Anxiety Disorders in Older Patients

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ABSTRACT

Anxiety complaints are common among older people. Specific phobia is characterized by exaggerated fear to a specific object or situation. Fear of falling is one example and occurs in about 50% of older persons who have fallen recently. Polypharmacy heightens fall risks. Generalized anxiety disorder is characterized by chronic uncontrollable worry that interferes with functioning and is accompanied by restlessness and disturbed sleep. Panic disorder refers to recurrent, unexpected surges of intense fear that evidence physical and cognitive dysfunction. Cognitive behavior therapy has efficacy among psychotherapies for older anxious adults. In treating anxiety, medications that might be anxiogenic are reduced in dosage or discontinued. It is essential to monitor for suicidal ideation and symptom change. The first-selected pharmacotherapy for people with most anxiety disorders is selective serotonin reuptake inhibitors or serotonin-norepinephrine reuptake inhibitors. The risk-benefit ratio of benzodiazepine pharmacotherapy in elderly patients is not favorable.

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Anxiety is a mood state oriented toward a future concern associated with preparation for a possible negative event.[1] In contrast, fear is an alarm response to present or imminent danger. The objective of this narrative review is to acquaint readers with the characteristics of common anxiety disorders among older people. Treatment guidelines are also provided.

METHODS

A search with no date restrictions was conducted in early 2018 for English-language articles in PubMed, Psychiatry Online, UpToDate, and OvidMD. MeSH terms used in the search included *benzodiazepines*, *anxiety*, *anxiety disorders*, *phobic disorders*, *psychiatry*, *adult*, *aged*, *complementary therapies*, *phobia*, *social*, *anti-anxiety agents*, *tai chi*, *psychotherapy*, *accidental falls*, *pulmonary disease*, *chronic obstructive*, and *drug therapy*. The search strategy is included in the Supplementary Appendix.

Google Scholar was used to check article citations, author affiliations, and journal impact factor. The articles[1–64] chosen were frequently cited in journals, with randomized controlled trials preferred.

INCIDENCE AND PREVALENCE

Anxiety is the most prevalent psychiatric disorder, with a lifetime prevalence of approximately 29%.[2] Potential predictors for persistent anxiety include poor overall quality of life and comorbid personality or mood disorders.[3]

Incidence of newly emerging anxiety disorders in late life is low, as they typically do not newly emerge in older people. Anxiety complaints have usually already been present in 99% of anxious individuals who are over age 65 years.[2]

Anxiety among chronically ill older adults is disabling.[4] Elderly outpatients with high anxiety frequently visit doctors but receive relatively few mental health services.[4] Among nursing home residents, pain, pharmacotherapies for depression, and suboptimal quality of life are consistently associated with anxiety.[5]

ANXIETY SYNDROMES

Specific phobia is an anxiety disorder that represents exaggerated or irrational fear related to a specific object or situation[6] (Table 1). A study[7] of the prevalence and course of specific phobia in a population of 70-year-old individuals revealed a declining frequency from 10% at age 70 to 4% at age 79. The lifetime occurrence of anxiety disorders in noninstitutionalized persons over age 65 years is 30%, with a prevalence rate of 14% among those with anxiety and a rate of 11% for those with phobias[8] (Table 2).

Clinical Points

- Anxiety is a common emotion that can become chronic and yield considerable dysfunction.
- Intervention includes various psychotherapies, pharmacotherapies, and stress reduction techniques.
- When prescribing, it is especially important to consider geriatric patient problems such as unstable gait, reduced metabolism, and medicinal interactions.

A fear of falling is one example of a specific phobia that is especially common among older individuals and occurs in up to 50% of those in long-term facilities.[9] As people age, confidence in and ability to balance may impair performance, which over time can result in isolation. Those with significant mobility limitations, but without fear of an unstable gait, are most likely to fall; thus, fear of falling may act as a protective buffer.[10] In a review[11] of 28 studies of elderly people, the prevalence range for fear of falling was between 3% and 85%. Fear of falling occurs in about 50% of older persons who have fallen in the previous year.[12] Some factors associated with fear of falling include female sex, impaired mobility, and the need for gait assistance devices.[13]

Anxiety and especially depression are associated with fear of falling, with mood disorders being the most strongly connected.[12] Detection and effective treatment of people with depression and anxiety are protective factors.

