Psychiatry

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Case Report

Frontotemporal dementia patient with bipolar disorder: a case report

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Abstract

Introduction

A diagnosis of frontotemporal dementia may be delayed or missed because early symptoms may develop gradually and can mimic symptoms of a variety of disorders or conditions. We aimed to write a report on a patient with frontotemporal dementia with bipolar disorder.

Case report

This is the case of a 63-year-old man with frontotemporal dementia whose presentation was consistent with bipolar affective disorder. With brain imaging and neurocognitive testing, frontotemporal dementia was diagnosed.

Conclusion

A differential diagnosis between bipolar disorder and frontotemporal dementia is difficult to establish. Frontotemporal dementia is a heterogeneous disease with a large variety of cognitive dysfunctions.

Introduction

Frontotemporal dementias (FTDs) are defined as the second most common cause for dementias under the age of 65 after Alzheimer's disease and the third most common cause for neurodegenerative dementias after Alzheimer's and Lewy body dementia[1].

FTD starts between the ages of 45–65 years and is seen equally in both genders[2,3]. The average life expectancy from onset of the disease ranges from 6–9 years[2,3]. FTD belongs to a group of heterogeneous diseases with different clinical and pathological findings[4]. FTD has three different subtypes including a behavioural variant, a semantic variant and a progressive, nonfluent aphasia[5]. In the behavioural variant, changes in eating habits[6], loss of empathy, behavioural disinhibition, loss of social awareness, inappropriate affect, apathy and stereotypical behaviours, can be seen[7]. Brain imaging studies revealed—when the temporal region is affected—a significant decrease in emotional processing, disaffection in interpersonal relations, inappropriate social behaviours, jokes with sexual content, hypomanic-like behaviours and—when the frontal area is affected—apathy, reduction in social activity and tendency for criminal behaviours[8,9]. In FTD, mood, behaviour and speech disorders are seen before the memory impairment; thus, clinically heterogeneous symptoms may lead to misdiagnosis with psychiatric disorders.

In this article, we have presented a case of a man who was misdiagnosed with late-onset bipolar disorder, but then diagnosed with FTD after neuropsychiatric examination, neuroimaging and neurocognitive testing.

Case report

A 63-year old, retired, male patient was admitted for psychiatric examination, accompanied by his wife, on her request. According to him, he had no complaints, but his wife informed that he had started doing things he had never done before, leading to major commotion in the family. About two years ago, he molested a neighbour, a year ago a girl who visited them and finally 1.5 months ago, his niece when everybody was at home. This situation had caused a crisis in the family. One year ago, he started making speeches and jokes with sexual contents, laughing inappropriately. While not working for the last 4–5 years, he had become incapable of fulfilling his simple, daily responsibilities. There had been an increase in his speech volume. He had begun to feel more physically active than he did before. He had started taking long walks and yelling in the street. Conversely, he had introverted periods during which he stayed at home, although he showed increased communication with women. The patient's appetite had increased and his eating habits had changed. He spent more money than he did before, especially shopping for groceries. Since about a year ago, he had become forgetful during his daily activities. He had forgotten to close the car windows and to turn off the car headlights and had started losing his belongings at home. He showed a distinct poverty of speech. On some occasions, he became angry and violent for no particular reason.

He had no history of seizures, head trauma, medical and psychiatric diseases, alcohol intake and substance usage. His sibling had been diagnosed with schizophrenia. As per his mental-state examination, he was conscious, cooperative and oriented. His appearance was in line with sociocultural characteristics. The amount and speed of speech was normal. His affect was ignorant; his thought content was poor and grandiose. He had no insight regarding his situation and no delusions or hallucinations. He showed a decreased need for

