

Clinical interventions for late-life anxious depression

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Abstract: Anxiety symptoms are frequently present in patients with late-life depression. The designation “anxious depression” has been used to describe major depressive disorder (MDD) accompanied by clinically significant but subsyndromal anxiety symptoms. MDD may also present comorbid with diagnosable anxiety disorders, although this presentation is less common in late life. Diagnosis of anxious depression in the elderly is complicated by several factors (eg, their tendency to experience and report psychiatric symptoms as somatic illness) and is associated with a more severe clinical presentation, increased risk for suicidal ideation, increased disability, and poorer prognosis. Standard pharmacotherapy for depression may be sufficient but for many patients must be modified or augmented. Psychosocial interventions may also be an important component in the treatment of these patients, although no specific psychosocial treatments have been developed for late-life anxious depression.

Keywords: late-life, anxious depression, geriatric, anxiety, depression

Introduction

The importance of recognition and treatment of late-life psychiatric disorders has been highlighted recently (Katz 1998; Jeste et al 1999). Depression and anxiety are two of the most common psychiatric problems among older adults and frequently co-occur (Lenze, Mulsant, et al 2001). Geriatric patients with depression and anxiety also present special challenges for physicians (Small 1997; Katz 1998). For example, increased medical comorbidity and changes in cognitive status may confound diagnosis. Other cohort characteristics (eg, fears of stigma regarding mental illness; tendency to attribute psychiatric symptoms to medical causes) may lead to underreporting of psychiatric symptoms. In addition, most older adults seek psychiatric care from primary care physicians rather than from mental health specialists (Wetherell et al 2004). System challenges in the primary care setting (eg, short appointment times) present additional barriers to assessment of late-life depression and anxiety (Katz 1998; Watts et al 2002).

Recognition of late-life depression and anxiety is critical given the associated personal and healthcare system burden, including higher rates of service utilization, increased risk for medical illness and disability, and higher mortality rates (Lecrubier 2001; Hybels and Blazer 2003). The co-occurrence of depression and anxiety is also associated with more severe emotional distress, increased risk for suicidal ideation, and poorer treatment response (Flint and Rifat 1997a; Lenze et al 2000). Despite the clear public health significance of late-life depression and anxiety, these problems remain underrecognized and inadequately treated (Small 1997; Young et al 2001).

“Anxious depression” is not a formally recognized psychiatric disorder, but the term is commonly used to describe a clinical picture in which symptoms of both depression and anxiety are prominent. Several clinical presentations are described in

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the literature (Silverstone and von Studnitz 2003). Depression and anxiety may co-occur at the caseness level, when the patient meets full diagnostic criteria for both a depressive and an anxiety disorder. Anxious depression may also describe a patient diagnosed with major depressive disorder (MDD) who presents with clinically significant but subsyndromal anxiety symptoms. Others use this term to refer to the clinical presentation similar to mixed anxiety depressive disorder (MADD), which is characterized by the coexistence of clinically significant but subsyndromal depression and anxiety symptoms with neither diagnostic threshold met (APA 1994). Consistent with a recent review by Lenze, Mulsant, and colleagues (2001), we use the term *comorbid depression and anxiety* to refer to diagnostic comorbidity and *anxious depression* to refer to diagnosed MDD coexistent with subsyndromal anxiety symptoms. When appropriate, we specify that data refer to coexistent depressive and anxiety symptoms or MADD, although this article does not focus on this construct.

In this review we outline the conceptualization, epidemiology, risk factors, and clinical correlates of late-life anxious depression. We also discuss the special challenges of differential diagnosis and review the literature on pharmacological and psychosocial interventions. Given that so many questions remain unanswered, we conclude by discussing future directions for research in this area.