Polypharmacy, such as with coprescribed antidepressant and antianxiety drugs, heightens fall risks, especially among demented nursing home patients.[14] People appear to fall more often when selective serotonin reuptake inhibitor (SSRI) dosages are high; however, this contention is controversial.[15] With no known randomized controlled trials on this topic, there is insufficient evidence to recommend avoidance of SSRIs in older people based only on risk for falling.[16]

Social phobia is characterized by marked anxiety about 1 or more social situations in which the individual is exposed to possible scrutiny by others[17] such as social interactions or being observed while eating or performing in public.[17] There are several core symptoms of social phobia across the adult lifespan.[18] These symptoms include anxiety associated with thinking about social situations, being in the social situation, remaining in the social situation too long, and avoiding such occasions.[18] Additional concerns involve self-evaluations of being more nervous than others and having greater fear or avoidance than is reasonable.[18] About 3% of adults experienced some social phobia in the prior year and 5% have during their lifetimes.[19] People 65 years and older experience less social phobia than those who are younger.

Generalized anxiety disorder (GAD) is characterized by chronic, uncontrollable worry that interferes with function and is accompanied by restlessness, muscle tension, impaired concentration, and disturbed sleep.[20] Such worries in older individuals often focus on concerns about health, finances, or disability of self or spouse.[21] The prevalence of generalized anxiety without comorbidity is 1%, but up to 4% when associated with another psychiatric condition.[22] The prevalence of GAD in persons over 65 years of age is lower than in younger adults, with a range in elderly people of 1%–2%.[22]

Panic disorder refers to recurrent, unexpected panic attacks. These emotions are surges of intense fear that peak within minutes and evidence numerous physical and cognitive symptoms.[17] First-onset panic attacks occurring after age 55 are usually less severe than those starting earlier in life.[23] The rate of panic disorder among those over age 55 is 1%, with a lifetime occurrence of nearly 4%.[24] This condition is more common among patients reporting recent stress, poor health-related quality of life, tachycardia, or gastric ulcers.[24] It is also associated with depression and being in lower socioeconomic groups. Since panic among older people has origins earlier in life, new cases are less likely over time.[24] Yet, medical illnesses, use of stimulants, and drug withdrawal syndromes may contribute to panic symptoms and should remain in the differential diagnosis.[25]

COMORBIDITY

Anxiety and depression share some symptoms in common.[1] Shared manifestations typically include a

Table 1. Overview of Anxiety Syndromes and Treatments

Definitions	Treatments
Specific phobia is an anxiety disorder with exaggerated or irrational fear related to a specific object or situation; fear of falling down is common in older people	Exposure therapy, as in cognitive behavioral therapy (CBT), is recommended as treatment for specific phobia; when CBT is unavailable, benzodiazepines may be utilized if there is no history of or current substance abuse; benzodiazepines should not be prescribed concurrently with opioids
Social phobia is marked anxiety about 1 or more social situations in which someone is exposed to possible scrutiny by others	CBT is effective; patients preferring medication may be treated with second-generation antidepressant drugs; propranolol may be prescribed for those with infrequent performance anxiety, such as for public speaking
Generalized anxiety disorder is characterized by uncontrollable worry that interferes with function accompanied by restlessness, muscle tension, impaired concentration, or disturbed sleep; in older people, concerns are often related to health, finances, or disability of self or spouse	CBT is effective; patients preferring medication may be treated with second-generation antidepressant drugs
Panic disorder refers to recurrent, unexpected panic attacks; emotions of intense fear surge and include physical and cognitive symptoms	Second-generation antidepressant drugs are efficacious for patients with panic disorder but should be started at low doses; benzodiazepines have more rapid onset of effects but are not prescribed for those with substance use concerns due to dependency risks

Table 2. Anxiety Syndromes: Lifetime Prevalence and Commorbidities

Anxiety Syndrome	Lifetime Prevalence	Comorbidities
Specific phobia	11%	Depression
Social phobia	5%	Depression, other anxiety disorders, and substance abuse
Generalized anxiety disorder	1%–4% 1%–2% at > age 65 y	Depression or other anxiety disorders
Panic disorder	4%	Depression, other anxiety disorders, and substance abuse

