

# Scrutiny of the differential diagnosis of dementia and depression, over a case report

Ibrahim Gundogmus, Mikail Burak Aydin, Ayşegül Tasdelen Kul

Health Science University, Gulhane Training and Research Hospital, Department of Psychiatry, Ankara, Turkey

Copyright © 2018 by authors and Annals of Medical Research Publishing Inc.

## Dear Editor,

One of the most common psychiatric disorders in the elderly is a depressive disorder. However, depression was seen in old age; due to agitation, hypochondriac complaints and cognitive disorders are different from other periods of depression. (1,2) Therefore, there may be occasional errors in diagnosis and treatment. In this case, both the patient and the social cost and dysfunction may increase. It is evident that the most important confounding factor in elderly patients is changes in cognitive functions for the clinicians. (3) Therefore, it may be thought that the most important differential diagnosis of depression in elderly patients is dementia. (4) Although the decline in cognitive function with age is considered normal, it is important to determine where depressive disorder or dementia begins (2,4).

In this article, we present a patient who was a diagnosis of dementia under follow-up for two years and had no benefit from treatment. After the evaluation of the patient by psychiatry, we aim to attend that diagnosed depression and the dramatic improvement with vortioxetine.

A 50-year-old, married, graduated university, work as a teacher woman with a 2-year history of memory impairment presented with worsening forgetfulness, confusion, reduced speech, lack of enjoyment. She had used memantine 5 mg / d and donepezil 10 mg / d for two years, recommended by the neurologist for treatment of dementia. The patient's Mini Mental State Examination (MMSE) score (20/30) represented a deterioration in two years. Also, her Hamilton Depression Scale (HAM-D) and Hamilton Anxiety Scale (HAM-A) scores were 17/53 and 13/56, respectively. The patient had without a family history of dementia. There was no organic pathology such as neurological diagnosis, laboratory findings,

addictions that could explain the patient's complaints. After a detailed psychiatric examination, her treatment of dementia stopped because it was thought no effective. The patient was diagnosed with depressive disorder and a multimodal antidepressant; vortioxetine 10 mg / d was started and titrated 20 mg / d after two weeks. After six weeks of control, we learned that the patient's complaints were significantly reduced and she felt better. No side effects were seen in the patient. Such that, her MMSE, HAM-D and HAM-A scores were 27/30, 11/53 and 6/56, respectively. All tests at the 12th week of the follow-up were within normal range, and the patient had no complaints.

In the presented case, although the patient was treated for two years with the diagnosis of dementias, the cognitive function of the patient did not change. It is noteworthy that the diagnosis of the patient was changed to depression and that the patient's symptoms were over with vortioxetine 20 mg/day. The temporal relationship between the regression of the patient's complaints and the diagnosis of depression may suggest that the diagnosis of the patient is wrong. In elderly patients with clinical practice, depression and dementia are two diagnoses that are often miscible due to similar symptoms such as decline cognitive function and amnesia. (5,6) In fact, because of clinical and organic similarities, even common diagnoses have been tried to be developed. (5) Therefore, clinicians' difficulty in diagnosis and treatment can be considered normal. However, considering the patient's, it can cause both time loss and irreversible results even malpractice may be acceptable. In the present patient, we think that the patient presented with the loss of time. Two years later, the patient's dramatic recovery with antidepressant treatment supports the previous false diagnosis.

Received: 08.04.2019 Accepted: 20.05.2019 Available online: 02.07.2019

Corresponding Author: Ibrahim Gundogmus, DHealth Science University, Gulhane Training and Research Hospital, department of Psychiatry, Ankara Turkey, E-mail: dribrahim06@gmail.com

Recent studies on animals and humans show that vortioxetine has a positive effect on specific cognitive functions. (7) It is suggested that this different effect is due to a different mechanism of action and multimodal activity compared to other antidepressants. (8) The patient presented here was the reason we preferred vortioxetine because we thought it would improve cognitive function. In accordance with the literature, depressive symptoms of the patient were regressed after the patient began to use this agent. Therefore, cognitive functions also improved.

At this point, a detailed anamnesis is important in the distinction between dementia and depression. Because depression is different from the dementia with the history of the disease, no progressive memory loss, learning to be robust, and the difficulty of remembering the patch style. In cognitive dementia, chronic, progressive and progressive cognitive impairment is observed. Each dementia has its specific cognitive profile. In particular, there is difficulty in learning new information. Loss in near memory is noticeable, memory shows a sequential deterioration leading to the nearest to the oldest. (9)

As a result, clinicians should be more careful in distinguishing between dementia and depression, which will increase the quality of treatment for patients and prevent unwanted outcomes. Neurologists and psychiatrists should not refrain from consulting each other when necessary. It is clear that vortioxetine improves cognitive functions in depressive disorder, but further and controlled studies are needed for the effect of vortioxetine

on the destruction of the cognitive functions of dementia.

*Competing interests: The authors declare that they have no competing interest.*

*Financial Disclosure: There are no financial supports*

*Ibrahim Gundogmus ORCID: 0000-0002-1921-1495*

*Mikail Burak Aydin ORCID: 0000-0002-5763-6144*

*Aysegul Tasdelen Kul ORCID: 0000-0002-3681-735X*

## REFERENCES

1. Eker E, Noyan A. Yaşlıda depresyon ve tedavisi. Klinik Psikiyatri 2004;2:75-83.
2. Downing LJ, Caprio TV, Lyness JM. Geriatric psychiatry review: differential diagnosis and treatment of the 3 D's- delirium, dementia, and depression. Curr Psychiatry Rep 2013;15:365.
3. Keskinoglu P, Pıçakçıefe M, Giray H, ve ark. Yaşlılarda depresif belirtiler ve risk etmenleri. Genel Tıp Dergisi 2006;16:21-6.
4. Chaves MLF, IZQUIERDO I. Differential diagnosis between dementia and depression: a study of efficiency increment. Acta Neurol Scand 1992;85:378-82.
5. Korczyn AD, Halperin I. Depression and dementia. J Neurol Sci 2009;283:139-42.
6. Jorm AF. Is depression a risk factor for dementia or cognitive decline? Gerontology 2000;46:219-27.
7. McIntyre RS, Lophaven S, Olsen CK. A randomized, double-blind, placebo-controlled study of vortioxetine on cognitive function in depressed adults. Int J Neuropsychopharmacol 2014;17:1557-67.
8. Katona C, Hansen T, Olsen CK. A randomized, double-blind, placebo-controlled, duloxetine-referenced, fixed-dose study comparing the efficacy and safety of Lu AA21004 in elderly patients with major depressive disorder. Int Clin Psychopharmacol 2012;27:215-23.
9. Erden-Aki Ö. Differential diagnosis of depression and dementia in elderly. Turkish Journal of Geriatrics 2010;13:37-42.