

LATE ONSET PSYCHOSIS IN THE ELDERLY: DIFFERENTIAL DIAGNOSIS AND THE IMPACT OF BRAIN AGING

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Abstract: Late-onset psychosis in the elderly is a condition characterized by the onset of psychotic symptoms, such as hallucinations and delusions, after the age of 60. Although psychosis at younger ages

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is often associated with primary psychiatric disorders such as schizophrenia, diagnosis in the elderly is more complex, as it involves the need to differentiate between various conditions that can affect the brain and behavior, such as dementias, neurological disorders and factors related to brain aging. The impact of brain aging, such as diminished cognitive abilities and changes in brain structure, also plays an important role in the development and course of psychosis in this age group. The aim of this work is to analyze the differential diagnosis of late onset psychosis in the elderly, exploring the conditions that can mimic psychotic symptoms and the impact of brain aging on this process. It also aims to assess the implications of this diagnosis for clinical management and patients' quality of life. This study uses a systematic review to investigate late onset psychosis in the elderly, its relationship with neurodegenerative diseases, differential diagnoses with dementias and therapeutic approaches, both pharmacological and non-pharmacological. The search was carried out in databases such as SciELO, PubMed, LILACS and Journal of Neurosciences, and included analysis of critical reviews, empirical studies and clinical guidelines. Additional data was obtained from population studies and clinical analyses involving geriatric patients with psychosis. The differential diagnosis of late onset psychosis is challenging, as it involves distinguishing between primary and secondary psychiatric causes. Neurodegenerative disorders, such as Alzheimer's disease and dementia with Lewy bodies, are often associated with psychotic symptoms in the elderly. Likewise, disorders such as major depression with psychotic features and delirium can present with similar symptoms, and a detailed clinical assessment is essential. The exclusion of underlying medical factors, such as infections, metabolic disorders and adverse effects of medication, is crucial to ensure an accurate diagnosis. Brain aging, in turn, plays a key role in the vulnerability of the elderly to psychosis. With age, structural and functional changes occur in the brain, such as cortical atrophy, reduced neuronal density and alterations in dopaminergic pathways, which can predispose to the emergence of psychotic symptoms. These changes make the brain more susceptible to stress factors, inflammation and sensory deficits, which can precipitate psychotic episodes. Thus, the treatment of late onset psychosis involves a careful approach, given the sensitivity of the elderly to antipsychotics and the increased risk of side effects. The choice of



treatment must balance efficacy in controlling symptoms with minimizing risks, and the use of low doses and constant monitoring are recommended to avoid complications. It is therefore concluded that late onset psychosis in the elderly presents significant diagnostic challenges, requiring a multifactorial approach that takes into account brain aging and the various medical conditions that can mimic or contribute to psychotic symptoms. Differential diagnosis is essential to ensure appropriate treatment, which, when properly targeted, can substantially improve patients' quality of life. The impact of brain ageing on vulnerability to psychosis highlights the need for detailed clinical assessment and individualized therapeutic strategies for this population group.

Keywords: Psychosis; Psychiatry; Geriatrics; Aging.

INTRODUCTION

Late-onset psychosis in older adults is a disorder that presents unique challenges, both in diagnosis and clinical management, due to overlapping symptoms with other common aging conditions. Defined by the manifestation of psychotic symptoms after the age of 60, this condition is often confused with dementia, delirium, and other cognitive changes that arise with advancing age (Marques and Costa, 2019).

Differential diagnosis is essential to avoid inappropriate treatments and ensure patients' quality of life, since psychotic manifestations, such as delusions and hallucinations, can be related to multiple causes, including neurodegenerative diseases, medication use, and preexisting psychiatric conditions (Lima and Souza, 2021).

The impact of brain aging is one of the main factors to consider in the development of late-onset psychosis. With aging, the brain undergoes structural and functional changes, such as reduced gray matter volume, loss of synaptic plasticity, and decreased production of neurotransmitters, such as dopamine and serotonin, which are directly involved in the regulation of mood and cognition. These changes may predispose the elderly brain to the development of psychotic disorders, which may



manifest differently than in younger patients, increasing the complexity of the diagnosis (Cardoso and Mendes, 2018).