Table 3. Advantages and Disadvantages of Second-Line Treatments for Anxiety

Second-Line Treatments	Advantage	Disadvantage
Tai chi	Less falling	Time consuming
D-Cycloserine	Less reactivity to specific phobias	Augments exposure therapy; not monotherapy
Tricyclic antidepressants	Effective for anxiety and depression	Anticholinergic symptoms, weight gain, sedation, and potential for lethal overdose
Pregabalin	Diminishes generalized anxiety	Controlled substance with few replication studies
Lamotrigine	Diminishes panic	Little substantiation
Benzodiazepines	Rapidly effective	Dependency, falls, and memory impairment

generalized distress factor. Anhedonia is specific to depression, whereas hyperarousal is related to persons with anxiety.[1]

Older persons experience comorbidities to a similar extent as younger adults; depressive and anxiety disorders frequently coexist across the lifespan.[26] In a study by Lenze and colleagues,[27] approximately 35% of older subjects with depression had at least 1 lifetime anxiety disorder, and 23% had a current diagnosis. The most common anxiety disorder diagnoses were panic disorder, specific phobia, and social phobia.[27]

Anxiety has links to coronary artery disease, but disparate findings are cited regarding postmyocardial infarction anxiety.[28] Older adults who experienced a heart attack and are also anxious have more adverse cardiac events.[29,30] Postmyocardial infarct anxiety-induced complications exist beyond the effects of depression[31]; yet, the validity of such contentions are not universally confirmed. An analysis of people after an infarct revealed that anxiety assessments were affected by the severity of heart disease, physical inactivity, and depression.[31] Yet, postinfarction anxiety was not associated with more cardiovascular events or death.[31]

Patients with chronic obstructive pulmonary disease (COPD) are more likely to develop anxiety disorders compared with healthy controls.[32] The development of anxiety among patients with COPD results in a compromised prognosis.[32] Anxiety disorders are disabling in this population and without intervention can become chronic, thereby lowering self-esteem, predisposing to suicidal ideation, and increasing hospitalization rates.[33] Both patients and caregivers may become overwhelmed and find it difficult to cope with such difficulties.

Patients with COPD also have a high prevalence of social and specific phobia.[34] Socially phobic persons with COPD often are embarrassed by breathlessness, sweating, and urinary incontinence.[34] Those with specific phobia fear certain circumstances or the idea of being without medication.[34] Such patients frequently avoid leaving the house without their medication and minimize activities likely to cause breathlessness.[34]

Anxiety is associated with cognitive impairment and dementia.[35] Depression and anxiety disorders in midlife are risk factors for dementia.[36] Within this population, anxiety has a moderate incidence and persistence.[37] Chronic anxiety is associated with reduced cortical brain thickness; yet, in a Mayo Clinic study[38] after adjusting for comorbid depression, only the association between anxiety and reduced insular thickness was significant. The prevalence of anxiety in patients with Parkinson's disease is higher than in healthy and comparably disabled elderly subjects.[39]

TREATMENT

Management

The elderly patient and family should be informed that treatment of anxiety is important to improve health and quality of life.[40] Collateral information from family and caretakers is helpful for a complete history. Physicians should to be aware of prior therapies for anxiety and response. All medications that might be anxiogenic such as anticholinergic agents, antihistamines, steroids, sympathomimetic compounds, stimulants, and dopaminergic drugs should be reviewed.[41] Ingestion of coffee, tea, and other caffeine sources and illicit stimulant drugs should be avoided.[41] Coexistent anxiety and depression is frequent and requires treatment.[40] Close follow-up with discussion of possible medication side effects enhances compliance.[40] It is essential to monitor for suicidal ideation and symptom change, and symptom decline indicates clinical improvement.[40]

Psychotherapy

Cognitive behavioral therapy (CBT) benefits older patients with GAD.[42] CBT has been shown to diminish worry and depressive symptoms, with improved mental health among older persons with GAD; however, that is not always consistently so.[43]

Exposure therapy is recommended for patients with specific phobias.[44] Phobic severity, anxiety, and avoidance can be lessened when applied in combination with other psychotherapies.[44] Treatment gains are maintained for 1 year, but exposure therapy yields high dropout rates and low treatment acceptance.[45]

Tai chi is effective in reducing falls and fear of falling in older adults (Table 3).[46] Its greatest benefit is enhancement of balance confidence.[46] Tai chi is a system of gentle

physical exercise and stretching that develops flexibility and coordination.[47] Individuals are challenged to move through positions with a reduced base of support—standing on 1 leg is an example.[48] Tai chi also promotes relaxation, awareness, and focus and is a form of physical therapy.[47]

