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Vascular psychosis in the elderly: Response to Clozapine

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Cerebrovascular disease is a cause of late-onset psychosis in the elderly more frequent, accompanied or not, multi-infarct dementia. In many cases the patient has adequate preservation of cognitive functions or in any case, no criteria for dementia. In those that do, is in vascular dementia where psychotic symptoms are more frequent, occurring in over half cases, compared to one third of patients with Alzheimer disease.

A case of a 92 year-old woman with no somatic background -except for a bilateral progressive hearing loss-, who debuted at this age with psychotic delusions structured injury and auditory hallucinations. The CT scan showed signs of cortico-subcortical atrophy. Neuropsychological examinations showed some cognitive impairment but no clinical criteria for dementia. Was refractory to first-line atypical antipsychotics, remitting symptoms after administration of low doses of clozapine. We discuss the clinical features of this psychosis, as well as its therapeutic approach.

Keywords: Vascular Psychosis, Senile psychosis, Clozapine

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Psicosis vascular en el anciano: respuesta a clozapina

La enfermedad cerebro-vascular supone una de las causas de psicosis en el anciano de origen tardío más frecuentes, se acompañe o no de demencia multi-infarto. En muchos casos el paciente presenta una adecuada conservación de las funciones cognitivas o, en todo caso, no presenta criterios de demencia. En aquellos que sí, es en la demencia vascular donde los síntomas psicóticos son más frecuentes, presentándose en más de la mitad de los casos, frente a un tercio en los pacientes con demencia tipo Alzheimer.

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Se presenta el caso de una mujer de 92 años, sin antecedentes somáticos de interés -a excepción de una progresiva hipoacusia bilateral-, que debuta a esa edad con clínica psicótica aguda en forma de delirios de perjuicio estructurados y alucinaciones auditivas. La TAC cerebral mostró signos de atrofia córtico-subcortical. La evaluación neuropsicológica demostró cierto deterioro cognitivo, pero sin criterios clínicos de demencia. Fue refractaria a antipsicóticos atípicos de primera línea, remitiendo el cuadro tras administración de dosis bajas de clozapina. Se discuten las características clínicas de esta psicosis, así como su abordaje terapéutico.

Palabras clave: Psicosis vascular, Psicosis senil, Clozapina

INTRODUCTION

M. Bleuler created the concept of *Late Schizophrenia* in the middle of the XX century after the first studies in psychotic episodes of onset in patients over 40 years of age without apparent organic factors.¹ Since then, and up to the time of the "International Consensus on late onset schizophrenia" in the year 2000, there have been many conceptual and etymological debates and discussions. However, there is scarce evidence in the etiological field. This lack of recognition and of diagnostic unanimity reflected in the international classifications (DSM and ICD) in their different editions have delayed studies on these clinical conditions.² The appearance of the concepts of *Late Onset Schizophrenia* (>40 years) and *Very Late Onset Schizophrenia - Like Psychosis* (>65 years¹) have made it possible to advance quantitatively and qualitatively in the epidemiological field in order to facilitate new lines of investigation that clarify the true nature of this type of disorder. Even so, the etymology used has led to confusion regarding its true etiological bases, of those distant from the neuro-development as well as those close to the neurodegenerative theories, whether of vascular or other origin.

Equally as melancholic episodes initiating in elderly ages orient towards an organic origin, frequently vascular,³

presence of psychotic symptoms in the elderly over 65 years who have no previous history of mental illness suggests a somatic cause or sensory deficit but never a primary psychosis.⁴ It was only possible to postulate the concept of late-onset schizophrenia after the systematic application of neuroimaging test, which informed on vascular or other affectations, and which was assumed to exist in the origin of the psychosis, thus making it unnecessary to use the diagnosis of schizophrenia, even when the psychotic symptoms were clearly psychomorphologic (although not the course). For the diagnosis, it is interesting to know that, in the dementia patient group, the psychotic symptoms become more prevalent as the severity of the primary dementia increases -Alzheimer. This is not observed in vascular dementia, in which these appear in mild stages of the disease.⁵