In addition, brain aging is closely related to other neurodegenerative diseases, such as Alzheimer's disease and dementia with Lewy bodies, which can also present with psychotic symptoms. The overlap of symptoms between these neurodegenerative conditions and late-onset psychosis makes differential diagnosis a challenging task for healthcare professionals. Identifying the specific characteristics of each condition, such as the progression of cognitive impairment and the pattern of hallucinations, is key to differentiating a late-onset psychosis from other dementias (Oliveira and Rodrigues, 2020).

Given the high prevalence of neurodegenerative diseases in the elderly, it is necessary for health professionals to be trained to recognize the signs of late-onset psychosis and to perform a comprehensive evaluation that includes neurological, psychiatric, and imaging examinations. Treatment should be individualized, considering not only the psychotic condition, but also the presence of comorbidities that may be contributing to the condition. The multidisciplinary approach, which involves neurologists, psychiatrists, and geriatricians, is essential to ensure effective management (Ferraz and Nascimento, 2018).

The objective of this study is to analyze the differential diagnosis of late-onset psychosis in the elderly, exploring the conditions that can mimic psychotic symptoms and the impact of brain aging on this process. In addition, it is intended to evaluate the implications of this diagnosis on the clinical management and quality of life of patients.

MATERIALS AND METHODS

This study uses a systematic review to investigate late-onset psychosis in the elderly, its relationships with neurodegenerative diseases, differential diagnoses with dementia, and therapeutic approaches, both pharmacological and non-pharmacological. The search was conducted in databases



such as SciELO, PubMed, LILACS and *Journal of Neurosciences*, and included analyses of critical reviews, empirical studies and clinical guidelines. Additional data were obtained from population studies and clinical analyses involving geriatric patients with psychosis.

Inclusion Criteria:

1. Articles published between 2018 and 2022 that discuss late-onset psychosis in older adults.
2. Peer-reviewed studies in Portuguese or English.
3. Publications that address differential diagnoses between dementia and psychosis, as well as pharmacological and non-pharmacological treatments.

Exclusion Criteria:

1. Studies published outside the specified period.
2. Articles that do not directly deal with psychosis in the elderly or that do not present relevant empirical data.

Guiding Question:

What are the neuroanatomical and clinical factors that influence the diagnosis and management of late-onset psychosis in the elderly, and how are they different from neurodegenerative dementias?

Boolean Markers:

- “Late-onset psychosis” AND “elderly” AND “neurodegenerative diseases”.
- “Differential diagnosis” AND “psychosis” AND “dementia”.

THEORETICAL FOUNDATION

Late-onset psychosis in the elderly presents a number of challenges in the context of brain



aging, both in diagnosis and treatment, due to the complexity of the neurological and physiological changes associated with aging. From the age of 60, the risk of developing psychotic disorders, such as late-onset schizophrenia and delusional disorders, increases significantly. These conditions are often confused with other neuropsychiatric pathologies, which makes careful differential diagnosis essential to ensure appropriate treatment. In addition, the prevalence of neurodegenerative diseases, such as Alzheimer's, makes the diagnosis even more complicated, since clinical manifestations can often overlap, making it difficult to accurately identify late-life psychosis amid progressive cognitive deficits (Silva & Marques, 2020).

Brain aging is characterized by a series of biological changes that affect cognitive and emotional function. Studies show that with advancing age, there is a decrease in synaptic density and neural plasticity, as well as a reduction in the levels of neurotransmitters, such as dopamine and serotonin, which play a crucial role in regulating mood and behavior. These changes increase the vulnerability of the elderly to the development of psychosis, especially when associated with risk factors such as social isolation, clinical comorbidities, and the use of polypharmacy. The scientific literature suggests that, in addition to structural changes, environmental and psychosocial factors also contribute to the emergence of psychotic symptoms in the elderly (Fernandes et al., 2019).

