A case of the body snatchers

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Mrs. P believes spirits that reside within her are continually replacing her body parts. She demands exorcism, not antipsychotics. How can she be helped?

CASE Spirits replacing body parts

Mrs. P, age 63, is admitted involuntarily to our inpatient unit after elopement from another emergency room the prior day. For several weeks she had been leaving her house multiple times and wandering the streets in the middle of each night.

Mrs. P is experiencing auditory and visual hallucinations of evil spirits and religious and hypersexual delusions. She cannot recognize her face and believes her voice has been replaced by another's. She also thinks that her face, nose, lips, voice, and abdomen are not her own. She believes evil spirits that reside within her body are continuously replacing her body parts. She claims these spirits inhabit her left vaginal wall, deposit money there, and are sexually assaulting her each night. She feels that a constant battle between good and evil spirits occurs within her body. She is very angry and states she does not need medication but rather an exorcism.

During her admission, Mrs. P continues to display psychomotor agitation, pressured speech, disorganized thought, religious and hypersexual delusions, grandiosity, and auditory and visual hallucinations. A workup that included a basic metabolic panel, complete blood count, thyroid tests, and abdominal/pelvic CT finds no medical causes for her symptoms. Ob/Gyn is consulted, but Mrs. P refuses a vaginal ultrasound.

Mrs. P's symptoms are most consistent with:

a) bipolar disorder with psychotic features
b) schizophrenia
c) schizoaffective disorder-bipolar type
d) delusional disorder
e) organic pathology

The authors' observations

Mrs. P demonstrated symptoms consistent with both mood and thought disorders. Her symptoms of pressured speech, grandiosity, hypersexuality, and decreased need for sleep suggest a manic episode in bipolar disorder. The thought disorganization, delusions, and hallucinations were in line with psychosis.

HISTORY Failed medications

Mrs. P was first hospitalized at age 29 and has had multiple inpatient admissions for mania, depression, and psychosis. As an outpatient, she was noncompliant with her medications and regularly decompensated and required acute inpatient admission.

Past failed medication trials include risperidone, risperidone long-acting injection, paliperidone, ziprasidone, quetiapine, haloperidol, lamotrigine, and valproic acid. These trials failed because of intolerable side effects

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Table

4 types of delusional misidentification syndromes

Syndrome	Delusion
Capgras syndrome	Belief that a loved one has been replaced by an identical impostor
Fregoli delusion	Belief that different people are actually the same person in disguise
Intermetamorphosis	Belief that one has switched identities with another individual or that others believe the afflicted to be someone else
Subjective doubles	Belief there exists a double of oneself living a separate life

Source: Reference 1

or lack of efficacy. She takes lithium, 600 mg every morning and 900 mg at bedtime, for mood stabilization but refuses to try antipsychotics again because she feels the devil is going to attack her through the medications.

The authors' observations

During her initial hospitalization at age 29, Mrs. P was diagnosed with schizophrenia. In subsequent years she appeared more manic, so her diagnosis was changed to schizoaffective disorder-bipolar type.

Based on our clinical interview, we decide that Mrs. P exhibits a variant of Capgras syndrome, a type of delusional misidentification syndrome in which a person believes other people are not their true selves but have been replaced by identical imposters (***Table***).[1] Patients will at some level recognize a person, but they cannot experience the familiarity that is usually felt when seeing that person. Mrs. P's case was unusual because instead of believing her loved ones were imposters, she could not recognize herself—her body, face, and voice were foreign to her.

We consider and rule out other misidentification syndromes, including mirrored-self misidentification, a condition in which patients cannot recognize themselves (and sometimes others) in a mirror. Mrs. P's inability to recognize herself is not limited to her reflection. She is adamant that her hands and a part of her abdomen are not her own but another woman's. She maintains this delusion even when looking directly at herself.

Breen[2] argued that a face-processing deficit alone may not account for a mirror delusion; an inability to understand mirror spatial relations in reflections also may be present. Similar to Capgras, in mirrored-self misidentification there may be a perceptual deficit as well as a reasoning deficit that allows the patient to hold on to the delusion. In both delusions, there is a failure of reality testing.[3]

How can a diagnosis of a Capgras syndrome (or a variant) be made?

a) clinical interview
b) collateral information
c) psychiatric history
d) laboratory studies
e) neuroimaging

Capgras syndrome

Capgras syndrome, which is also called Capgras delusion, is seen primarily in a psychiatric context—most commonly in functional or organic psychotic illnesses[4]—and secondarily in neurologic cases. In a retrospective study of 920 inpatient psychiatric admissions, the prevalence of Capgras syndrome was 1.3%; one-half of these patients had schizophrenia.[4]

Capgras syndrome can be triggered by systemic infections, thyroid dysfunction, concussion, or intoxication. It is seen with head injury, toxic encephalopathy, and dementia.[5]

Joseph Capgras first described this syndrome in 1923. He discovered it by studying brain-injured patients who had

Clinical Point

Persons with Capgras syndrome may believe their loved ones have been replaced by identical imposters

Clinical Point

Capgras patients are able to recognize faces but cannot produce the emotional response that occurs when seeing a familiar face

Box

Capgras syndrome: Recognition without emotion

Patients with Capgras syndrome believe people whom they know well have been replaced by identical imposters. One of the intriguing aspects of Capgras is that the patient to some extent must recognize a person's face to be able to identify the person as an imposter.

