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Research Article

Diagnosis and Treatment of Depression in the Elderly

Michel Bourin*

Neurobiology of Anxiety and mood disorders, Nantes University, 98 rue Joseph Blanchart, 44100 Nantes, France

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***Corresponding author:** Michel Bourin, Neurobiology of Anxiety and mood disorders, Nantes University, 98 rue Joseph Blanchart, 44100 Nantes, France, Tel: +33 610858103, Email: Michel.Bourin@univ-nantes.fr

ABSTRACT

Depression in the elderly is a common but underdiagnosed condition with significant implications for morbidity, quality of life and mortality. While it shares core clinical features with depression in younger adults, it often presents atypically in older populations masked by somatic complaints, cognitive impairment and anxiety. Diagnostic challenges arise due to symptoms overlapping with medical comorbidities and age-related cognitive decline. This paper reviews epidemiology, symptomatology, diagnostic difficulties and treatment options for late-life depression, including its complex relationship with dementia and suicide risk. The article discusses evidence-based treatments like psychotherapy, medication and ECT, emphasizing personalized care for older adults' physical and mental health needs. Recognizing and appropriately managing depression in the elderly can significantly improve prognosis, reduce suffering and prevent suicide.

Keywords: Depression in the elderly, Late-life depression, Atypical presentation, Somatic symptoms, Cognitive impairment, Dementia, Differential diagnosis, Suicide risk, Selective serotonin reuptake inhibitors (SSRIs), Pharmacotherapy, Psychotherapy, Electroconvulsive therapy (ECT), Vascular depression, Elderly mental health, Diagnostic challenges.

1. Introduction

The World Health Organization (WHO) now identifies unipolar depression as the foremost cause of illness and disability worldwide, affecting an estimated 16% of people over their lifetime. Among older adults, the prevalence is notably higher, ranging from 20.3% in cognitively intact individuals to 65.1% in those with dementia[1,2]. Late-life depression is associated with significant reductions in quality of life, increased functional dependence, elevated healthcare utilization and a heightened risk of premature mortality, particularly due to cardiovascular disease and suicide[3,4]. Despite these substantial clinical and public health implications, depression in the elderly is frequently underdiagnosed and inadequately treated. This is attributable in part to atypical symptomatology, where somatic complaints often predominate over affective symptoms[5]. As a result, depressive syndromes may be misattributed to physical illness or aging itself. Inappropriate treatment approaches, such as the isolated use of benzodiazepines for anxiety-related symptoms, can obscure underlying depression and introduce additional risks, including cognitive impairment, falls and drug dependence[6]. The diagnostic complexity of late-life depression is further compounded by the high prevalence of multimorbidity in this population, overlapping with age-related cognitive decline, polypharmacy and the social and psychological stressors inherent to aging such as bereavement, loss of autonomy and socioeconomic decline[7]. Importantly, depressive symptoms in older adults are often perceived as normative consequences of aging, contributing to therapeutic inertia and clinical oversight[8]. Many elderly patients do not report depression directly, but instead present with vague physical symptoms, fatigue or cognitive issues that can mask mood disorders.

Neurobiological changes associated with aging may also alter the clinical expression of depression, reduce the prominence of classical features such as sadness or guilt and increase the prevalence of psychomotor retardation, anxiety and cognitive symptoms. Notably, untreated depression in this population confers a substantial risk of suicide, particularly among older men a demographic with among the highest suicide rates globally[9].

Given its high prevalence, diagnostic complexity and profound consequences, late-life depression warrants focused clinical attention. Timely diagnosis and appropriate management including psychotherapy, pharmacotherapy and electroconvulsive therapy can significantly reduce morbidity and improve functional outcomes. This review examines the distinctive clinical features, diagnostic challenges, epidemiological context and therapeutic approaches relevant to depression in the elderly.

2. Definition of a Major Depressive Episode and Specific Features in the Elderly

The diagnosis of a major depressive episode is clinical and grounded in standardized diagnostic criteria, most notably those outlined in the International Classification of Diseases, 11th Revision (ICD-11) and the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)[10,11]. Both systems require the presence of core symptoms such as persistent depressed mood or anhedonia-occurring nearly every day for a minimum duration of two weeks, accompanied by significant distress or impairment in social, occupational or other key areas of functioning. Depressive episodes are classified as mild, moderate or severe based on symptom number and intensity.