Conceptualizations of anxious depression

A diagnosis of MDD is a component of some conceptualizations of anxious depression. A formal diagnosis of MDD requires the presence of at least five specified symptoms, one of which must be sad mood or loss of interest in activities. The remaining four (or three if both of the above are present) may be any of the following: sleep dysregulation, feelings of worthlessness, appetite changes, fatigue, suicidal ideation, or psychomotor agitation or retardation. Symptoms must be present most of the day nearly every day for 2 weeks or more (APA 2000). As mentioned previously, MDD is present in *comorbid anxiety and depression* (when an individual is diagnosed with a comorbid anxiety disorder) and in *anxious depression* (when an individual presents with coexistent clinically significant but subsyndromal anxiety symptoms). MADD, however, would not include a diagnosis of MDD, given that both depression and anxiety symptoms are subsyndromal.

Anxiety disorders are characterized by an exaggerated fear response and attempts to reduce, escape, or avoid threat.

The fear response may be exaggerated when individuals misattribute threat or have an extreme emotional reaction to nonthreatening or minimally risky situations, thoughts, emotions, or somatic symptoms. Avoidance can take many forms, including total refusal to face a given situation and engaging in “anxiety behaviors” that reduce anxiety (ie, behaviors that allow the individual to temporarily avoid anxiety). Common anxiety behaviors among older adults are reassurance seeking (eg, repeated calls to a physician regarding a test result) or checking behaviors (eg, excessive checking of blood pressure, repeated phone calls to family members to confirm their wellbeing).

In addition to sharing these general features, each anxiety disorder is defined by specified symptom clusters (APA 2000). Generalized anxiety disorder (GAD) is the most common late-life anxiety disorder (Beekman et al 1998). GAD is characterized by excessive and uncontrollable worry, accompanied by three or more hyperarousal symptoms (ie, restlessness, fatigue, concentration problems, sleep dysregulation, muscle tension, irritability) more days than not, for at least 6 months. Worry associated with GAD is “diffuse” and related to two or more topics (eg, health, family, finances). Phobias are also common in late life and are characterized by excessive fear and, typically, avoidance of discrete situations (eg, fear of driving, fear of social situations). A unique type of phobia, called agoraphobia, is characterized by fear and avoidance of situations in which individuals believe they may experience physical symptoms (eg, a panic attack) and escape will be difficult or assistance not readily available (eg, in crowded areas). Agoraphobia may present in the elderly following a significant medical event (eg, heart attack) or may present with those who have a history of panic disorder. Other anxiety disorders are rare among older adults in community settings. For example, panic disorder is rare in community settings, but is more common among older adults with MDD (Regier et al 1988; Lenze et al 2000); obsessive-compulsive disorder is rare among elderly with or without MDD; and one study also found low prevalence of post-traumatic stress disorder among those with MDD (Flint 1994; Lenze et al 2000).

In late life, MDD co-occurring with prominent but subsyndromal anxiety symptoms may be even more pertinent than comorbid depression and anxiety. Table 1 presents common anxiety symptoms that may co-occur with MDD, some of which are among the diagnostic criteria for anxiety disorders (APA 2000) and others are from the authors’ clinical experience. Symptoms of GAD are most common among older adults with MDD (Lenze et al 2000).

Table 1 Common late-life anxiety symptoms

Unrealistic fears
Excessive and uncontrollable worries
Behavioral agitation
Irritability
Muscle tension
Sleep onset insomnia
Fatigue
Concentration problems
Heart palpitations
Shortness of breath
Tightness in chest
Stomach distress
Trembling or shaking
Headache
Excessive reassurance seeking
Excessive checking
Avoidance of feared situations

More research is needed to identify the symptom profile of late-life anxious depression; however, several issues complicate the refinement of this construct. First, there is an overlap in the symptoms of anxiety and depression. For example, sleep disturbance, concentration problems, and fatigue are criteria for both MDD and GAD. In addition, it is more difficult to differentiate anxiety and depressive symptoms in elderly patients (Parmelee et al 1993).