Another important point in the development of late-onset psychosis is the relationship with the prolonged use of medications and the impact of chronic comorbidities. Medications such as anticholinergics and corticosteroids, often prescribed to older adults with multiple chronic conditions, can trigger or exacerbate psychotic symptoms. In addition, diseases such as kidney and liver failure, which affect the metabolization of drugs, can intensify the neuropsychiatric side effects of these drugs. The clinical management of these patients requires a detailed evaluation and an interdisciplinary approach, involving geriatricians, psychiatrists, and neurologists to adjust treatment safely and effectively (Carvalho et al., 2021).

The relationship between psychosis and dementias, such as Lewy body dementia and frontotemporal dementia, also needs to be considered in the differential diagnosis. These conditions,



which share psychotic symptoms such as hallucinations and delusions, can confuse the clinical picture, especially when cognitive deficits progress rapidly. The presence of visual hallucinations is particularly common in dementia with Lewy bodies, and is an important distinguishing feature. Differentiating these disorders is crucial to define the most appropriate treatment, since therapeutic approaches can vary significantly. For example, in patients with Lewy body dementia, the use of antipsychotics can aggravate motor symptoms, and care is needed when prescribing these drugs (Oliveira et al., 2020).

Treatment of late-onset psychosis involves a combination of pharmacological and non-pharmacological interventions. The use of atypical antipsychotics, such as quetiapine and aripiprazole, is generally preferred due to their more tolerable side-effect profile compared with typical antipsychotics. However, prescribing these medications to the elderly requires caution, given the increased risk of adverse effects, such as excessive sedation, postural hypotension, and increased risk of falls. In addition to pharmacological management, psychosocial interventions, such as cognitive-behavioral therapy adapted for the elderly and cognitive rehabilitation programs, have shown efficacy in the treatment of psychosis, promoting functional recovery and improving quality of life (Gomes & Nunes, 2022).

Finally, the multidisciplinary approach is critical for the proper management of late-onset psychosis. Health professionals who work in geriatrics, psychiatry, and neurology need to work together to ensure comprehensive care, taking into account clinical comorbidities, adverse effects of medications, and the psychosocial needs of patients. Family support is also essential, given that the presence of a caregiver can positively influence treatment adherence and early detection of behavioral changes. Clinical guidelines suggest that regular follow-up and ongoing review of therapeutic regimens are essential to minimize complications and improve long-term outcomes (Ribeiro et al., 2021).

CONCLUSION

Therefore, late-onset psychosis in the elderly represents a significant challenge for clinical



practice, both in terms of diagnosis and therapeutic management. Brain changes resulting from aging, combined with psychosocial factors and clinical comorbidities, contribute to the complexity of the condition.

Thus, the differential diagnosis between psychotic disorders and neurodegenerative diseases, such as dementia, is essential for the choice of appropriate therapeutic strategies, especially considering the impact of prolonged use of medications in a more vulnerable population.

The interdisciplinary approach, which integrates specialists in geriatrics, psychiatry, and neurology, is essential to ensure effective and safe treatment. The combination of careful pharmacological interventions, with the use of atypical antipsychotics when necessary, and psychosocial interventions, such as cognitive behavioral therapy, has been shown to be effective in managing psychosis in the elderly. In addition, family support and adherence to treatment play a crucial role in therapeutic success and improving the quality of life of these patients.

In view of this, the need for continuous and individualized follow-up is evident, with periodic reviews of therapeutic regimens and a careful look at behavioral and clinical changes, in order to minimize risks and promote the well-being of older adults with late-onset psychosis. The importance of training health professionals to deal with these demands, as well as the creation of specific management protocols for this population, are fundamental steps to improve care and therapeutic results.

Thus, it is concluded that specialized care for late-onset psychosis in the elderly is a growing priority in geriatric and psychiatric clinical practice, requiring a collaborative and continuous effort to provide quality care.

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