International Journal of Gerontology 12 (2018) 348–350

Contents lists available at ScienceDirect

International Journal of Gerontology

journal homepage: www.ijge-online.com

Case Report

A Case of Very-late-onset Schizophrenia-like Psychosis from Taiwan

Wei-Chieh Huang [a], Chun-Kai Fang [a, b], Chien-Chi Hsu [a, b *]

[a] Department of Psychiatry, MacKay Memorial Hospital, Taipei, Taiwan, [b] Department of Medicine, MacKay Medical College, Taiwan

ARTICLE INFO

Article history:
Received 3 January 2018
Accepted 11 February 2018
Available online 2 March 2018

Keywords:
Very late-onset schizophrenia-like psychosis,
Partition delusion,
Olanzapine

SUMMARY

We report a case of an 84-year-old widow from Taiwan who meets a classic presentation of symptomatology from very late-onset schizophrenia-like psychosis (VLOSLP). After 2 decades of reference idea, she subsequently suffered from persecutory, partition delusion and multimodal hallucinations. Acute psychiatric hospitalization was arranged for diagnostic workup and antipsychotics treatment. No laboratory abnormalities were found. We gave olanzapine and gradually titrated to 20 mg/day, and her psychotic symptoms were relieved in a month, then discharged. This case report is aimed to discuss the clinical characteristics, nosology, and treatment of VLOSLP. Further exploration of VLOSLP should be considered because of its unique clinical feature and course.

1. Introduction

The new development of psychotic symptoms in late life causes a diagnostic dilemma for clinicians when assessing and treating older patients. Late-onset delusions and hallucinations are usually associated with cognitive impairment or medical conditions. However, there are still few elder patients with the first onset of psychotic symptoms who cannot find any possible origin of their psychosis. The Late-onset schizophrenia (LOS) and very late-onset schizophrenia-like psychosis (VLOSLP) are proposed as the diagnoses. Manfred Bleuler, a pioneer of late-onset schizophrenia, found these late-onset cases constituted 15% of the schizophrenia patients he examined; 4% of the patients had an onset after 60[1]. Although the onset of schizophrenia was historically considered to be limited to adolescence or early adulthood, the DSM-III-R then allowed the diagnosis of schizophrenia late-onset type after age 45. DSM-IV described no diagnostic restrictions toward the age of onset, and so did DSM-V.[2] An international consensus in 2000 proposed that in terms of epidemiology, symptom profile, and identified pathophysiologies, the diagnoses of late-onset schizophrenia (LOS) (illness onset after 40 years of age) and VLOSLP (onset after 60 years of age) have their own validity and clinical utility.[3] The comparison of clinical characteristics between LOS and VLOSLP are summarized in Table 1. Compared with elderly patients who have earlier onset schizophrenia, patients with VLOSLP have higher mortality rates.[4] Those with VLOSLP also need more psychiatric hospital care than earlier onset schizophrenic patients.[5] However, there are still numerous debates, like the relation of VLOSLP with schizophrenia, the psychopathology, the pathogenesis, the treatment response, and the prognosis. Because few studies addressed these issues, we wish to describe a patient with VLOSLP and the difficulties observed in our diagnostic process.

1.1. Case report

An 84-years-old widow, retired elementary school teacher, was in good physical condition except for insomnia. She sometimes took hypnotics from local medical clinic since her 60s and had no family history of any psychiatric illness. She could keep her housework and make money by investing her saving in stocks. She was a very obstinate person and sticks to her own opinions, refusing to take others' advice. She complained about her neighbors' gossips since her 60s. Her adult children thought nothing of these arguments. She was bothered by her interpersonal relationship but could maintain her hobby and stock market investment with fair quality. Her daily function remained in good condition. No obvious mood episode was noted in her past history.

She first visited our psychiatric outpatient unit at the age of 83 and accused others of plotting against her. For example, she claimed her food had been poisoned and toxic smoke diffused in her house through the walls by her neighbors (partition delusion). She developed multimodal hallucinations, while denying substance and alcohol use. She persistently saw her neighbors everywhere, heard neighbor's voices, and smelt some gas-like smell. The physical and neurological examination did not reveal any abnormality.

* Corresponding author. No. 92, Sec. 2, Zhongshan N. Rd., Taipei City, 10449, Taiwan.
E-mail address: hsuchienchi@gmail.com (C.-C. Hsu).

https://doi.org/10.1016/j.ijge.2018.02.005

Table 1
Comparison of clinical characteristics between late-onset Schizophrenia (LOS) and very-late-onset schizophrenia-like psychosis (VLOSLP).

	LOS	VLOSLP
Female predominance	Y	YY
Family history	Y	N
Negative symptoms	Y	N
Dementia-like Cognitive deterioration	N	YY
Overall neuropsychological decline	Y	YY
Specific brain MRI abnormalities	N	YY
Minor physical anomalies	Y	N

MRI, magnetic resonance imaging; Y: moderately present; YY: strongly present; N: absent.
Data from Harv Rev Psychiatry 2001; 9: 51–58.

