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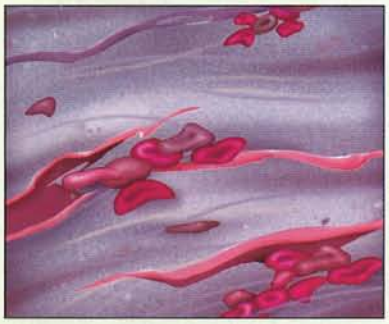

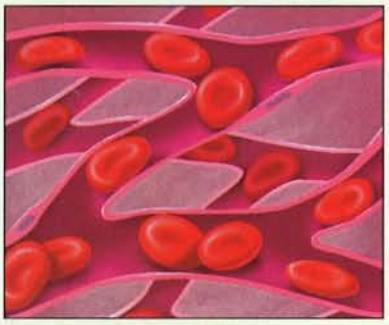

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Recognition and management of social anxiety disorder

Shirah Vollmer, MD

ABSTRACT **Social anxiety disorder is a chronic, disabling condition with serious consequences. The diagnosis is often overlooked, and patients may be inappropriately treated. Since many sufferers are unaware of the condition or too embarrassed to discuss their symptoms, identification depends on careful screening. Physicians must sort through an often complex differential diagnosis. Education, pharmacotherapy, and cognitive behavioral therapy can effectively reduce or eliminate symptoms and restore normal social functioning.**

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Social anxiety disorder, also called social phobia, affects more than 5 million adults in the United States in any given year.[1] It is the most common anxiety disorder overall and the third most widespread psychiatric disorder after major depression and alcohol dependence.[2] Lifetime prevalence ranges from 10%-15%, and 1-month prevalence is 4.5%.[3] Patients tend to be young, single, and of low socioeconomic status.[4] The female-to-male ratio is 3:2.[5] The central feature of the disorder is excessive fear of scrutiny in situations such as speaking, writing, or typing in front of others.

The term social phobia joined the official diagnostic nomenclature in the 1980 *Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III)*.[6] Earlier classifications grouped all phobias together, consonant with a psychoanalytic perspective that phobic symptoms were the product of unacceptable instinctual urges.[7] As it became clear that some individuals feared many social situations,[8] the revised *DSM-III (DSM-III-R)* introduced the generalized subtype of social phobia and deleted the arbitrary *DSM-III* exclusion of persons who met the criteria for avoidant personality disorder.

Two major subtypes are currently recognized, each with apparently unique symptoms, course, morbidity, comorbidities, treatment response, and pathophysiology. Generalized social anxiety disorder describes a pervasive fear of a wide range of social situations. The specific (or nongeneralized) subtype refers to fear of one or more situations, which are most commonly performance activities (such as public speaking).[9]

Despite its prevalence, social phobia tends to be dismissed by sufferers, the public, and even health care providers as mere shyness. Those

who have the disorder are frequent users of medical services without necessarily receiving appropriate treatment, despite a high use of psychotropic drugs.[10]

Notwithstanding the number of effective options, social anxiety disorder is not easy to treat. Managing a comorbid condition sometimes helps determine optimal therapy for the primary social phobia. Recognizing and appropriately treating these patients can prevent long-term personal and professional disability.

Exploring the causes

The origin of social anxiety disorder remains unknown. As with other psychiatric disorders, it is unlikely that a single defect is responsible. Some evidence suggests that neurobiologic factors are involved, with various studies implicating dysfunctions in adrenergic,[11] γ-aminobutyric acid (GABA),[12] dopaminergic,[13] and serotonin neurotransmission. Neuroimaging studies have detected blood flow abnormalities in areas of the brain believed to be important in planning affective responses and an awareness of body position—both of which play significant roles in social anxiety disorder.[14,15]

Behavioral theories can be considered from three perspectives: direct conditioning (fear develops in response to a traumatic event), vicarious learning (observing another person in a traumatic situation), and information transfer (verbal or nonverbal).[16]

Studies have also focused on genetic and environmental factors. Compared with other disorders, the degree of social phobia is higher in first-degree relatives of social phobics.[17] Prevalence is increased as much as threefold among relatives of affected individuals.[18] In an adoption study, both the biological and adoptive mothers of shy children were more socially anxious and less sociable than those of nonshy children.[19]

Defining the disorder

The hallmark features of social phobia are a marked fear of performance, scrutiny, and being embarrassed. Sufferers are excessively concerned about being humiliated or judged negatively. Most are afraid of three to five specific situations, and some fear almost all social situations.[20] These people tend to be self-conscious and self-critical, often exhibiting physical symptoms such as blushing, palpitations, sweating, and trembling. They interpret situations negatively, believing, for example, that others regard them as foolish, inadequate, or boring. In this vicious cycle, anticipatory anxiety about a feared setting leads to avoidance, which in turn exacerbates both anticipatory and social anxiety.