Patients may also present with subsyndromal symptoms of both depression and anxiety. The clinical relevance of subsyndromal psychiatric symptoms is receiving increased attention across the lifespan. For example, a large field trial to define the features of subsyndromal depression and anxiety among a sample of mixed-age primary care patients identified the following symptoms as most characteristic: concentration or memory problems, hypervigilance, hopelessness, feelings of worthlessness, fatigue, sleep disturbance, anticipating the worst, worry, irritability, and being easily moved to tears (Zinbarg et al 1994). Subsequently, MADD was defined as a disorder for further study (APA 1994). MADD is currently defined as persistent or recurrent dysphoric mood occurring along with at least four additional symptoms (listed above) for 1 month or more. The current MADD criteria are somewhat restrictive, perhaps overly so for geriatric patients, given that the diagnosis cannot be made when full criteria for mood or anxiety disorders have ever been met.

Epidemiology

The prevalence of MDD among adults 65 years or older living in the community is less than 1% (Weissman et al 1988). However, MDD is the most common psychiatric

diagnosis for older nondemented psychiatric patients (Cooke et al 2004). In addition, the rate of MDD among older adults has been reported as 9% in older primary care patients (Areán and Alvidrez 2001), 11.5% in hospitalized medical patients (Koenig et al 1988), and 13.5% of older adults receiving home healthcare services (Bruce et al 2002). Comorbidity rates for MDD and anxiety disorders are high. In community-based studies, 47.5% of depressed elderly also meet diagnostic criteria for an anxiety disorder (Beekman et al 2000). Among older primary care patients with depression, 61.4% also have an anxiety disorder (Turrina et al 1994). Although some studies have found low rates (5%) of anxiety disorder diagnoses among older depressed psychiatric patients (Mulsant et al 1996), those utilizing prospective designs with enhanced training of personnel reported a higher prevalence (23.1%) (Lenze et al 2000). Anxious depression may be even more common than is a comorbid diagnosis of both MDD and an anxiety disorder. Of older primary care patients with depression, 74% reported significant anxiety symptoms (Watts et al 2002), and 64.9% of elderly nursing home residents with MDD have significant anxiety symptoms (Parmelee et al 1993). In addition, 27.5%–30.9% of older psychiatric patients diagnosed with MDD report clinically significant symptoms of GAD (Lenze et al 2000; Steffens and McQuoid 2005). GAD symptoms are the most common anxiety symptoms among older adults with and without depression (Heun et al 2000; Lenze et al 2003).

Risk factors

Demographic characteristics associated with late-life depression *or* anxiety are female gender, unmarried status (especially for men), and lower income (Blazer et al 1991; Heun et al 2000). Of these characteristics, female gender is the most consistent demographic risk factor reported. Other common risk factors are family or personal history of depression or anxiety. Of note, while older age per se is not associated with increased risk, the physical and cognitive decline and associated functional disability that often occur with aging have been reported as risk factors for late-life depression or anxiety (eg, Lenze, Martire, et al 2001; Hybels and Blazer 2003). Cardiovascular disease must be considered because it may predispose to “vascular depression”, characterized by late onset, psychomotor retardation, poor insight, and cognitive impairment (Alexopoulos et al 1997). Late-onset depression may also be associated with triggering psychosocial stressors (Brilman and Ormel 2001), the most common of which is

bereavement (eg, death of a spouse). Older adults high in the personality trait of “neuroticism” and who experience chronic life stress are particularly at risk for developing depression following an acute stressful life event (Ormel et al 2001).

Several studies have investigated risk factors specific to late-life comorbid depression and anxiety or anxious depression. In a large community-based sample, comorbid depression and anxiety was associated with being unmarried, having functional limitations, an external locus of control (a personality trait characterized by believing life experiences are caused by circumstances outside one’s control), family history, life events, and death of partner (Beekman et al 2000). Death of partner was the strongest predictor of comorbid depression and anxiety. In another large community sample, female gender, younger age, service utilization, personal history, disability, and cognitive decline were risk factors for comorbid depression and anxiety (Schoevers et al 2003). Female gender was the strongest predictor, and younger age and service utilization were unique predictors of comorbid depression and anxiety (relative to diagnosis of only one disorder). These findings, however, contrast with research demonstrating that disability, psychosocial stressors, medical illness, and cognitive status did not add to depression severity in the prediction of severity of anxiety symptoms among elderly psychiatric patients with MDD (Flint and Rifat 2002).