Psychological interventions reduce anxiety and depression in demented patients by helping them learn better ways to cope with these symptoms.[48] Psychotherapies compare favorably with pharmacologic treatments.[49]

Pharmacotherapy

Drug treatment often has better efficacy than psychotherapy in people with late-life anxiety.[50] The usual first-selected treatment for anxiety disorders, with the exception of specific phobias, are the SSRI or serotonin-norepinephrine reuptake inhibitor (SNRI) drugs.[51] Escitalopram and paroxetine are effective for specific phobias.[52–54] Tricyclic antidepressant drugs are usually a second-choice option because of anticholinergic side effects, weight gain, sedation, and potential for lethal overdose.[51] Other pharmacotherapies not approved for anxiety disorder management include monoamine oxidase inhibitors, mirtazapine, gabapentin, pregabalin, hydroxyzine, and antipsychotic drugs.

Pregabalin has efficacy for patients with GAD.[51] Pregabalin acts on the $\alpha_2\delta$ subunit of calcium channels to reduce neurotransmitter release.[51] Gabapentin has a similar mechanism in off-label prescribing.[51] Lamotrigine may inhibit voltage-dependent sodium channels to decrease glutamate release. Lamotrigine can diminish panic in some people.[55] All 3 of these drugs are anticonvulsant medications.

D-Cycloserine is an *N*-methyl-D-aspartate (NMDA) partial agonist prescribed off-label to augment exposure therapy.[51] Although not effective in monotherapy, it can facilitate fear extinction.[56] Additionally, D-cycloserine reduces reactivity to phobic stimuli in subjects with a specific phobia, as documented by functional magnetic resonance imaging.[57] D-Cycloserine combined with exposure therapy can lead to sustained changes in the ventromedial and prefrontal cortex response to phobic stimuli.[57]

Benzodiazepines are often prescribed to older patients with anxiety. However, they are usually indicated only for short-term applications, as when adults experience infrequent anxiety symptoms, eg, flight phobia.[58] Close physician monitoring is required when prescribing benzodiazepines, as anxiety in older people tends to become a chronic condition.[4] Among sustained benzodiazepine users, only a small proportion use higher doses than recommended.[59] Favorable features of benzodiazepines include a lack of metabolic or sexual side effects and quick alleviation of anxiety.[60] These drugs are well tolerated and safe in oral monotherapy. When used on an as-needed basis, however, they might reinforce maladaptive behavior.[40] The practice of prescribing anxiety medication for immediate relief may prolong anxiety for an extended period of time.[40] There is greater dependence potential with short versus long half-life benzodiazepines.[61] Physicians should use caution to avoid drug dependence. The risk-to-benefit ratio of this pharmacotherapy in older people is generally less favorable.[61]

Benzodiazepines induce a heightened risk for falls and hip fracture—dosages greater than 3 mg/d of diazepam equivalent increased the risk of hip fracture by 50%. Such injuries usually occur shortly after initiating therapy.[62] Large dosages should be avoided. Short half-life benzodiazepine versions may not be safer than the long half-life versions; yet, falls occur more often with long elimination half-life benzodiazepines, especially when prescribed in combination with other drugs.[63]

Since benzodiazepines are eliminated slowly from the body, prolonged treatment with repeated doses often results in adipose tissue accumulation, dependence, and potential drug withdrawal.[64] Impaired cognition can also occur. Thus, when benzodiazepines are utilized in older people, those with a short elimination half-life are usually preferred.[63] Nevertheless, many people have been safely prescribed these medications for decades with no misuse or clinical concerns.

CONCLUSION

CBT has the best efficacy among the psychotherapies in treating elderly people with anxiety. Among pharmacotherapies, SSRI and SNRI drugs provide the greatest benefit in these patients.

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Supplementary material follows this article.

THE PRIMARY CARE COMPANION
FOR CNS DISORDERS

Supplementary Material

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List of Supplementary Material for the article

1. Supplementary Appendix. Search Strategy

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This Supplementary Material has been provided by the author(s) as an enhancement to the published article. It has been approved by peer review; however, it has undergone neither editing nor formatting by in-house editorial staff. The material is presented in the manner supplied by the author.