Treatment of psychoses in the elderly is based on antipsychotics, preferably atypical ones.⁶ Clozapine is among these. It is frequently used in psychoses with a baseline neurological condition, as in Parkinson's syndrome and in dementias. However, evidence is lacking in cases of psychosis without clear organic involvement in the elderly age.⁷ Its use in the elderly is debated due to its many "minor" adverse effects (sialorrhea, orthostatic hypotension, weight gain, hypertriglyceridemia, hypertransaminasemia or sedation) and other potentially fatal ones, such as agranulocytosis (greater risk of appearance in the elderly^{7,8}) and myocarditis. Its dangerousness is found in the pharmacokinetic and

pharmacodynamic problems involved in the geriatric patient per se, physiological changes inherent to their age, comorbidities, multiple drugs, among others. Thus, greater clinical control and significant evaluation of the risk-benefit are needed in each patient.⁹

CLINICAL CASE

The clinical case is presented of a 91-year woman, widow, analphabet, resident in a small rural population, where she lives with his son. There are no known personal somatic, psychiatric or familial backgrounds. Some months prior to her admission at 92 years of age, she suffered moderate hypoacusis. Coinciding with her sensory deficit, she reported that she heard God and National Radio of Spain (RNE) in her head and that both told her that her son wanted to kill her. She states, in fact, that she is convinced that her son's attitude is inadequate, and that she feels forced and obligated by him to do some things against her will, referring to this with anguish and sorrow. She also explains that these voices assure her that it will not be possible to defeat her and that they will protect her. She also stopped eating because she was informed by God that the food her son prepared for her was poisoned. As the weeks passed, the situation in the home became worse, and she was aggressive with her son, oppositional, irritable, hostile and with