Impact on health, functioning, and quality of life

The negative effect of late-life depression and anxiety disorders on health, functioning, and quality of life is well documented. Depression and anxiety are risk factors for medical illness and adversely affect recovery from medical illness (Doraiswamy 2001). For example, depression and anxiety increase medical complications, recovery times, and mortality in patients with cardiovascular disease (eg, Moser and Dracup 1996; Schulz et al 2000). Older adults with depression or anxiety also are high users of healthcare services (Koenig and Kuchibhatla 1999; Stanley et al 2001). Risks of functional disability, cognitive decline, and nursing home placement also increase with depression or anxiety (Lenze, Martire, et al 2001; Gibbons et al 2002; Sinoff and Werner 2003). Perceived health quality and quality of life are negatively affected by late-life depression or anxiety (Maddux et al 2003). Notably, the effects of depression and anxiety may be additive. Older psychiatric patients with anxious depression report more severe psychiatric

symptoms, poorer social functioning, and more severe somatic complaints than those with depression alone (Lenze et al 2000; Schoevers et al 2003). There is also an increased risk for suicidal symptoms among older adults with anxious depression (Lenze et al 2000; Bartels et al 2002).

Impact on prognosis

Pharmacological studies in late-life MDD have shown poorer response to psychiatric treatment for those with anxious depression. For example, in a study of 101 older depressed psychiatric outpatients, those with anxious depression were more likely to discontinue treatment and to have an attenuated response to nortriptyline (Flint and Rifat 1997a). In a 2-year follow-up study, Flint and Rifat (1997b) reported that residual anxiety symptoms following successful treatment of MDD predicted a shorter time to relapse of depression. Evaluation of treatment response for depressed elderly receiving nortriptyline and interpersonal therapy indicates that those with comorbid anxiety disorders or anxious depression experience delayed or attenuated treatment response and an increased likelihood of needing pharmacological augmentation (Mulsant et al 1996; Dew et al 1997). A recent evaluation from Steffens and McQuoid (2005) demonstrated that the presence of GAD symptoms was associated with longer time to remission of depressive symptoms among elderly inpatients and outpatients with MDD. These patients were treated with pharmacotherapy (based on an algorithm) with augmentation of electroconvulsive therapy and/or cognitive-behavioral psychotherapy as clinically indicated. In an ongoing trial of citalopram (with psychotherapy augmentation if necessary) for older depressed primary care patients, those with anxious depression demonstrated a lower response rate and longer time to response despite having a higher rate of treatment augmentation (Lenze et al 2002).

In a notable exception to the accumulating evidence for poorer response associated with anxious depression, Lenze and colleagues (2003) have published two studies with a total of 241 older psychiatric outpatients with MDD. One was a randomized, double-blind comparison trial of nortriptyline and paroxetine; the other was an open trial of treatment with paroxetine and interpersonal therapy. There were no differences between the anxious and nonanxious depressed patients on rate of response, time to response, or attrition. In fact, somatic complaints were reduced more quickly and significantly in the anxious depression group. Results were replicated when comparing groups based on the presence of comorbid anxiety disorders. It was suggested

that outcome for treatment of anxious depression in this study may have benefited from greater clinical efforts than in previous studies to reduce attrition (eg, providing reassurance, including phone contact between scheduled appointments). Thus, adaptations in clinical management, including close monitoring of side effects and somatic complaints early in treatment and referrals to specialty mental health centers, may be necessary to improve treatment outcomes, perhaps especially in patients with anxious depression (Lenze et al 2002).