However, the clinical presentation of depression in older adults often diverges from that observed in younger populations. Affective symptoms such as sadness or guilt may be less prominent or even absent, leading to under-recognition. It is a common but erroneous assumption that expressions of sadness, pessimism or social withdrawal are normative aspects of aging[12]. Such features may indicate an underlying depressive disorder requiring clinical attention.

In the elderly, depression frequently manifests through non-specific or somatic symptoms, including persistent asthenia, cognitive complaints, expressions of loneliness, diffuse physical pain, weight loss and a constellation of unexplained somatic symptoms particularly gastrointestinal. Additional warning signs may include refusal to eat or take medications, neglect of personal care and recent or escalating use of alcohol or benzodiazepines[13]. The symptomatic presentation is heterogeneous and may include psychomotor retardation, marked anxiety or delusional content involving themes of harm, incurability or ruin. In so-called "masked" depressions, emotional symptoms are replaced or concealed by behavioral disturbances such as irritability, hostility, regression or hypochondriacal preoccupations.

The frequent co-occurrence of cognitive impairment further complicates the clinical picture. Cognitive symptoms may precede, accompany or follow depressive episodes and are associated with poorer treatment response and worse functional outcomes[13]. Depression frequently occurs alongside neurological disorders like stroke, Parkinson's disease and dementia. In these cases, it can be challenging to separate mood symptoms from the underlying neurodegenerative changes.

Late-onset depression, typically defined as first-onset depressive episodes occurring after the age of 65, has been associated with cerebrovascular pathology. Structural lesions, particularly in subcortical white matter, may disrupt fronto-subcortical circuits involved in mood regulation, contributing to what has been termed "vascular depression"[14-16]. Patients with this subtype often present with prominent executive dysfunction and are more likely to have cardiovascular comorbidities, including hypertension, atrial fibrillation, dyslipidemia and prior cerebrovascular events[17]. This neurovascular hypothesis underscores the importance of considering underlying medical and neurological conditions in the assessment and management of late-life depression.

3. Epidemiological Data

Epidemiological findings on depression in older adults vary, largely due to differences in diagnostic criteria, assessment tools and study methodologies[18]. A central issue lies in the lack of consensus on the operational definition of depression in this population. Furthermore, growing evidence supports the notion that depressive disorders in the elderly may present with symptom profiles that differ significantly from those seen in younger individuals. These differences are not indicative of a distinct disorder but may reflect clinical subtypes influenced by age-related neurobiological changes. Depression in older adults remains underdiagnosed and undertreated, with estimates suggesting that 60% to 70% of cases go unrecognized. The prevalence of major depressive episodes in the general elderly population is estimated to range between 1% and 4%. Broader estimates of depressive syndromes including subthreshold and minor depression suggest a prevalence of 8% to 16% in individuals aged 65 and older, rising to 12%-15% in those over the age of eighty-five.

The incidence of depression also shows age- and sex-related variation, with an annual incidence rate of approximately 1.5% among older women. Prevalence rates are significantly higher in institutionalized populations, ranging from 10% to 45%, depending on the setting and assessment method. In primary care settings, 15% to 30% of elderly patients present with clinically significant depressive symptoms. Among elderly individuals hospitalized in psychiatric units, the prevalence of depression reaches up to 35%[19].

4. Semiology of Depression in Older Adults

While the core symptoms of depression observed in younger populations are also present in older adults, their clinical expression in the elderly is often atypical and may be obscured by somatic complaints. The presentation is frequently subtle, with symptoms less pronounced or easily misattributed to normal aging or coexisting medical conditions. As such, the identification of depressive disorders in this demographic often requires a nuanced clinical approach and specific expertise[20]. Older patients with depression may report low mood; however, anhedonia the marked loss of interest or pleasure in previously enjoyable activities remains a key diagnostic indicator. Affective symptoms frequently include pervasive fatigue, diminished energy, apathy, feelings of hopelessness, self-directed anger and a pessimistic outlook. Though a decline in interests with age is common, losing pleasure in basic activities such as eating

may indicate an underlying health problem. Many patients report inner emptiness, emotional numbness and problems with thinking or starting tasks[21].

