It is illegal to post this copyrighted PDF on any website. Clinical Benefit of Neuroimaging in an Elderly Patient With Depression

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The prevalence of depression in geriatric patients is 6%-9% in the primary care setting.^{1,2} Older adults also tend to seek psychiatric care from their primary care providers.³ The treatment of depression in geriatrics generally consists of lifestyle changes, pharmacotherapy, and psychotherapy.⁴ Rarely, depression can be the only manifestation of a brain tumor.^{5,6} Meningiomas are the most common benign brain tumors, often asymptomatic and difficult to detect as neuroimaging is not usually considered during workup for mood disorders.⁷ There are currently no established guidelines regarding neuroimaging in the evaluation of patients with psychiatric symptoms.

Case Report

A 74-year-old woman with a history of depression and alcohol use was admitted to the psychiatric unit for passive suicidal ideation and 3 months of depression. Two days prior, she had been admitted elsewhere for alcohol intoxication and was discharged with oxazepam. Postdischarge, the patient was again found drunk by her children, who brought her to the emergency department, and she was subsequently admitted to the inpatient psychiatric unit.

Per family report, the patient had been highly functional until a few months prior, when she became unmotivated and anhedonic. The only stressor noted was a chronically strained marriage by an accident that paralyzed her son 30 years ago. The patient had a history of alcohol use but had stopped drinking for 10 years; she reported drinking now to self-treat her symptoms. She had been treated with fluoxetine then sertraline by her primary care provider for mild depression. Prior to this episode, she had no history of psychiatric hospitalizations.

The patient's symptoms met criteria for major depressive disorder according to *DSM-5* criteria. On interview, the patient had a restricted affect and recalled 0 of 3 objects.

To cite: Halpern D, Wey S. Clinical benefit of neuroimaging in an elderly patient with depression. *Prim Care Companion CNS Disord.* 2019;21(4):18102392.

To share: https://doi.org/10.4088/PCC.18I02392 © *Copyright 2019 Physicians Postgraduate Press, Inc.* The history and a mental status examination prompted a follow-up Montreal Cognitive Assessment (MoCA).⁸ The patient scored 23/30 on the MoCA, with deficits in attention, abstraction, and delayed recall. Due to the atypical depression presentation, concerning MoCA score, and lack of baseline neuroimaging, a magnetic resonance image (MRI) was ordered to rule out structural causes and clear the patient for potential electroconvulsive therapy. The MRI revealed a meningioma in the anterior right temporal lobe and middle cranial fossa with 4-mm midline shift and vasogenic edema. The patient was transferred to the intensive care unit and then to another facility the following day for surgical resection of the tumor. The tumor was removed, and the patient recovered with no neurologic deficits. Five months postsurgery, she was seeing a therapist and taking sertraline and had a markedly improved mood. She had resumed daily function and family activities to the level prior to her deterioration.

Discussion

Previously, Hollister and Boutros9 suggested that history of brain injury or stroke, suspicion of dementia, the presence of abnormal neurologic or organic mental symptoms, or a psychotic break or personality change after 50 years of age warranted neuroimaging. Although the cost-effective and justified use of neuroimaging is debated, neuroimaging can be helpful in the management of psychiatric patients, especially for primary care providers. As with brain tumors, other conditions, such as pseudotumor cerebri, normalpressure hydrocephalus, Alzheimer's disease, lupus, multiple sclerosis, N-methyl-D-aspartate receptor encephalitis, viral encephalitis, neurosyphilis, or any neuropsychiatric syndrome with subtle neurologic findings may manifest with psychiatric symptoms. We suggest a preliminary algorithm for imaging in the setting of psychiatric disorders. In the absence of neurologic deficits and identifiable etiology of symptoms, patients with abnormal cognitive findings on initial mental status examination and at least 2 of the following factors should undergo neuroimaging: history of failing multiple medication trials; sudden onset of psychiatric symptoms; age >55 years; complete blood count, basic metabolic panel, liver functioning test, thyroidstimulating hormone, vitamin B₁₂, folate, bronchoalveolar lavage, and vitamin D values within normal limits and negative rapid plasma reagin and urine toxicology; or abnormal MoCA score. Future prospective studies should aim to refine and validate this algorithm.

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Halpern and Wey It is illegal to post this copyrighted PDF on any website Published online: July 11, 2019.

Potential conflicts of interest: None.

Funding/support: None.

Patient consent: Consent was obtained from the patient to publish the report, and information has been de-identified to protect anonymity.

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