Differential diagnosis

Medical conditions that can mimic or present with disturbances in mood and symptoms of anxiety are extensively discussed in many standard textbooks (eg, Hales and Yudofsky 2002). The differential diagnosis includes thyroid and parathyroid disease, primary cardiac pulmonary disease (mitral valve prolapse, arrhythmias, chronic obstructive pulmonary disease, coronary insufficiency), substance withdrawal, hypoglycemia, various malignancies and autoimmune conditions, Parkinson's disease, dementia, multiple sclerosis, and metabolic and gastrointestinal disorders. There are additional considerations in the evaluation of elderly patients with symptoms of anxious depression. Many of the medical conditions that must be considered in a differential diagnosis of MDD are more common with increasing age (eg, Parkinson's disease, stroke, and dementia) and thus are of relatively greater importance in evaluating the elderly patient. When MDD is accompanied by prominent symptoms of anxiety, the differential is even more extensive (eg, cardiac arrhythmias, mitral valve prolapse, drug and alcohol withdrawal).

Differential diagnosis in the elderly patient is complicated by several factors. For example, mood and anxiety symptoms are common in patients with an established medical diagnosis, and the elderly are more likely than younger patients to have a medical illness. Somatic symptoms, common in both depression and anxiety, can mimic a number of medical disorders, including cardiovascular, neurological, and gastrointestinal disorders. In addition, the psychiatric illness may be unrecognized and untreated, especially in elderly patients whose physical complaints may be attributed to a tendency to ruminate or to worry excessively, or be incorrectly attributed to the consequences of aging. The life circumstances of many elderly individuals can also complicate the accurate and timely diagnosis of a mood or anxiety disorder, making it more difficult to determine if the *Diagnostic and statistical*

manual of mental disorders criterion of "excessive" worry or anxiety is met. For example, concerns related to realistic financial or health stressors can be viewed as a manifestation of depression or anxiety, resulting in an unnecessary and ineffective treatment intervention.

As noted above, a number of psychiatric disorders must be considered when evaluating patients with anxiety and disturbances in mood, although some would rarely present for the first time in late life (eg, schizophrenia). Of particular concern in older individuals is the recognition in depressed patients of cognitive impairment and of psychotic symptoms. In the former, a diagnosis of "anxious depression" may be misapplied if agitation and attempts to accommodate to declining cognitive capacity are attributed to "worry" or are considered the "pseudodementia" of depression. In the latter scenario, the depressed patient with delusions may be misdiagnosed as merely agitated, or fearfulness in the anxious patient may be incorrectly viewed as evidence of psychosis. As mentioned above, the effects of alcohol, illicit drugs, and prescribed medications must be considered when evaluating both physical complaints and psychiatric signs and symptoms (Kaempf et al 1999; Clark et al 2004). Acute and chronic effects of these agents are of concern as well as withdrawal states (eg, alcohol, benzodiazepines) (Oslin 2004). Patients of any age may intentionally misuse prescription medications, but this issue has recently been found to be underrecognized in the elderly (Petrovic et al 2002; Weintraub et al 2002; Clark et al 2004). Older patients are also vulnerable to adverse consequences related to age-related slower drug metabolism, increased sensitivity to side effects (eg, sedation), and drug–drug interactions (given that older patients are more commonly on multiple medications).

Pharmacological interventions

As discussed above, anxious depression is not a formally recognized diagnosis, and there are no pharmacotherapy guidelines specific to this condition. Furthermore, most randomized, controlled trials exclude patients with medical comorbidities and other features commonly seen in the elderly, resulting in a very limited "evidence base" about the treatment of these patients. Even for patients well represented in randomized, controlled trials there remains a trial and error component to therapeutic decisions, a problem dramatically illustrated in the treatment of late-life anxious depression.