Psychomotor retardation, a common feature in depression, is often more difficult to assess in elderly individuals due to age-related physical limitations. Complaints of impaired concentration and a disrupted perception of time either excessively slow or accelerated-are frequently reported. Somatic symptoms are particularly prevalent and can range from vague malaise and general discomfort to specific complaints such as gastrointestinal disturbances, musculoskeletal pain, cardiovascular symptoms and headaches[22]. Sometimes, physical symptoms hide an underlying depressive disorder. Fatigue is one of the most consistent and disabling symptoms, manifesting as overwhelming exhaustion and a pervasive sense of weariness. Hypochondriacal preoccupations are also common, typically involving cardiovascular, urinary or gastrointestinal systems. In severe cases, these can escalate into delusional beliefs, such as in Cotard's syndrome, where individuals exhibit nihilistic delusions involving bodily decay organ denial, eternal damnation or immortality[23].

In melancholic depression, themes of guilt, worthlessness, incurability and self-blame are frequently observed. These self-deprecating thoughts often contribute to diminished self-esteem and fears of being unable to perform daily tasks. Older adults sometimes experience delusional thoughts, especially those involving persecution, which can often focus on ideas like infidelity, a sense of losing value in their marriage or believing in conspiracies. Such presentations may suggest an underlying paranoid personality structure. Cognitive disturbances often co-occur with depressive symptoms in older adults, complicating differential diagnosis between depression and early-stage dementia[24]. Notably, the two conditions frequently coexist, particularly in neurodegenerative diseases such as Alzheimer's disease. Depression impairs attention, information encoding, retrieval and explicit memory, while implicit memory functions tend to remain intact. Unlike patients with Alzheimer's disease who are typically anosognosic depressed patients frequently express concern about memory loss and intellectual decline[25].

Sleep problems often occur, but it's important to keep in mind that normal changes in sleep patterns happen as people age. Anxiety frequently coexists with depression and may either precede or follow the depressive episode. Typically, anxiety is pervasive and lacks a clear external trigger. Patients may report overwhelming apprehension, irrational fears and a profound inability to relax. Behavioral manifestations include restlessness, moaning and a heightened need for reassurance responses which may be distressing to caregivers[26].

Sometimes, phobic symptoms such as agoraphobia and growing reliance on caregivers appear. Conversion symptoms such as functional motor deficits, swallowing difficulties or cataleptic states may also appear. Depressive mood in the elderly is frequently expressed behaviorally rather than verbally, with overt sadness often replaced by irritability, withdrawal, hostility or aggression. Some patients may exhibit mutism, food refusal, social isolation, incontinence or substance misuse[27]. Nervous agitation can escalate to confusion, blurring the diagnostic boundaries between depression and delirium. Many older people have difficulty identifying or expressing their depressive symptoms. Although suicidal thoughts are common among depressed elderly patients, clinicians frequently overlook them, even though they are a primary concern for these individuals. The suicide rate in this population is more than twice that of the general population, particularly among those living outside institutional settings, underscoring the need for systematic inquiry into suicidal thoughts during clinical evaluation[28].

Finally, while a decline in libido is common with aging, a recent or sudden loss of sexual interest should prompt clinicians to explore the possibility of a depressive disorder, especially when accompanied by other affective or somatic symptoms[29].

5. Diagnostic Challenges in Late-Life Depression

Depression in older adults remains significantly underdiagnosed and, when identified, is frequently undertreated or mismanaged[30]. Approximately 80% of initial diagnoses occur within the context of primary care. Notably, while 15% to 30% of elderly individuals presenting general practitioners exhibit clinically significant depressive symptoms, only 4% to 14% receive a formal diagnosis[31]. This diagnostic gap underscores the persistent misperception of depression as an inherent or "normal" aspect of aging, rather than a distinct and treatable psychiatric condition. It is critical to differentiate late-life depression from normal emotional responses to age-related stressors such as bereavement, loss of independence or decline in physical and cognitive functioning[32]. Multiple factors make diagnosis challenging in this group. These include the high prevalence of somatic comorbidities, many of which share symptomatology with depression (e.g., psychomotor slowing, fatigue, anorexia, sleep disturbances and decreased libido) and the potential for adverse effects of polypharmacy to mimic or exacerbate depressive symptoms. Furthermore, communication difficulties, cognitive impairment and the atypical or less overt clinical presentation of depression in older adults often obscure its recognition[33].

Stigmatization of mental illness, both by patients and healthcare providers, may also hinder disclosure and recognition of depressive symptoms. Clinicians should maintain a high index of suspicion when encountering somatic or affective symptoms that appear disproportionate to contextual life events, when treatment responses are suboptimal or when patients demonstrate limited motivation to engage in care. Early identification and appropriate intervention are essential, given the substantial impact of late-life depression on functional status, quality of life and mortality[34].