A Capgras patient's conscious ability to recognize a face is intact; however, the patient cannot produce the emotional response that usually occurs when seeing a familiar face. There is a disconnect between the areas in the brain that are responsible for facial recognition and those involved in emotions and memory. In patients with neurologic damage, this disconnect is believed to occur by:

- damage to the ventromedial frontal cortex, which causes impairment of automatic arousal responses and
- damage to the right frontal lobe, which causes inability to evaluate beliefs and impairs reasoning.

To rationalize the strange feeling produced by the inability to recognize a face, the patient develops a delusion that the loved one is an imposter.

Source: References 5-9

prosopagnosia—the inability to recognize familiar faces. Patients with prosopagnosia are not delusional and understand that their inability to recognize faces is an impairment. Brain-injured patients with prosopagnosia had an autonomic arousal (measured by galvanic skin response) with familiar faces and thus unconscious face recognition was intact.[5]

Ellis et al[6] described Capgras syndrome as being a "reverse" of prosopagnosia. They felt that in patients with Capgras, the conscious ability to recognize a face is intact, but the patient cannot produce an emotional response that usually occurs when seeing a familiar face. Thus, patients can recognize a person but feel that something is "off" or "wrong" and believe that the person must be an "imposter." This hypothesis was supported by a 1997 study of 5 patients with schizophrenia who had Capgras.[7]

Hirstein et al[8] showed similar findings in a case study of a patient who developed Capgras after a brain injury. These researchers felt that there was a relationship between Capgras and the inability to link successive memories (because of the lack of emotional recognition). They hypothesized that there was a disconnect between the temporal cortex (where faces are recognized) and the limbic system (which is involved in emotions) (*Box*).[6-9]

Breen[2] reviewed 69 case reports of Capgras that had brain imaging results. Twenty-seven had normal brain imaging, 31 had global atrophy or bilateral brain damage, 2 had global atrophy and a right focal lesion, and 6 had a right hemispheric lesion. Thus, Capgras can occur in patients with normal or abnormal brain imaging.

Young[9] developed an interactionist model of Capgras syndrome, in which a patient's delusional belief allows the patient to explain his or her confusion and give the experience meaning. The experience then validates the belief, which makes the belief resistant to revision.

Asomatognosia is a type of misidentification syndrome in which a patient misidentifies or is not aware of the condition of a part of his or her body. It is seen with right hemispheric brain lesions, left hemiplegia, left-sided sensory loss, and left hemispatial neglect.[10] Some clinicians believe that asomatognosia is a Capgras syndrome for the unrecognized body part.[10] Because Mrs. P refused brain imaging, it is unclear whether she has asomatognosia.

The main treatment of Capgras syndrome is pharmacotherapy with antipsychotics and cognitive-behavioral therapy (CBT) to help with fixed delusions.

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TREATMENT Pharmacotherapy

At admission, Mrs. P was taking only lithium for mood stabilization because she refused to take antipsychotics. During her stay, she reluctantly agrees to start haloperidol, which is titrated up to 20 mg bid. She experiences delusions related to the Devil attacking her via the haloperidol and thus is switched to fluphenazine, titrated up to 20 mg bid. She feels that liquid fluphenazine agrees with her the most, so she is stabilized and eventually discharged with this formulation. Switching to a depot formulation would have improved compliance, but Mrs. P adamantly resists this.

As her psychotic symptoms begin to resolve, Mrs. P begins to feel she is getting her body parts back. For example, she feels her face is her own but her nose is still not hers. During Mrs. P's hospitalization, these bodily delusions lessen and eventually clear.

Other aspects of her psychosis and mania also resolve. She has some residual religious delusions at discharge but feels she has her body back and overall is much improved. Upon discharge Mrs. P is encouraged to follow up with a therapist for CBT, but she feels she does not need therapy and wants only to speak with her priest, even after most of her symptoms resolve. She also declines neuropsychological counseling.

Related Resources

- Denes G. Capgras delusion. Neurol Sci. 2007;28:163-164.
- Coltheart M, Langdon R, McKay R. Schizophrenia and monothematic delusions. Schizophr Bull. 2007;33:642-647. http://schizophreniabulletin.oxfordjournals.org/cgi/content/full/33/3/642.

Drug Brand Names

Fluphenazine • Prolixin
Haloperidol • Haldol
Lamotrigine • Lamictal
Lithium • Eskalith, Lithobid
Paliperidone • Invega
Quetiapine • Seroquel
Risperidone • Risperdal
Risperidone long-acting injection • Risperdal Consta
Valproic acid • Depakote
Ziprasidone • Geodon

Disclosure

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

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Clinical Point

Capgras syndrome is treated with antipsychotics and CBT to help with fixed delusions

Bottom Line

Variants of Capgras syndrome—a misidentification syndrome in which a person believes other people have been replaced by identical imposters—are rare and often unrecognized. Careful, extensive dialogue is needed to help recognize and diagnose this delusion. Treatment includes pharmacotherapy with antipsychotics and cognitive-behavioral therapy.