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Capgras syndrome:

Familiar unfamiliar faces

Although rare, this condition can be seen in a variety of well-known disorders, including Lewy body dementia and schizophrenia.

By Amanda Perkins, DNP, RN

Capgras syndrome is a disorder in which a person can recognize a familiar face but is unable to connect emotionally with the known person, leading to the belief that the person has been replaced by an imposter. Psychiatrists Joseph Capgras and Jean Reboul-Lachaux were the first to describe Capgras syndrome in 1923 when caring for a patient who believed that her family, friends, and neighbors had all been replaced by imposters.

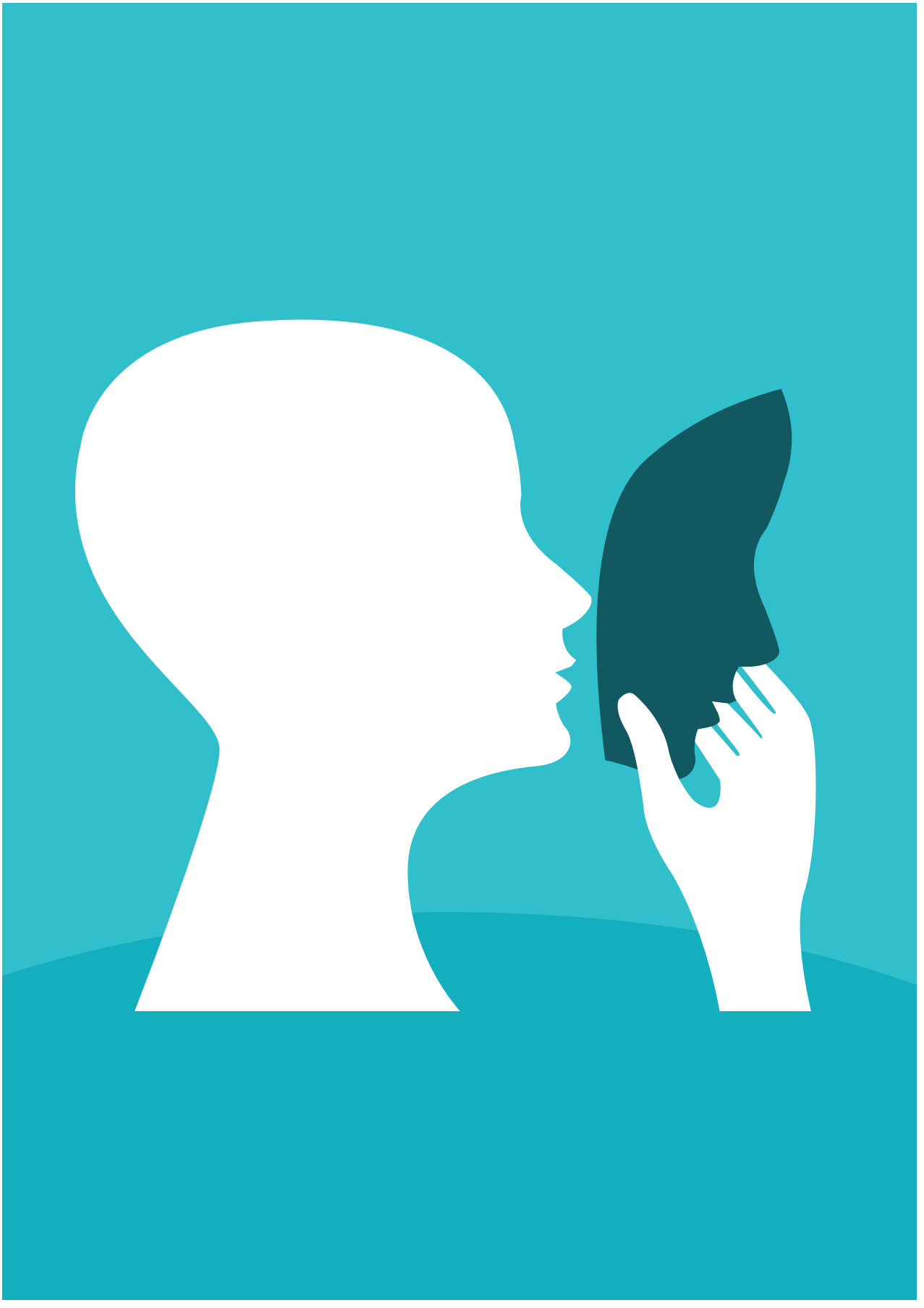
This article takes a look at Capgras syndrome, including associated conditions, signs and symptoms, and care of the patient with the disorder.