Most medications used in the treatment of MDD and anxiety in the general adult population can be considered for these conditions in the elderly. Most of the drugs

Table 2 FDA-approved indications for selected antidepressants

Antidepressant	MDD	GAD	OCD	PTSD	Panic disorder	Social anxiety disorder
Citalopram	×					
Escitalopram	×	×				
Fluoxetine	×		×		×	
Fluvoxamine			×			
Paroxetine	×	×	×	×	×	×
Sertraline	×		×	×	×	×
Venlafaxine	×	×				×
Bupropion	×					
Mirtazapine	×					
Duloxetine	×					

Abbreviations: MDD, major depressive disorder; GAD, generalized anxiety disorder; OCD, obsessive-compulsive disorder; PTSD, post-traumatic stress disorder.

originally developed and marketed as antidepressants have also been found to be effective in one or more of the anxiety disorders, although all do not have US FDA-approved indications for the latter. The most prominent example is the selective serotonin reuptake inhibitors (SSRIs), which have largely replaced tricyclic antidepressants (TCAs) and the monoamine oxidase inhibitors (MAOIs) in clinical practice. The SSRIs are easier to use and, perhaps especially for geriatric patients, may have a more favorable side effect profile. Therefore, it is reasonable to consider SSRIs the first line of treatment in elderly patients with anxious depression. Although there is insufficient evidence to conclude that there are differences in efficacy among the various SSRIs, side effects such as sedation may determine drug preference. There are also differences in the FDA-approved indications for these drugs. Table 2 summarizes the FDA-approved medications (SSRIs and related medications) for treatment of MDD and anxiety disorders in adults. Several FDA-approved antidepressants have not been adequately studied in patients with anxiety disorders, and there are fewer published data supporting their use in anxious depression (eg, mirtazapine, duloxetine, bupropion). Nonetheless, any effective antidepressant may also be effective for anxious depression, especially since symptoms of anxiety may resolve as depression improves.

When monotherapy with antidepressants at conventional dosages is not effective, a next step can be a dosage increase, a change to a different class of antidepressants, or an augmentation strategy. With regard to dosage, it is important to remember that the risk of side effects increases with dosage and that tolerability is a relatively greater concern in the elderly – thus the axiom “start low and go slow”. Equally important, however, is the need to extend treatment

trials to the degree tolerated before concluding that a given agent is not effective. To address this principle, Lenze, Mulsant, et al (2001) have recently recommended an additional adage: “aim high (dosage) and treat long”. When antidepressant monotherapy is not adequate, augmentation strategies include venlafaxine, mirtazapine, a TCA (or other antidepressant), and gabapentin and buspirone. Not well studied is the response of different components of the anxiety symptom cluster (eg, mental/emotional complaints versus physical symptoms) to specific drugs. Future research may identify, for example, more specific indications for TCAs in some forms of anxious depression, just as β -blockers, while not generally useful for anxiety, may be helpful on an as-needed basis in patients with anxiety limited to specific situations (eg, public speaking). Note that although the required dosage of a β -blocker is usually low (eg, propranolol 50 mg), these agents may not be tolerated in patients with comorbid medical conditions such as asthma, congestive heart failure, or sinus bradycardia, and the prominent anticholinergic effects of TCAs may limit this treatment option.

Adjunctive pharmacotherapy with benzodiazepines in geriatric patients deserves special mention. Use of benzodiazepines as a treatment for anxiety disorders in general and in geriatric patients in particular has been widely debated (Shorr and Robin 1994). A full discussion of this issue is beyond the scope of this paper, but in support of their use, especially early in the treatment of patients with marked symptoms of anxiety, is rapidity of onset. Such a strategy may also be useful in patients who experience agitation on initiation of therapy with an SSRI. Benzodiazepines may not be well tolerated by some geriatric patients, and the risk-benefit ratio must be assessed on a patient-by-patient basis. Risks to consider in this analysis are cognitive impairment, disrupted coordination (ie, risk of falls), and potential withdrawal effects if the medication is not tapered appropriately after long-term use (Shorr and Robin 1994; Hanlon et al 1998). In addition, the benzodiazepine of choice may be different for elderly patients; long half-life agents such as clonazepam may generally be preferable to the short half-life options in treating anxiety, but in the elderly there is much less risk of drug accumulation with the latter (eg, lorazepam).