6. Depression and Dementia: Diagnostic and Clinical Interactions

The co-occurrence of cognitive impairment and depressive symptoms in older adults presents a significant diagnostic challenge, particularly in distinguishing between major depressive episodes and neurodegenerative disorders such as dementia[35]. Late-life depression is now understood to be not only an early warning sign of dementia, but also a separate risk factor, particularly for Alzheimer's disease and vascular dementia[36]. Conversely, various forms of dementia-including Parkinson's disease, dementia with Lewy bodies, frontotemporal dementia and Alzheimer's disease-frequently present with comorbid depressive syndromes[37]. Neuroanatomically, damage to frontal-subcortical circuits, particularly the striato-pallido-thalamo-cortical pathways, has been implicated in the pathogenesis of both depressive and cognitive symptoms in this population.

Additional structural abnormalities, such as cerebral atrophy, periventricular ischemia and white matter lesions, may further contribute to symptom overlaps[38]. Clinically, patients with dementia typically demonstrate deficits in executive functioning and short-term memory. These individuals often lack awareness of their cognitive decline (anosognosia) and while mood disturbances may be present, they are often intermittent and accompanied by residual capacity for pleasure. Behavioral symptoms such as apathy, irritability and agitation are frequently observed. Antidepressant treatment rarely improves cognitive function in these situations[39].

In contrast, depressive pseudodementia cognitive impairment is secondary to a depressive episode presents with prominent subjective complaints of memory loss, attentional deficits and concentration difficulties. Core affective symptoms often accompany these cognitive issues, including persistent low mood typically worse in the morning loss of interest or pleasure, disrupted sleep and appetite and physical complaints. Importantly, both mood and cognitive symptoms tend to improve with appropriate antidepressant treatment, supporting the reversibility of symptoms and aiding in diagnostic clarification. Accurate differentiation between these clinical entities is essential for guiding prognosis and tailoring therapeutic interventions. Longitudinal assessment and comprehensive neuropsychological evaluation are often necessary to distinguish primary dementia from depression-related cognitive impairment[40].

7. Vascular Depression

Forty years ago, the Japanese considered that true depression was that observed following a stroke. The idea of vascular depression has only been recognized in the last few years[41,42].

Vascular depression refers to a subtype of depression that arises either within two years following an acute cerebrovascular event, such as stroke or in association with chronic ischemic brain lesions. Older adults with cerebral vascular problems are thought to be more likely to experience depressive disorders. Lesions localized to the left hemisphere, particularly within the prefrontal cortex, have been associated with both a higher prevalence and greater severity of depressive symptoms. Furthermore, this subtype of depression often demonstrates a diminished therapeutic response to conventional antidepressant treatments[43]. Chronic vascular brain lesions are typically correlated with pronounced psychomotor retardation, anhedonia and functional impairment, while exhibiting a lower prevalence of psychotic symptoms and feelings of guilt compared to other depressive subtypes. Clinically, patients with frontal lobe involvement often present with significant dysexecutive syndrome characterized by deficits in planning, problem-solving and cognitive flexibility, as well as marked apathy, reduced motivation and psychomotor slowing, rather than overt sadness[44].

8. Suicide Risk

Suicide ranks as the ninth leading cause of death among individuals aged 65 to 84 years. Although older adults have a lower incidence of suicide attempts compared to younger populations, the ratio of completed suicides to attempts is markedly higher in this demographic, approximately 4:1 in the elderly versus 200:1 in individuals under 25 years of age[45]. Notably, elderly men, particularly those over the age of 85, exhibit a higher suicide mortality rate than women, a disparity attributed in part to the use of more lethal methods. Approximately 75% of suicide deaths in older adults occur during the first depressive episode and in 60% of cases, the individual has consulted a healthcare professional within the month preceding suicide[46]. These findings underscore the critical need to enhance the detection and management of depression in this population to mitigate suicide-related mortality. Suicidal vulnerability may be linked to neurobiological changes associated with brain aging, especially involving the prefrontal cortex. Additionally, the increased organic fragility characteristic of advanced age heightens the lethality risk of suicide attempts[47]. Key risk factors for suicide in older adults include insomnia, pervasive hopelessness, agitation, psychotic symptoms, alcohol use and chronic pain. Additional considerations in suicide risk assessment encompass coexisting medical conditions, terminal illnesses, social isolation and the history of previous suicide attempts[48].

