

Images in Neurology

Mirrored-Self Misidentification in a Patient With Probable Alzheimer Dementia

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A 77-year-old man who was a retired primary school teacher with probable Alzheimer dementia diagnosed after 2 years of progressive short-term memory loss and predominant hippocampal atrophy on magnetic resonance scan of the brain was brought to the out-



Multimedia

patient neurology clinic by his wife because of persistent abnormal behavior. The caretaker reported that he was frequently puzzled and astonished by his own mirror image. His medical history was remarkable for controlled hypertension and type 2 diabetes. He did not have any personal or family history of psychiatric disease. There were no recent changes with the patient's regular medications (rivastigmine, 9.5 mg daily transdermally; enalapril; and metformin). His wife described him as being a very quiet and relaxed person until the start of restrictions imposed by the COVID-19 pandemic, when he started with complaints of seeing a strange man whenever he saw his face reflection in the mirror. The patient's symptoms got much worse during the lockdown phase, with anxiety and irritability when confronting his own image in the mirror, often questioning who is this man? What is he doing in my house?

When brought to face a mirror during the consultation, he confirmed the presence of the stranger in the mirror (Video 1). Although able to recognize others, he was unable to identify his face in the mirror (Video 2). On the Mini-Mental State Examination, he scored 20 of 30 points: orientation (−1 point), registration (−3 points), recall (−3 points), and attention and serial sevens (−3 points). Findings from an electroencephalogram, brain magnetic resonance imaging, and metabolic panel were unremarkable. Bedtime queti-

apine, 12.5 mg, was introduced, and the patient's rivastigmine dose increased to 13.4 mg daily transdermally, with minimal improvement. He became progressively more calm, after the covering or removal of all mirrors in his home.

Mirrored-self misidentification (MSD) is a monothematic delusion characterized by the inability to recognize one's own reflected image in the mirror.^{1,2} As is this case, patients with MSD are in general capable of recognizing others in the mirror.² Although more common in individuals with severe dementia, persons with mild to moderate dementia can also manifest MSD.^{1,2} MSD is associated with failure of face-selective activity in the right occipitotemporal cortex, probably causing impaired mapping of perceived face on the stored memory representation.³ Coexistence of dorsal prefrontal hypometabolism can explain failure of adequate interpretation of the individual problem of loss of self-face memory, culminating in MSD.² Delusion syndromes can be refractory to cholinesterase inhibitors and antipsychotics. There is no established effective pharmacologic treatment for MSD.⁴ In the absence of significant disruption and risk of harm to self or others, nonpharmacologic interventions such as education of caretakers to maintain patience to reduce the patient's emotional distress, isolation of the underlying mechanism (mirror covering), reassurance, and redirection should be considered as first-line treatment in patients with MSD.^{2,4} Environmental factors influence development of delusion syndromes.^{2,4} In this patient, isolation and inexistence of social contacts during restrictive lockdown may have been the trigger or perpetuator of MSD. Hence, theoretically, the increment of social interactions can be a valid strategy of redirection of attention.

ARTICLE INFORMATION

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