal central nervous system abnormalities in patients with misidentification syndromes. *Biol Psychiatry* 1986;164:68-79.
7. Ellis H. The role of the right hemisphere in the Capgras delusion. *Psychopathology* 1994;27:177-85.
8. Breen N, Caine D, Coltheart M. Models of face recognition and delusional misidentification: a critical review. *Cognit Neuropsychol* 2000;17:55-71.
9. Christodoulou G. The delusional misidentification syndromes. *Br J Psychiatry* 1991;159:65-9.
10. Capgras J, Reboul-Lachaux J. Illusions des soises dans un delire systematize chronique. *Bulletin de la Societe Clinique de Medecine Mentale* 1923;2:6-16.
11. Capgras J, Lucchini P, Schiff P. Du sentiment d'etrangete a l'illusion des soises. *Bulletin de la Societe Clinique de Medecine Mentale* 1924;121:210-17.
12. Capgras J, Carrette P. Illusions des soises et complexe d'Oedipe. *Ann Med Psychol* 1924;82:48-68.
13. Enoch D. The Capgras syndrome. *Acta Psychiatr Scand* 1963; 39:437-62.
14. Todd J. The syndrome of Capgras. *Psychiatric Q* 1957;31:250-65.

## Related resources

- PsychNet-UK. Disorder information sheet: Capgras (delusion) syndrome. www.psychnet-uk.com/dsm_iv/capgras_syndrome.htm.
- Bourget D, Whitehurst L. Capgras syndrome: a review of the neurophysiological correlates and presenting clinical features in cases involving physical violence. *Can J Psychiatry* 2004;49:719-25. Available at: www.cpa-apc.org/Publications/Archives/CJP/2004/november/bourget.asp.
- Barton JJ. Disorders of face perception and recognition. *Neurol Clin* 2003;21:521-48.
- Lewis S. Brain imaging in a case of Capgras' syndrome. *Br J Psychiatry* 1987;150:117-21.
- Christodoulou GN. The syndrome of Capgras. *Br J Psychiatry* 1977;130:556-64.

DRUG BRAND NAMES

Haloperidol • Haldol
Lithium • Eskalith, others
Quetiapine • Seroquel

DISCLOSURES

The authors report no financial relationship with any company whose products are mentioned in this article, or with manufacturers of competing products.