Anxious depression in the elderly is a treatment challenge, one that requires designing a patient-specific approach (eg, recognition of the patient’s age-related characteristics, of variables that can influence medication choice and dosing, and of suitability for psychotherapy and

psychosocial interventions). Knowledge of the wide variety of presentations is critical, as is awareness of the different patterns of treatment response. The clinician must determine the specific cluster of symptoms that is the target for pharmacotherapy. In formulating treatment it may be more useful to think of signs and symptoms not as now classified in the various DSM categories but as disturbances that may present in different combinations and permutations. At present it is not known if particular clusters of symptoms predict response to specific therapies. Anxiety, for example, may or may not resolve as the depression improves, and some symptoms may persist even in patients “successfully” treated for MDD.

Psychosocial interventions

There are no psychosocial interventions specific to treatment of late-life anxious depression. However, a consensus statement has identified psychotherapy, either alone or in combination with pharmacotherapy, as an efficacious treatment for late-life depression (Lebowitz et al 1997). Of these interventions, cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT) have received the strongest empirical support. CBT is a short-term, problem-focused treatment, which aims to teach and/or strengthen coping skills (eg, evaluating and changing negative thoughts, problem solving). In randomized, controlled trials, CBT has demonstrated superior effects over waiting list or usual care for late-life MDD (Areán and Cook 2002). In addition, one study found CBT alone or in combination with desipramine superior to desipramine treatment alone for late-life MDD (Thompson et al 2001). IPT engages patients in interpersonal problem solving and in processing emotional distress. Most IPT research has evaluated the efficacy of this treatment in combination with pharmacotherapy or pill placebo and found IPT combination therapy superior to placebo or pharmacotherapy alone for late-life MDD (Areán and Cook 2002). Finally, collaborative care models have demonstrated effectiveness for treatment of late-life depression in medical settings (Unützer et al 2002).

Far less research has been conducted on the psychosocial treatment of late-life anxiety, and most of this has focused on treatment of GAD. Initial reports indicate that CBT is a promising psychosocial intervention for late-life GAD. In randomized, controlled trials, group CBT has demonstrated superiority over weekly therapist monitoring of symptoms or a waiting list, but was not generally superior to other group supportive therapy or discussion group (Stanley et al 1996; Stanley, Beck, et al 2003; Wetherell et al 2003).

Similar positive effects have been found for individual CBT compared with usual care for primary care patients with GAD (Stanley, Hopko, et al 2003). Preliminary data suggest that cognitive aids may enhance the effect of CBT for late-life GAD (Mohlman et al 2003). Other research has found CBT superior to a waiting period, with some superiority for CBT over supportive therapy for treatment of older adults with a variety of anxiety disorders (Barrowclough et al 2001). CBT has also been established as an efficacious treatment for other anxiety disorders among young and middle-aged adults (Nathan and Gorman 1998), with a few case studies supporting its use in late life (eg, Carmin et al 2002). However, more research is needed to increase the evidence base for psychosocial treatment of late-life anxiety disorders.

No specific psychosocial intervention has been developed to address late-life anxious depression. Recent geriatric programs, however, are recognizing subsyndromal symptoms as targets for psychosocial intervention and are combining interventions for anxiety and depression into “modularized” CBT treatment programs for older adults (Wetherell et al 2005; Stanley et al in press). Thus, therapists are able to select from a variety of interventions to individualize treatment. Some components of CBT are common to both older and younger adult interventions for anxiety or depression (eg, relaxation, cognitive therapy, behavioral activation, reducing avoidance). Others have been integrated to address issues more relevant to older adults (eg, pain management, life review). Modularized interventions are innovative and provide a more comprehensive and flexible treatment. Similar approaches are likely to enhance treatment of late-life anxious depression, although additional research in this area is needed.