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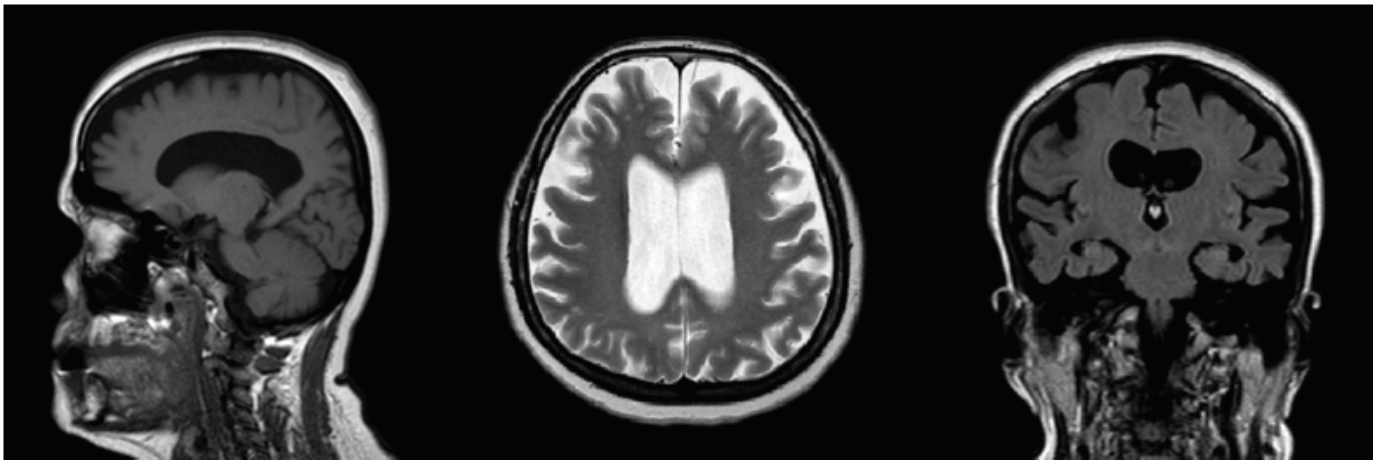

Figure 1: Cranial MRI images of the patient showing the presence of frontotemporal cortical atrophy.

sleep, but an increased appetite and libido. His neurological examination was normal.

In his neurocognitive tests, impaired ability to sustain attention as well as frontal findings such as disinhibition, working memory and complex attention difficulties, were found. In relation to memory functions, secondary learning difficulty at an advanced level of attention was found. In the delayed recall phase, medium level 'free recall' difficulty was found. His cognitive profile showed that his personal information and orientation, visual-spatial functions and language processes were totally preserved, whereas primary memory processes and abstraction were only partially preserved. In summary, attention and executive dysfunction and free recall difficulty compatible with dysexecutive memory distortion was seen. In the light of these findings, the symptoms were found to be primarily compatible with frontal type disorder. Additionally, according to the Frontal Behavioural Inventory[10], inattention, disorganisation and loss of insight, were found. The negative behavioural score was measured to be 12. Also, due to perseveration, irritability, excessive jocosity, inappropriateness, impulsivity, aggression and hyperorality-hypersexuality, the disinhibition score was 27 and the total score was 39.

In order to eliminate possible reversible dementia causes, complete blood count, biochemistry, vitamin B12, thyroid functions, thyroid autoantibodies, human immunodeficiency virus, treponema pallidum haemaglutination assay and Venereal Disease Research Laboratory tests, were applied and no pathology was detected. The patient's electroencephalography (EEG) showed no anomalies. In quantitative EEG, an increase in the absolute power was found in the left centrotemporal area. Brain magnetic resonance imaging showed severe bilateral atrophy in the frontotemporal lobes, relatively sparing the parietal lobes and the hippocampal regions. Structural magnetic resonance imaging of saggital, axial and coronal sections obtained from the patient, is shown in Figure 1.

The patient was given sertraline, 50 mg/d, to which he showed a favourable response, with a decrease in disinhibited behaviour. However, over several weeks, this effect diminished. Sertraline was increased to 75 mg/d and risperidone 1 mg/d was added to the treatment to improve his aggressive behaviour. The patient showed a favourable response to this treatment regimen.

Discussion

A diagnosis of FTD in this patient is discussed below in terms of its clinical features, neurocognitive testing and neuroradiological findings. As FTD is a subtype of dementia with changes in personality and behaviour but without any memory disorders, especially in the early period, it might be confused with psychiatric disorders such as depression, bipolar disorder, obsessive compulsive disorder or schizophrenia[11]. When euphoria, inappropriate jokes, increased self-confidence and irritability are seen, these symptoms may be initially misdiagnosed as hypomanic or manic episodes[12]. Akiskal et al.[13] defined a clinical syndrome named as 'bipolar disorder VI' emerging in 60- to 70-year-old people with mood symptoms and impairment in cognitive functioning such as attention and memory. However, he also indicated that the mood symptoms were milder than manic episode symptoms[13]. It is important to bear in mind that in late-onset psychiatric disorders, some medical conditions, especially neurological diseases, have been reported to develop secondarily[14]. In our case, the patient had no psychiatric history till the age of 61 years; however, changes in personality and behaviour including

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socially inappropriate behaviour and increased psychomotor activity were observed; in time, memory disorders followed these symptoms.

Conclusion

The patient was evaluated with a diagnosis of late-onset bipolar disorder. Evaluating a case from a psychiatric point of view alone may lead to misdiagnosis. This case must be considered valuable in terms of its emphasis on the importance of evaluating patients from a neuropsychiatric point of view.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-chief of this journal.

Abbreviations list

EEG, electroencephalography; FTD, frontotemporal dementia.

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