A Blind Man With Parkinson's Disease, Visual Hallucinations, and Capgras Syndrome

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Published Online:1 Nov 2002

SIR: Capgras syndrome is a delusional misidentification in which the patient believes that a closely related person has been replaced by an impostor.[1] This syndrome has been observed in a number of psychiatric and neurological disorders, including schizophrenia, head trauma, cerebrovascular disease, multiple sclerosis, Alzheimer's disease, and Parkinson's disease.[2,3] I report here a patient with Parkinson's disease and blindness who developed both visual hallucinations and Capgras syndrome.

Case Report

This 73-year-old man was diagnosed with retinitis pigmentosa in childhood at age 6 years. By the age of 65 his vision had declined to inability to detect light. The patient was diagnosed with Parkinson's disease at age 67, when he presented with right hand tremor. His motor symptoms improved with levodopa therapy. The patient first experienced a visual hallucination at age 71, when he believed he saw a woman in a yellow dress approach his wife. Subsequently he recurrently experienced visual hallucinations that were complex and detailed, such as seeing strangers in his home. Later, the patient developed the conviction that impostors, including several different women and also men, sometimes replaced his wife. He states that he can discriminate between these impostors and his wife, whom he refers to as “primary” or “original,” by the quality of their speech and by the clothing he sees them wearing. These episodes of misidentification resulted in substantial stress for the patient and his wife. He sometimes angrily rejected his wife's affectionate touch, believing her to be a man. The patient's medications for Parkinson's disease included levodopa and the dopamine agonist pramipexole. Examination of the patient revealed typical features of Parkinson's disease, including asymmetric, predominantly resting tremor, limb rigidity, bradykinesia, and postural instability. On a Mini-Mental State Exam modified for the patient's blindness, he scored 17 of a possible 25 points. Brain MRI demonstrated diffuse symmetric cortical atrophy and minimal subcortical white matter ischemic changes. Treatment with quetiapine up to 200 mg daily did not substantially alter the hallucinations or delusions.

Comment

Visual hallucinations are well known to occur with a variety of disorders producing visual impairment, including glaucoma and macular degeneration.[4] Visual hallucinations in the setting of Parkinson's disease are common and are generally associated with dopaminergic medications, although the pathogenesis is unknown. Delusions of misidentification in association with Parkinson's disease have infrequently been reported. Previous reports on Capgras syndrome have suggested that this phenomenon of delusional misidentification may arise from dysfunction of cerebral areas involved with processing of visual information for facial recognition. Data from PET studies of patients with Alzheimer's disease and associated delusional misidentification indicate "sensory-affective dissonance" may arise from dysfunction in multimodal cortical association areas and paralimbic-limbic structures.[5] This case suggests that intact vision is not necessary for Capgras syndrome, and that other senses and their misinterpretation, including hearing and touch, contribute to this phenomenon. To my knowledge this is the first report of a case of Capgras syndrome in a patient with blindness.

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