Presentation of Psychosis

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The growing proportion of older adults in the population has increased the interest in psychiatric symptoms and disorders that seriously compromise the quality of life in this age group. Psychotic symptoms are common among both demented and nondemented older adults and demand resources from the social and health care systems. There are different etiologies of these symptoms, and different possible underlying medical contributing illnessess, concomitant medications, dementia, delirium, and psychiatric comorbidities should be identified before a specific antipsychotic treatment is considered.

Key words: *psychosis, hallucinations, delusions, paranoid older adults*

Introduction

Studies of nondemented older adults based on interviews show a prevalence of psychotic symptoms, mostly paranoid, of approximately 2%.[1,2] The prevalence of psychotic symptoms is possibly underrated because older adults may be reluctant to report those symptoms.[1] Thus, it is necessary to collect information from collateral sources (Table 1). One study that has used interview data as well as information from key informants reported a prevalence of 4% among cognitively intact individuals age 70 years and over.[3] Another study of nondemented 85-year-olds that used interview data, information from key informants, and medical records reported a 1-year prevalence of psychotic symptoms of 10%.[4] Limited data are available about the incidence of psychotic symptoms among older adults. One study of individuals age 70 years and older observed a cumulative incidence rate for psychotic symptoms of 4.8% during 3.6 years in cognitively intact individuals,[3] and another found that almost 10% of nondemented 70-year-olds and 20% of those surviving up to age 85 years developed psychotic symptoms for the first time in life during a 20-year follow-up.[5]

A list of appropriate examinations to perform is presented in Table 2.

Risk Factors for Psychosis

Some risk factors have been associated with the development of psychotic symptoms among older adults. Previous paranoid personality traits have been associated with late-onset psychosis,[4,6] and individuals with paranoid symptoms tend to be divorced, lack friends and regular visitors, and be more dependent on community care.[3,7]

Sensory impairments are common among older adults and have been associated with very-late-onset schizophrenia.[8] However, the associations between the type of sensory loss and a specific psychotic symptom are not consistent,[4,8,9] not even for Charles Bonnet syndrome, an acute onset of visual hallucinations that usually has been related to eye disease or cerebral organic disorder.[10] Hearing impairment has usually been associated with paranoid symptoms, but, again, there are no consistent associations with the type of sensory loss.[4,7,11,12] It may be that suboptimal correction of these deficits plays a role in late-life psychotic symptoms.[13]

Studies of individuals with late-onset schizophrenia have shown its occurrence in a greater number of women than men.[8] Population studies on psychotic disorders, however, have generally not found an association with the female sex.[14–16] One population-based study on paranoid symptoms reported an association with the female sex,[7] whereas two population-based studies on psychotic symptoms found no association.[3,4]

Impairment, Mortality, and Psychosis

Psychotic symptoms among older adults are associated with cognitive dysfunction. Nondemented older adults with psychotic symptoms perform worse than mentally healthy older adults on cognitive tasks measuring general cognitive abilities—such as verbal ability, logical reasoning, and spatial ability[17]—and on tests of mental speed.[3] Important observations for the differential diagnosis of dementia are that memory test performance is unaffected[3,17] and that cognitive deficits are mild. Clinical studies have shown that those with late-onset schizophrenia perform worse than age-matched controls on measures of executive functions, learning, motor skills, and verbal ability.[6,18]

Psychotic symptoms decrease the ability to manage daily life.[3,4] Whether psychotic symptoms in late life are related to an increased mortality is not clear, but one study has found an increased mortality among nondemented very old women with hallucinations, even after adjustment for physical disorders.[4]

Psychotic Disorders

In a substantial number of older adults with psychotic symptoms there is a genuine psychotic disorder. Neither the *Diagnostic and Statistical Manual of Mental Disorders, Revised Fourth Edition,* of the American Psychiatric Association nor the International Classification of Diseases (ICD-10) of the World Health Organization have any special categories for late-onset psychosis, although schizophrenia and delusional disorder can be diagnosed at any age.

Table 1: Key Elements of a Patient History

Medical history
Psychiatric history, including psychotic and depressive symptoms
Information from a key informant, including any details regarding psychotic, depressive, and cognitive symptoms

The International Late-Onset Schizophrenia Group[8] has suggested an illness classification: very-late-onset (after age 60 years) schizophrenia-like psychosis. The disorder is associated with the female sex, a low prevalence of formal thought disorder and affective blunting, mild cognitive deficits, and no excess of focal structural brain abnormalities; in addition, it might arise within the context of sensory impairment and social isolation.