Breaking it down

Capgras syndrome is a type of delusional misidentification syndrome (DMS), which can be seen with a variety of neurologic and psychiatric disorders. When caring for a patient with Capgras syndrome, it's important to understand that these disorders often overlap and can evolve from one type to another (see *Delusional misidentification syndromes*). DMSs are characterized by delusions, such as the belief that strangers are people known to the patient who are wearing disguises or the belief that nonliving objects can think and feel. Of the DMSs, Capgras syndrome is the most common and may be transient or persistent.

Historically, Capgras syndrome was classified as a psychiatric disorder affecting female patients, which caused it to be linked with hysteria. We now know that Capgras syndrome is found equally in men and women. What's unclear is whether this condition is a neurologic or psychiatric disorder, or combination of the two. In the 1980s, Capgras syndrome was first associated with brain lesions, opening the door for a neurologic disorder classification. At this time, Capgras syndrome is classified as a psychiatric and neurologic disorder. Because the etiology isn't well understood, more research needs to be conducted.

Although the etiology of Capgras syndrome isn't fully understood, multiple theories exist. It has been hypothesized that this disorder is caused by a disconnect between the areas of the brain responsible for facial recognition and emotional responses. There may be underactivity in the inferior temporal cortex, the area of the brain responsible for facial recognition. It's also theorized that there may be impaired



PLANET FLEM/ISTOCK

did you know?

Reverse Capgras syndrome is when a person develops a new identity, often becoming someone whom they admire such as a famous person. Individuals with reverse Capgras syndrome may also believe that they've rediscovered a preexisting identity.

communication between the inferior temporal cortex and the amygdala, the area of the brain responsible for an emotional reaction when seeing someone. Basically, the person can recognize a familiar face but is unable to form the emotional connection that typically occurs when seeing a known person such as a spouse.

In some patients with Capgras syndrome, as with patients with other DMSs, a right-hemisphere lesion is identified. This tends to be the case when dementia isn't the cause. These right-hemisphere lesions were first identified and associated with facial recognition difficulty in 1979. Facial recognition predominantly occurs in the right hemisphere of the brain, which also plays an important role in facial processing. In 1979, researchers also linked damage to the frontal lobes of the brain with difficulty in identifying familiarity.

Keep a watchful eye

A variety of disorders are associated with Capgras syndrome, including paranoid schizophrenia, schizoaffective disorder, Parkinson disease, Alzheimer disease, Lewy body dementia, and brain injury. Reversible Capgras syndrome has been associated with epilepsy and the use of prescribed and illegal drugs, such as cocaine, diazepam, lithium, morphine, ketamine, and alcohol. When considering all DMSs combined, paranoid schizophrenia is the most commonly associated condition. Narrowing down the focus to Capgras syndrome, dementia accounts for most cases.

Schizophrenia, a chronic psychiatric disorder in which patients have impaired reality, is associated with hallucinations and delusions. The DMSs, including Capgras syndrome, are characterized by delusions. In the patient with schizophrenia, delusions make up most of their thinking. It's important to note that schizophrenia is now classified in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* as a schizophrenia spectrum disorder. Often less severe than schizophrenia, schizoaffective disorder may include symptoms of major depression or manic episodes. Both these disorders have been associated with Capgras syndrome.

Capgras syndrome is highly associated with neurodegenerative disorders. In Parkinson disease, the development of Capgras syndrome typically occurs years after the onset of dementia. It has been hypothesized that a dopamine deficiency may be related to the development of Capgras syndrome. Others believe that the development of Capgras syndrome in the patient with Parkinson disease is associated with frontal or global cerebral atrophy.

Approximately 15.8% of patients with Alzheimer disease have Capgras syndrome. Delusions, such as those seen with Capgras syndrome, often develop in patients with moderate Alzheimer disease. In most cases, patients with Alzheimer disease will be in the moderate stage for a longer time than the other stages. While in this stage patients may become moody, impulsive, and suspicious, in addition to having delusions.

Lewy body dementia is a progressive and degenerative disorder. Patients with Lewy body dementia often develop delusions that they strongly believe even in the face of evidence that contradicts their delusions. It has been estimated that approximately 16.6% to 27.8% of patients with Lewy body dementia also have Capgras syndrome.

A variety of brain injuries have been associated with Capgras syndrome, including focal brain injuries, stroke, brain tumors, and subarachnoid hemorrhage. Some researchers hypothesize that Capgras syndrome develops because of a lesion that's connected to areas of the brain that recognize a face as familiar. When lesions in the brain are identified as being associated with Capgras syndrome, the most common area is the right frontal lobe, although lesions have been found in other areas of the brain as well.

There have been reported cases of postictal delirium after a seizure, leading to the development of reversible Capgras syndrome. The postictal phase occurs after a person has a seizure, lasting until neurologic function returns to normal. During this phase, the brain is recovering from the changes that happened during the seizure and some individuals may experience delirium and psychosis. This type of delirium is seen more commonly in patients with complex partial and generalized seizures. As many as 7% of patients in a postictal state develop psychosis, which can lead to Capgras syndrome. To break it down further, postictal psychosis is seen in approximately 7% of patients with temporal lobe epilepsy and 2% of all patients with epilepsy. The patient with postictal delirium can be symptomatic for up to 2 days, although in most cases it only lasts for hours.