9. Treatments for Depression in the Elderly

The management of depression in elderly patients encompasses a multimodal approach, including psychotherapy, pharmacotherapy and electroconvulsive therapy (ECT). The selection of appropriate treatment modalities depends on symptom severity, comorbidities, treatment accessibility and patient preference and may involve monotherapy or combination strategies[49].

9.1. Psychotherapy

Psychotherapy is usually the main treatment for mild to moderate depression in older adults. However, limited mobility among patients or logistical difficulties may impede its implementation. Psychotherapeutic interventions aim not only to alleviate depressive symptoms but also to improve lifestyle and reduce social isolation. Additionally, regular physical activity has demonstrated efficacy in ameliorating depressive symptoms[50]. When appropriate, using psychotherapy together with medication can lead to better clinical results and is worth considering at the same time. Simultaneous use of psychotherapy and medication usually leads to better clinical results and is recommended when appropriate[51].

9.2. Pharmacological treatments

Pharmacotherapy in the elderly requires careful dosage adjustments due to age-related pharmacokinetic and pharmacodynamic changes. These include altered body composition with increased fat and decreased muscle mass affecting drug distribution, reduced renal clearance, diminished hepatic metabolism, decreased intestinal absorption and lower plasma protein binding secondary to hypoalbuminemia. The presence of cardiac, hepatic and renal comorbidities further complicates medication management. Consequently, monotherapy with agents possessing a short half-life is preferred to minimize adverse effects and drug interactions[52].

9.3. Antidepressants

Antidepressant efficacy in elderly populations is comparable to that observed in younger adults; however, therapeutic outcomes are often suboptimal due to underdosing or insufficient treatment duration[53]. Initiation of treatment requires dose reduction (typically halving the initial dose), with titration to standard therapeutic levels over time. If there is no noticeable clinical improvement within four weeks, it may be advisable to change antidepressants, keeping in mind that older patients could experience slower symptom relief. Due to the increased

risk of relapses in this group, it is recommended that treatment continues for at least 12 months after remission and should be extended even further if episodes recur[54]. Monotherapy is commonly chosen since it reduces the potential complications that can arise from using multiple medications together.

- **Selective Serotonin Reuptake Inhibitors (SSRIs):** SSRIs are the first-choice drugs for treating unipolar depression in older adults[55]. Fluoxetine is avoided due to its long half-life and high potential for drug interactions. Paroxetine is avoided due to its anticholinergic side effects and the possibility of drug interactions; however, it may be an option when anxiety is the primary issue[56]. Citalopram and escitalopram, while effective, carry a risk of QT interval prolongation and arrhythmias, particularly in patients with predisposing cardiac conditions. Sertraline is commonly preferred due to favorable tolerability. Hyponatremia, akathisia, parkinsonism and sinus bradycardia are potential adverse effects warranting close monitoring[57].
- **Selective Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs):** Duloxetine and venlafaxine serve as second-line agents. Their noradrenergic activity increases the risk of cardiovascular side effects, thus contraindicating use in patients with hypertension or arrhythmias. They may be particularly beneficial in cases presented with marked apathy and duloxetine offers additional analgesic benefits in neuropathic pain[58].
- **Tricyclic Antidepressants (TCAs):** Reserved for treatment-resistant cases, TCAs are efficacious in severe or melancholic depression and may reduce relapse risk following ECT. Nonetheless, their use is limited by significant anticholinergic effects and cardiovascular risks, necessitating caution in patients with arrhythmias, glaucoma, urinary retention or prostatic hypertrophy. Side effects include constipation orthostatic hypotension and cognitive impairment. Clomipramine is the medication of choice when pain syndromes are involved[59].
- **Atypical antidepressants:** Mirtazapine offers an alternative therapeutic option, with side effects such as weight gain and sedation that may be advantageous or detrimental depending on the clinical context (e.g., anorexia vs. obesity, insomnia vs. fall risk)[60]. Reports indicate that venlafaxine can have enhanced effects when used synergistically for severe depression. Bupropion, notable for its lack of weight gain and efficacy against apathy and psychomotor retardation, is particularly useful in patients with Parkinsonian symptoms (. Combination therapy with SSRIs can enhance antidepressant efficacy but may increase the risk of anxiety, insomnia and seizures[61].
- **Augmentation strategies:** in cases of inadequate response to monotherapy, augmentation with low-dose atypical antipsychotics such as aripiprazole, quetiapine and risperidone can potentiate antidepressant effects[62]. Combinations such as olanzapine with fluoxetine, as well as the use of thyroid hormones or lithium, are also therapeutic considerations[63]. Pramipexole has shown promise but remains underutilized. Esketamine, used adjunctively for treatment-resistant depression, has demonstrated efficacy comparable to younger populations, with dosing beginning at 28 mg and titrated up to 84 mg. Contraindications include recent cardiovascular events and a history of cerebrovascular disease[64]. While antidepressants may reduce depression in people with dementia, tricyclic antidepressants are avoided due to their anticholinergic effects, which can make confusion worse. Antidepressants may have increased efficacy in vascular dementia compared to other dementia subtypes.
- **Dementia and antidepressants:** depressive symptoms in dementia may respond to antidepressants. It is recommended to avoid tricyclics, which have significant cholinergic activity and promote confusion[65]. However, they are more effective, particularly in vascular dementia. Esketamine is used in combination with an antidepressant in resistant depression when two different antidepressants have proven insufficient. Various studies have shown similar efficacy of esketamine in patients aged over 65 years compared to younger adults. The initial dose is reduced to 28 mg and can be increased in 28 mg increments up to 84 mg. It cannot be used in cases of recent cardiovascular events (within 6 weeks) or a history of cerebral hemorrhage or vascular diseases such as aneurysms[66].