Depression and Psychosis

Several population-based studies have found that psychotic symptoms are associated with depression,[3,4,7,19] and among individuals aged 65 years or older with major depression, the prevalence of psychotic symptoms is reported to be 18.5%.[20] Among inpatients aged 65 years or older with depressive disorder, the prevalence of psychotic symptoms is also estimated to be 18.5%[21] but could be as high as 45% among those with major depression.[22]

Dementia and Psychosis

Psychotic symptoms are frequent among individuals with dementia, and occurrence ranges between 10 and >60%.[23–25] The majority of the larger clinical studies have found no difference in the prevalence of psychotic symptoms between Alzheimer's disease and vascular dementia.[23,26]

Psychotic symptoms as early or preclinical symptoms of dementia are less well studied, but complex visual hallucinations appear to be early symptoms in Lewy body dementia.[27] First-onset hallucinations predict dementia, but most older individuals with first-onset psychotic symptoms do not develop dementia.[4,5] Among older adults with persecutory states, 15% develop dementia[28]; among those with late paraphrenia, 35% develop dementia within 3 years of diagnosis.[29]

Physical Disorders, Delirium, and Other Conditions Associated with Psychosis

Psychotic symptoms have been associated with many conditions, including hyperparathyroidism, hypothyroidism, intra- and extracerebral tumours, epilepsy, and cerebrovascular disease.[30–34] Beta-blockers, psychostimulants, anticholinergic drugs, antiparkinsonian agents, and corticosteroids may produce psychotic symptoms among older adults.

Physical Disorders and Psychosis

The relationship of common physical disorders to late-life psychotic symptoms is less well studied, and results are disparate. One population-based study found increasing odds of experiencing psychotic symptoms with an increasing number of self-reported physical symptoms,[35] and another found an association between "not feeling well" and paranoid symptoms.[36] However, there are no clear associations between physical disorders in general and psychotic or paranoid symptoms.[4,36]

Delirium and Psychosis

The risk of transient episodes of delirium is increased among persons with severe physical disorders, and about 50% of those develop psychotic symptoms.[37] Pharmacokinetic and pharmacodynamic changes among older adults alter drug response, which increases the risk for delirium. Polypharmacy or drug interactions also affect drug response and could lead to delirium. In addition, alcohol withdrawal and abrupt discontinuation of long-term treatment with benzodiazepines can produce delirium with psychotic features.

Table 2: Key Elements of Patient Examinations

Physical examination (including neurological examination as well as visual and hearing examination)
Cognitive testing: Mini-Mental State Examination
Blood test including thyroid-stimulating hormone and calcium levels
Brain imaging if indicated: computed tomography, magnetic resonance tomography

Structural Brain Changes and Psychosis

Clinical studies of older adults without organic cerebral disorder have not shown any associations between structural brain changes and psychosis.[8] Calcifications in the basal ganglia have been related to psychosis[38] and psychotic symptoms

Key Points

- Psychotic symptoms are common among older adults, but the etiologies vary.
- Nondemented older adults with psychotic symptoms perform worse than mentally healthy older adults on cognitive tasks measuring general cognitive abilities, but memory test performance is unaffected and other cognitive deficits are mild.
- First-onset hallucinations predict dementia, but most older individuals with first-onset psychotic symptoms do not develop dementia.
- Medical conditions, medications, dementia, depression, and other psychiatric comorbidities must be ruled out.
- Treatment should be directed toward the etiology, not the symptom.

among older individuals,[39] but their role in psychotic symptoms among older adults are not clear.

Conclusion

Psychotic symptoms among older adults are common; the etiology varies, and the symptoms have often a bad prognosis. If the primary question for a clinical evaluation concerns psychotic symptoms, it may often be necessary to obtain information from a key informant as older adults may be hesitant to self-report such symptoms. Underlying medical conditions and concomitant medications, dementia, depression, and other psychiatric comorbidities must be ruled out or treated. Older adults with psychotic symptoms often require social and environmental as well as pharmacological interventions.

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