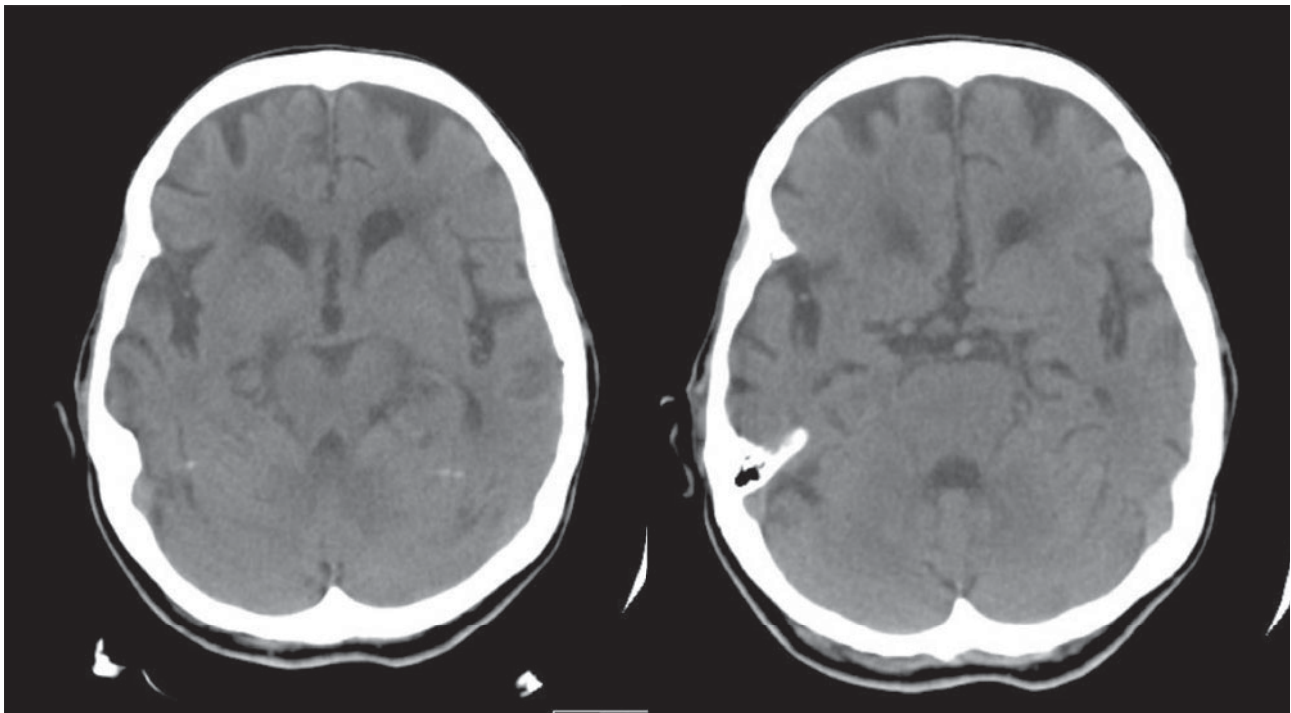


Figure 1

Cranial CT scan. Generalized cortical-subcortical atrophy is observed

soliloquies. Her physician prescribed haloperidol 1 mg/day, administered by her son (adding it in her meals, since she had already refused medication). In this context, she was referred from Emergency Department to the psychiatric unit of the hospital due to her refusal to eat. The cranial CT scan showed significant data of generalized cortical and subcortical atrophy (Figure 1). The neuropsychological evaluation conducted through the Geriatric Depression Scale (GDS) and Comprehensive Program of Neuropsychology Study (PIEN), showed good capacity of attention, partially temporally disoriented, good speech conservations, without visual gnosias, perservation of the *gestalt*, deficit in ideomotor praxis, evocative memory with release phenomena, conserved semantics and mild recognition deficit, observing deterioration in abstraction and conceptualization. In the Mini Mental State Exam, she obtained a score of 16/35. After, treatment with haloperidol was withdrawn and risperidone prescribed, initially at 0.75 mg/day with an increase in weeks to 4.5 mg/day due to scarce response, which, as it turned out, would make it necessary to withdraw it, initiating quetiapine 50 mg/day, which was also not effective. She was suspicious with the hospital personnel, but accepted treatment and food, focusing her suspicions and hostility on her son, always under the orders of the National Radio of Spain that even informed her about the situation of her home and properties, in process of sale or abandonment, the treatments described being unchanged. Due to the lack of effectiveness of both antipsychotics, clozapine was administered up to 50 mg/day, with mianserin 10 mg at night due to episodes of insomnia and nocturnal agitation, with which it was possible to deactivate deactivating the delusion, but without criticism of the past events. She rationalized this based on the belief that at time, the devil had been in possession of her son's body, but that he had already made the "pertinent supplications to God," who "freed him from Satan." Her auditory hallucinations noticeably became significantly less, being very occasional and without causing anxiety or change in the behavior of the patient, since she found out from RNE that her son no longer wanted to harm her. Consequently, the anxiety, fear and lack of trust remitted, and she collaborated at all times. The control laboratory tests did not show signs of blood dyscrasia and, as adverse event, there was a mild sialorrhea. The DSM-IV TR diagnosis was *Psychotic Disorder due to cerebrovascular lesions with predominance of delusional ideas* (293.2) and *Cognitive Disorder Not Otherwise Specified* (294.9). On discharge, she was prescribed clozapine 50 mg/day and mianserin 30 mg/day with the corresponding laboratory controls.

DISCUSSION

The clinical case presented shows many of the epidemiological characteristics of this type of disorder. This would support a separation from the schizophrenic spectrum, greater prevalence in women, greater presence of sensory

deficits, situations of isolation, much less familial aggregation, minor negative syndrome and clinical residual.² In the neuroimaging tests, the most frequent alterations found are signs of cerebral atrophy,¹⁰ findings that are present in our case, and in many others, increases are observed in the third ventricle.¹¹ Neuropsychologically, there are some functional deficits with little cognitive flexibility, which would explain some of the abnormal experiences, as a result of the difficulty in the search for rational alternatives.¹² From the therapeutic point of view, another point in permanent discussion is also provided, such as the use of clozapine in the elderly. Some authors consider its use relatively safe and well-tolerated. As the only adverse effect, the patient showed a mild sialorrhea with a dose of 50 mg/day, the recommended dose in the elderly being between 25–50 mg/day.⁹ This case, as many other similar ones, offers different epidemiological, clinical and radiological evidence to consider, with sufficient certainty, the presence of an underlying vascular neurodegenerative condition, as cause of the psychosis.

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