On the lookout

The diagnosis of Capgras syndrome is based on observation, the patient's medical history and physical, and diagnostic tests. The diagnostic process should be thorough and include a full workup to determine if a medical cause for the delusion can be identified. A variety of blood tests may be ordered to rule out other disorders that could be causing the symptoms. A urine drug screen should be ordered to rule out substance-induced psychosis. An MRI or computed tomography scan may be used to identify brain lesions, vascular malformations, stroke, and infection. An electroencephalograph may be ordered to look for a seizure focus.

Symptoms will often vary depending on the underlying cause. A variety of signs and symptoms are associated with Capgras syndrome, including paranoid delusions, dissociation, aggression, homicidal tendencies, and auditory and visual hallucinations. When determining associated signs and symptoms, remember that Capgras syndrome can develop in patients who don't display signs and symptoms of dementia or any type of cognitive deficit, making diagnosis a challenge.

Patients with this disorder believe that a person, or multiple people, whom they're close to has been replaced by an

Delusional misidentification syndromes

- ***Fregoli syndrome:*** The patient believes that a person whom they think they know but who's actually a stranger is repeatedly wearing disguises to change their appearance.
- ***Intermetamorphosis:*** The patient believes that a person close to them has switched identities by changing physically and psychologically.
- ***Syndrome of subjective doubles:*** The patient believes that they have doubles of themselves who live different lives and have different personalities.
- ***Clonial plurization:*** The patient believes that there are copies of themselves who are similar in personality and life choices.
- ***Mirrored-self misidentification:*** The patient believes that their reflection in the mirror is a stranger.
- ***Syndrome of delusional companions:*** The patient believes that nonliving objects are living and able to think and feel emotion.
- ***Reduplicative paramnesia:*** The patient believes that a familiar place has been duplicated or moved.

consider this

You work in a primary care office and one of your patients calls about her husband, who's also your patient. Her husband has Lewy body dementia, and she has been taking care of him at home. She tells you that he refused to take his medications this morning because he thought they were poison and has locked himself in the bathroom. She's distraught and tearful as she tells you that he keeps insisting she isn't his wife, and he wants his real wife back. How would you proceed? What recommendations would you make?

identical-looking imposter. The most common imposters, in order, are a spouse, parent, child, and sibling. When this disorder is associated with a psychiatric condition, such as schizophrenia, the patient's parents are often viewed as the imposters; when it's associated with a neurologic condition, such as Parkinson disease, the patient's spouse is often viewed as the imposter. These differences are thought to be related to the patient's age and stage in life. For example, schizophrenia may be diagnosed in a younger patient who still lives with their parents and dementia is often diagnosed in an older patient who's living with a spouse. In some cases, the patient may believe that a place, instead of a person, has been replaced by an imposter, or a pet has been replaced.

Patients with Capgras syndrome often believe that the imposter is evil or plans to harm them in some way, which increases the risk of criminal and/or violent behavior. The patient will often have suspicion and hostility/anger toward the imposter and may become paranoid and aggressive, both verbally and physically, feeling that violence is the only way to free the person of the imposter. It's important to note that the risk of violence is increased if the patient has a history of physical aggression. The following factors have been associated with violence/aggression in the patient with Capgras syndrome:

- male with longstanding delusions
- history of aggressive behaviors
- diagnosis of schizophrenia
- diagnosis of dementia
- substance abuse
- social withdrawal or isolation.

Aggressive behavior is often focused on a person who lives with the patient and, in many cases, is a planned act. Capgras syndrome has been associated with parricide, the killing of a parent or close relative. The risk of violence increases as time passes; the longer the patient has the delusions, the higher the risk of violence.

Keen management

Currently, management of Capgras syndrome isn't curative and is based on signs, symptoms, and the cause of the disorder. It's important to consider that Capgras syndrome is itself a sign/symptom of an underlying disorder that needs to be treated. The management of these patients may include therapy, medications, and education for both the patient and the family. Due to the increased risk of violence, patient management should include a violence and homicide risk assessment. Prompt recognition and treatment of the dementia patient with Capgras syndrome is essential because these patients have a higher incidence of earlier admission to long-term care, worsening health, and increased stress for the patient and family.