Table 2
The comparison of score of Mini-Mental Status Examination (MMSE) during admission and in one year later.

	During admission	One year later
Orientation	7/10	7/10
Registration and Recall	6/6	6/6
Calculation	4/5	5/5
Language	9/9	9/9
Overall scores	26/30	27/30

We checked the score of Mini-Mental Status Examination (MMSE) as 26/30. Psychiatric hospitalization was arranged later in a week. The blood count, thyroid level, toxic screen, rapid plasma reagin, vitamin B12, folic acid level, chest radiograph, electrocardiogram and electroencephalography (EEG) are all in normal range. The level of CRP was 6 mg/l, showing mild elevated but still in normal range.[6] There were bilateral periventricular white matter changes over brain magnetic resonance Imaging (MRI) (Fig. 1).

We diagnosed her with VLOSLP and prescribed olanzapine with titrating dosage to 20 mg/day. Her symptoms relieved to attenuated symptoms within a month. No extrapyramidal symptoms or other side effect was noted. She was discharged on the same dose of medications. Although the residual symptoms persisted even in a year later, she could make money by investing in stock and keep social interactions with neighbors as before. Her MMSE improved even in a year later (Table 2).

2. Discussion

In this case report, we presented one 84-year-old female who had the typical manifestation of VLOSLP. Although she had some referential idea to her neighbors at her 60s, she still could manage her own investment and daily life. The full-blown psychotic symptoms exhibited at her 80s. Investigations including MRI, EEG, and other laboratory test were within the normal range. No obvious neurological sign was noted. Mild cognitive impairment (MMSE:26/30) was noted. Her psychosis improved after treatment with olanzapine. Besides, her MMSE improved further to 27 one year later. It is noted that her cognitive impairment may be influenced by her psychosis.

Since there are multiple etiologies in late-life psychosis, we should rule out other possible condition before the diagnosis of VLOSLP. As mentioned above we had already ruled out dementia due to changes over time in her MMSE. In addition, her daily function still remained the same as before. We had excluded acute reversible conditions (i.e. delirium, alcohol and/or substance condition, and certain medical and neurological diseases) as well. According to the clinical manifestation in our case, the persistent persecutory and partition delusion, the multimodal hallucinations, less negative symptoms and the onset above 60s were all consistent with the description of VLOSLP by literature review.[3]

Partition delusion is the belief that people, objects or radiation can pass through what would normally constitute a barrier to such passage; it is found in 68% of 50 patients with late paraphrenia, but only in 13% of elder patients with schizophrenia and in 20% of young schizophrenics.[7]Individuals with LOS more commonly report visual, tactile, and olfactory hallucinations in addition to third-person running commentary and accusatory auditory

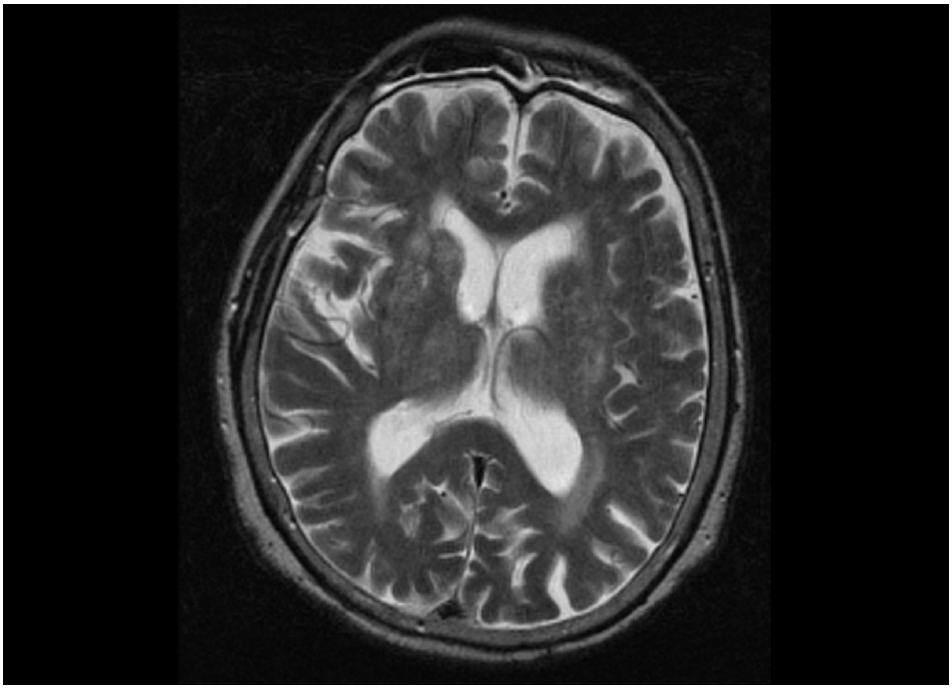

Fig. 1. The T2 weighted image with contrast showed bilateral periventricular white matter changes on MRI.

hallucinations compared with those with EOS.[1,8,9] According to most studies, individuals with LOS less commonly have severe negative symptoms or a formal thought disorder and thus are more commonly present with paranoid-type schizophrenia.[10,11] However, as the mentioned above, there are still very limited researches specified with the patients of VLOSLP.