Conclusions and directions for future research

Late-life anxious depression has clinical and public health significance, as it is a common clinical presentation in a variety of geriatric care settings and is associated with increased health risks. There is increased emotional distress, suicidality, and functional impairment and decreased quality of life and health status in patients with late-life anxious depression. Thus, there is a need for improved recognition and treatment of older adults with anxious depression. Further research is critical. One pressing need is to refine the taxonomy of late-life anxious depression. As noted in this review, several models of anxious depression have been advanced. Whether an individual meets criteria for threshold

MDD and/or anxiety disorder diagnosis is prominent in differentiating these conceptualizations. However, since older adults may be more likely to experience and/or report clinically significant but subsyndromal symptoms, the requirement that full criteria for comorbid MDD and anxiety are met may be too stringent for late-life anxious depression. MADD, defined as a mixture of subsyndromal depressive and anxiety symptoms and listed as a disorder for further study (APA 1994), may be a useful model for research on late-life anxious depression. However, even this approach may be too limiting, given that MADD precludes having ever met criteria for a mood or anxiety disorder.

In future research, the term “anxious depression” would be most useful if limited to patients with MDD and prominent symptoms of anxiety, and a unique term should be given to patients with coexisting depressive and anxiety disorders. The criteria for “prominent” anxiety symptoms have been defined in different ways across studies and should be standardized. Researchers have often used cut-off scores on anxiety symptom measures to differentiate, among patients with MDD, those with and without anxious depression. A first step to clarifying the nature of this construct may be to derive empirically the criteria for the anxiety symptoms characteristic of late-life anxious depression. This research must also take into account the level of specificity of anxiety symptoms (eg, identifying symptoms that do not overlap with MDD criteria). These data will facilitate putting forth a universal definition of late-life anxious depression for future research. A similar but broader research aim is to identify subtypes of late-life depression and to define the characteristics of these subtypes (eg, anxious depression may be one subtype of late-life MDD). Finally, risk factors, triggering events, course, psychosocial correlates, and treatment response are all important phenomenological elements to be outlined for MDD subtypes, including anxious depression.

Refining the definition of late-life anxious depression will improve recognition of this condition and allow for development and validation of assessment measures. There are many widely used measures of depression and anxiety (Nezu et al 2000; Antony et al 2001), only a few of which have been developed and validated specifically for older adults (eg, Yesavage and Brink 1983; Wisocki 1988) and none of which specifically assesses for anxious depression among older adults. Measures with simple response choices and uncomplicated language are important in assessment of older adults, and brief screening measures are needed in primary care settings.

It will also be important to consider late-life anxious depression in the context of older adulthood as a developmental phase. Symptoms of depression and anxiety commonly co-occur across the lifespan (eg, Brown et al 2001). Patients with life-long depression and/or anxiety diagnoses age, but the research focus for anxious depression should be on previously unrecognized symptoms or issues newly presenting in geriatric patients. For example, aging is associated with an increase in realistic risks (eg, declining health and cognitive status), and this context must be taken into account when assessing and treating geriatric patients. Losses associated with retirement, decreased independence, and death of friends and loved ones are important factors when working with elderly. These developmental issues highlight the potential role of psychosocial treatments for those with late-life anxious depression. Strengthening resilience, acceptance, and coping within the context of difficult life changes will be an important component for psychosocial treatments for late-life anxious depression.

While consensus guidelines for late-life anxious depression are lacking, researchers are beginning to outline treatment decision-making based on both empirical data and clinical experience (eg, Lenze et al 2002). At present there is no “one size fits all” approach to treatment of late-life anxious depression, and each individual must be treated on the basis of patient characteristics, such as symptom profile, medical comorbidity, and psychosocial stressors. Both pharmacological and psychosocial treatment options should be considered. Additional research is needed to develop psychosocial interventions for patients with late-life anxious depression. In addition, outcome studies will need to evaluate the efficacy and effectiveness of these interventions in various populations. Ultimately, identification of symptom profiles that are predictors of response to different treatments will inform patient-to-treatment matching algorithms.

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