Antipsychotics are frequently used for the patient with Capgras syndrome caused by dementia and those with a mental health disorder. Both typical and atypical antipsychotics may be prescribed; atypical antipsychotics have less adverse reactions than typical antipsychotics. Caution should be used in patients with cardiac disease, respiratory insufficiency, diabetes, an enlarged prostate, and/or intestinal obstruction. If the patient has Lewy body dementia, antipsychotic agents should be avoided when possible

because they're associated with parkinsonism, sedation, and neuroleptic malignant syndrome. The signs and symptoms associated with parkinsonism include difficulty speaking, difficulty swallowing, loss of balance, tremors, and shuffling gait. The signs and symptoms associated with neuroleptic malignant syndrome are fever, respiratory distress, tachycardia, convulsions, diaphoresis, BP changes, pallor, fatigue, muscle stiffness, and a loss of bladder control. Antipsychotics may decrease the therapeutic response of levodopa in patients with Parkinson disease; these patients should be monitored closely for worsening Parkinson disease symptoms.

Antidepressants may also be prescribed. When initiating antidepressants, the patient should be educated that these medications may take up to 4 weeks to have a therapeutic effect. Understanding that certain antidepressants can cause sedation, whereas others can cause insomnia, the patient should be encouraged to take sedating medications at night and those that cause insomnia in the morning. The patient should be monitored for suicidal ideation, especially early in the treatment. Patients and, when appropriate, family members and caregivers should be educated about the increased risk of suicide.

Certain antipsychotics and antidepressants can decrease the seizure threshold. Patients with a history of seizure should be educated about this risk and monitored appropriately. Patients should also be educated about not stopping their antipsychotic or antidepressant medications abruptly. Understanding that both these medications can lead to photosensitivity, the patient should be educated about how to stay safe when out in the sun. Antipsychotics and antidepressants may lead to urinary retention in patients with an enlarged prostate; monitor for this complication and ask the patient to report any difficulty urinating.

Patient monitoring

When a patient is started on medications to manage Capgras syndrome, monitor for:

- mental status, mood, and behavior changes
- vital sign changes
- seizure activity in patients with a history of epilepsy
- insomnia
- fatigue
- urinary retention
- signs and symptoms of neuroleptic malignant syndrome or parkinsonism, or worsening Parkinson disease symptoms (antipsychotics)
- suicidal ideation (antidepressants).

Other medications prescribed will depend on the cause of Capgras syndrome and may include benzodiazepines, lithium, antidementia medications, and antiepileptic mood stabilizers. If the patient has Parkinson disease, treatment may include the administration of levodopa. If the patient has developed postictal delirium, treatment will involve management of the seizures to prevent the postictal state.

Many patients show a good response to prescribed medications, particularly antipsychotics. When administering medications to these patients, assess their mental status, mood, and behavior before and after administration of the medication. Many of the medications used for the management of Capgras syndrome can lead to vital sign changes such as hypotension. Monitor the patient's vital signs before and after administration of any medications known to affect vital signs (see *Patient monitoring*).

Cognitive behavioral therapy (CBT) may be used in addition to medication. CBT is a type of therapy that focuses on the patient's thoughts, feelings, and behaviors and how they relate to one another, with both the therapist and patient actively participating. Patients may be asked to complete tasks outside of the therapy session. CBT helps patients

Tips for caregivers

- Don't argue with your loved one about the delusion.
- Acknowledge your loved one's emotions.
- Redirect your loved one as needed.
- Talk to your loved one before entering a room.
- If your loved one becomes aggressive or dangerous, seek advice from healthcare professionals.
- If overwhelmed, request respite care.
- Join a support group.

modify their patterns of thinking, which will help them cope more effectively.

In some cases, despite treatment with medication and therapy, the patient will continue to display violent or destructive behaviors. In these cases, hospitalization may be necessary to stabilize the patient.

Capgras syndrome can be challenging for family members, especially considering that the person closest to the patient is often the one believed to be an imposter. Family members may struggle because their loved one can't be reasoned with. Educate the patient's family about Capgras syndrome and how to best manage it, assess for increased stress, and provide assistance as needed.

Instruct family members on the importance of announcing themselves and talking to the patient before the patient sees them because this may help form an emotional connection. Ensure that family members understand that they should never argue about the delusion because this will make the patient defensive and angry while doing nothing to correct the delusion. The patient's emotions should be acknowledged while also letting them know that they're loved and cared about. Teach about the use of activities, such as music, puzzles, TV, or car rides, to distract the patient when they're focused on the delusion.

If the person with Capgras syndrome becomes a danger to themselves or others, they should be seen by a healthcare professional. Additionally, if the family feels overwhelmed, they should reach out for support. Nurses can help by providing information about support groups, both locally and virtually, and respite care (see *Tips for caregivers*).

Strong support

Capgras syndrome is a challenging disorder. Understanding what it is, who's at risk for developing this condition, how to identify signs and symptoms, and how to manage them will help nurses better support patients and their families. ■

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The author and planners have disclosed no potential conflicts of interest, financial or otherwise.

DOI-10.1097/01.NME.0000793080.39014.f4

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