The presence and severity of white matter lesion have been consistently related to cognitive function and emotion in the elderly. The risk of dementia and severity of cognitive impairment in demented patients were preferentially associated with periventricular white matter lesion (PVWML), and the risk and outcomes of mood disorders were more relevant with deep white matter lesion.[12] Even if the clinical manifestation of the patient's psychotic symptoms in our case couldn't be better explained by the imaging finding of PVWML, we still reasonably deduced that one with PVWML over brain imaging study might implicate the risk of dementia in the future. Overall, VLOSLP may be a neurodegenerative process in contrast to early-onset schizophrenia and middle-age-onset schizophrenia which are theorized to be a neurodevelopmental process.[13] However, more research is needed to support these theories. There were still very limited findings focusing on VLOSLP, like pathophysiology, treatment response, rehabilitation and even the prognosis. Marie Kim Wium-Andersen and colleagues found that elevated plasma levels of CRP were associated with a 6- to 11-fold increased risk of late- or very-late-onset schizophrenia in a prospective study of the general population. Such results may elucidate the relationship between inflammation and VLOSLP.[14] In our case, the slightly elevated level of CRP, which couldn't be better explained by other inflammatory disease, also supported Marie Kim Wium-Andersen's findings. In conclusion, the findings of this study may provide important clinical information for clinicians to notice in late-life psychosis. More research should be performed for the development of more effective preventive intervention for the patients with VLOSLP.

Conflicts of interest

All contributing authors declare no conflict of interest.

References

1. M B. Die spatschizophrenen krankheitsbilder. *Fortschritte der Neurologie und Psychiatrie*. 1943;15:259–290.
2. Palmer BW, Heaton SC, Jeste DV. Older patients with schizophrenia: challenges in the coming decades. *Psychiatr Serv*. 1999;50:1178–1183.
3. Howard R, Rabins PV, Seeman MV, et al. Late-onset schizophrenia and very-late-onset schizophrenia-like psychosis: an international consensus. The international late-onset schizophrenia group. *Am J Psychiatry*. 2000;157:172–178.
4. Talaslahti T, Alanen HM, Hakko H, et al. Patients with very-late-onset schizophrenia-like psychosis have higher mortality rates than elderly patients with earlier onset schizophrenia. *Int J Geriatr Psychiatry*. 2015;30:453–459.
5. Talaslahti T, Alanen HM, Hakko H, et al. Psychiatric hospital admission and long-term care in patients with very-late-onset schizophrenia-like psychosis. *Int J Geriatr Psychiatry*. 2016;31:355–360.
6. Pepys MB, Hirschfield GM. C-reactive protein: a critical update. *J Clin Invest*. 2003;111:1805–1812.
7. Howard RCD, O'Brien J, Almeida O, et al. Permeable walls, floors, ceilings and doors. Partition delusions in late paraphrenia. *Int J Geriatr Psychiatry*. 1992;7:719–724.
8. Pearlson GD, Kreger L, Rabins PV, et al. A chart review study of late-onset and early-onset schizophrenia. *Am J Psychiatry*. 1989;146:1568–1574.
9. Howard R, Castle D, Wessely S, et al. A comparative study of 470 cases of early-onset and late-onset schizophrenia. *Br J Psychiatry*. 1993;163:352–357.
10. Jeste DV, Symonds LL, Harris MJ, et al. Nondementia nonpraecox dementia praecox? Late-onset schizophrenia. *Am J Geriatr Psychiatry*. 1997;5:302–317.
11. Jeste DV, Harris MJ, Krull A, et al. Clinical and neuropsychological characteristics of patients with late-onset schizophrenia. *Am J Psychiatry*. 1995;152:722–730.
12. Kim KW, MacFall JR, Payne ME. Classification of white matter lesions on magnetic resonance imaging in elderly persons. *Biol Psychiatry*. 2008;64:273–280.
13. Palmer BW, McClure FS, Jeste DV. Schizophrenia in late life: findings challenge traditional concepts. *Harv Rev Psychiatry*. 2001;9:51–58.
14. Wium-Andersen MK, Orsted DD, Nordestgaard BG. Elevated c-reactive protein associated with late- and very-late-onset schizophrenia in the general population: a prospective study. *Schizophr Bull*. 2014;40:1117–1127.