In conclusion, the efficacy of antidepressants in the elderly is poorly documented, due to the lack of controlled double-blind clinical studies; only tricyclic antidepressants meet this criterion[67,68]. Furthermore, it is often necessary to treat depression in the elderly as a resistant depression[69].

9.4. Electroconvulsive Therapy (ECT)

ECT is highly effective in elderly patients, demonstrating higher remission rates relative to younger cohorts. It is recommended for cases of severe depression that do not respond to treatment or when medication causes significant side effects[70]. Multiple studies affirm the safety and efficacy of ECT in patients over 85 years old and those with cerebrovascular comorbidities. Continued ECT treatment lowers the chance of relapse and is frequently chosen instead of medication to prevent problems associated with taking multiple drugs. ECT thus represents a valuable therapeutic modality in the geriatric population[71].

10. Conclusion

Depression in the elderly is a prevalent yet frequently underrecognized condition, largely due to its atypical clinical presentations, which often include somatic complaints, cognitive disturbances and behavioral alterations. Its prevalence is notably higher among institutionalized and cognitively impaired older adults. The frequent coexistence of depression with dementia or its presentation in a manner that mimics cognitive decline, necessitates thorough differential diagnosis to ensure appropriate management. Alarmingly, suicide rates among the elderly especially men over 85 years remain significantly elevated, underscoring the critical role of depression in this vulnerable population.

Diagnostic challenges arise from the often subtle or non-classical manifestations of depression in older adults, where typical symptoms such as sadness or anhedonia may be absent. Physical symptoms and comorbid medical conditions can further obscure the clinical picture. Importantly, cognitive impairment associated with depression may resemble early dementia but is potentially reversible with timely intervention.

Effective treatment of depression in the elderly involves a tailored approach. For mild to moderate cases, psychotherapy is typically the preferred treatment, whereas more severe cases are generally treated with medications, especially selective

serotonin reuptake inhibitors (SSRIs). Careful observation is necessary to detect potential side effects like low sodium levels (hyponatremia) and lengthening of the QT interval. Second-line agents, including serotonin-norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants and atypical antidepressants, provide additional options for treatment-resistant cases or specific symptomatology. Electroconvulsive therapy (ECT) is a safe and efficacious intervention, particularly for severe or refractory depression in this age group.

It is imperative that primary care physicians maintain vigilance for depressive symptoms in elderly patients, particularly when somatic complaints, functional decline or cognitive changes are present. Systematic assessment of suicidal ideation must be integral to clinical evaluations. Every patient's treatment plan should be customized to their unique situation, taking into account any other medical issues, shifts in how their body processes medications and individual preferences. Ongoing monitoring is important to help prevent relapses and lessen related health risks.

Future efforts should prioritize increasing awareness and implementing routine screening protocols, alongside fostering multidisciplinary collaboration to improve diagnosis and management. Further research into the pathophysiology of vascular and late-onset depression is necessary to enhance diagnostic accuracy and therapeutic outcomes. Moreover, integrating mental health services within primary and geriatric care frameworks will be essential to facilitate early detection and ensure continuity of care for this growing population.

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