Supplementary Appendix. Search Strategy

MeSH Terms: Benzodiazepines, Anxiety, Anxiety Disorders, Phobic Disorders, Psychiatry, Adult, Aged, Complementary Therapies, Phobia, Social, Anti-Anxiety Agents, Tai Ji, Psychotherapy, Accidental Falls, Pulmonary Disease, Chronic Obstructive, Drug Therapy

PubMed Search Strings:

1. ("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("benzodiazepines"[MeSH Terms] OR "benzodiazepines"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR ("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields] OR "falling"[All Fields])) OR (("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields]) AND ("pulmonary disease, chronic obstructive"[MeSH Terms] OR ("pulmonary"[All Fields] AND "disease"[All Fields] AND "chronic"[All Fields] AND "obstructive"[All Fields]) OR "chronic obstructive pulmonary disease"[All Fields] OR "copd"[All Fields])) OR "chronic obstructive pulmonary disease"[All Fields] AND ("drug therapy"[Subheading] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "drug therapy"[All Fields] OR "pharmacotherapy"[All Fields] OR "drug therapy"[MeSH Terms] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "pharmacotherapy"[All Fields]) AND ("2013/08/18"[PDat] : "2018/08/16"[PDat] AND "humans"[MeSH Terms] AND "aged"[MeSH Terms])
2. (("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("benzodiazepines"[MeSH Terms] OR "benzodiazepines"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR ("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields] OR "falling"[All Fields])) OR (("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields]) AND ("pulmonary disease, chronic obstructive"[MeSH Terms] OR ("pulmonary"[All Fields] AND "disease"[All Fields] AND "chronic"[All Fields] AND "obstructive"[All Fields]) OR "chronic obstructive pulmonary disease"[All Fields] OR "copd"[All Fields])) OR "chronic obstructive pulmonary disease"[All Fields] AND ("drug therapy"[Subheading] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "drug therapy"[All Fields] OR "pharmacotherapy"[All Fields] OR "drug therapy"[MeSH Terms] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "pharmacotherapy"[All Fields]) AND (Review[ptyp] AND "2013/08/18"[PDat] : "2018/08/16"[PDat] AND "humans"[MeSH Terms] AND "aged"[MeSH Terms])
3. (("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("benzodiazepines"[MeSH Terms] OR "benzodiazepines"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR

("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields] OR "falling"[All Fields])) OR (("accidental falls"[MeSH Terms] OR ("accidental"[All Fields] AND "falls"[All Fields]) OR "accidental falls"[All Fields]) AND ("pulmonary disease, chronic obstructive"[MeSH Terms] OR ("pulmonary"[All Fields] AND "disease"[All Fields] AND "chronic"[All Fields] AND "obstructive"[All Fields]) OR "chronic obstructive pulmonary disease"[All Fields] OR "copd"[All Fields])) OR "chronic obstructive pulmonary disease"[All Fields] AND ("drug therapy"[Subheading] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "drug therapy"[All Fields] OR "pharmacotherapy"[All Fields] OR "drug therapy"[MeSH Terms] OR ("drug"[All Fields] AND "therapy"[All Fields]) OR "pharmacotherapy"[All Fields]) AND (Randomized Controlled Trial[ptyp] AND "2013/08/18"[PDat] : "2018/08/16"[PDat] AND "humans"[MeSH Terms] AND "aged"[MeSH Terms])

4. "Benzodiazepines"[MeSH] AND (("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR ("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("psychiatry"[MeSH Terms] OR "psychiatry"[All Fields])) AND "adult"[MeSH Terms]
5. "Benzodiazepines"[MeSH] AND (("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR ("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("psychiatry"[MeSH Terms] OR "psychiatry"[All Fields])) AND "adult"[MeSH Terms]
6. "Benzodiazepines"[MeSH] AND (("anxiety"[MeSH Terms] OR "anxiety"[All Fields]) AND ("phobic disorders"[MeSH Terms] OR ("phobic"[All Fields] AND "disorders"[All Fields]) OR "phobic disorders"[All Fields] OR "phobia"[All Fields]) AND ("psychiatry"[MeSH Terms] OR "psychiatry"[All Fields]) AND ("aged"[MeSH Terms] OR "aged"[All Fields] OR "elderly"[All Fields]))
7. Benzodiazepines"[MAJR] AND ("psychiatry"[MeSH Terms] OR "psychiatry"[All Fields]) AND (systematic[sb] AND "2013/08/08"[PDat]:"2018/08/06"[PDat]AND "adult"[MeSH Terms])