The causes of these fears of embarrassment or negative evaluation vary widely. Some are worried that people will notice a symptom of anxiety such as blushing, hand or vocal trembling, or sweating. Others fear being humiliated—speaking awkwardly or making a mistake. There is some awareness that the fears are irrational or excessive.

Onset is early, at a mean age of 15.5 years; onset after age 25 is uncommon.[21] Onset before 11 years of age bodes a poor recovery.[22] The condition can begin insidiously or may abruptly follow a stressful or humiliating experience.[23] Fluctuations in severity of impairment can parallel life stressors and demands.[24] Social phobia is a chronic disorder, with an average duration of 20 years. It is unlikely to remit spontaneously. Nevertheless, most sufferers are oblivious to the condition and never seek treatment.[4]

Avoidance is the greatest source of impairment. It may be subtle, as in avoiding eye contact or not initiating social conversation, or extreme, as in shunning all interpersonal contacts outside immediate family. More than half of patients have trouble meeting educational goals, maintaining employment, and developing relationships[4] and thus are often plagued with financial difficulties, more likely to live with their parents, and unable to date or maintain romantic relationships. Some, particularly those with comorbid conditions, are at increased risk of suicide.[4] The suicide attempt rate is 16% in those with comorbidities and 1% in those without comorbidities.[22]

Recognizing social anxiety disorder

Individuals with anxiety disorders seek general medical treatment as often as specialty mental health services.[21] But because social phobics fear

Table 1

Diagnostic criteria for social phobia

A. Marked and persistent fear of one or more social or performance situations in which the individual is exposed to unfamiliar people or to possible scrutiny by others. The person fears acting in a way (or showing anxiety symptoms) that will be humiliating or embarrassing. In children, there must be evidence of a capacity for age-appropriate social relationships with familiar people, and the anxiety must occur in peer settings, not just in interactions with adults.

B. Exposure to the feared social situation almost always provokes anxiety, possibly in the form of a situationally bound or situationally predisposed panic attack. In children, the anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people.

C. The individual recognizes the fear as excessive or unreasonable. In children, this feature may be absent.

D. The person avoids the feared social or performance situations or endures them with intense anxiety or distress.

E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the individual's normal routine, occupational (or academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.

F. Duration of at least 6 months in persons under 18 years of age.

G. The fear or avoidance is not caused by the direct physiologic effects of a substance (such as a drug of abuse or prescribed medication) or a general medical condition and is not better accounted for by another mental disorder such as panic disorder with or without agoraphobia, separation anxiety disorder, body dysmorphic disorder, a pervasive developmental disorder, or schizoid personality disorder.

H. If a general medical condition or another mental disorder is present, the fear in criterion A is unrelated to it (for example, the fear is not of stuttering, trembling in Parkinson's disease, or exhibiting abnormal eating behavior in anorexia nervosa or bulimia nervosa).

Specify if generalized, in which the fears include most social situations; also consider the additional diagnosis of avoidant personality disorder.

social interactions, they may be uncomfortable discussing their symptoms and initially visit a primary care physician with nondescript complaints.[21] Consequently, the diagnosis is often missed or delayed until a more well-known comorbid condition (such as major depressive disorder or alcoholism[22]) becomes evident[24] or when symptoms such as sweating, blushing, or trembling have become sufficiently bothersome.[22]

Diagnosis relies on patient history and the eight *DSM-IV* diagnostic criteria[23,25] (Table 1). The diagnosis should be considered in patients with hyperhidrosis, flushing, tremor, and white-coat hypertension; those with symptoms of anxiety such as chest pain, palpitations, or dizziness; and those diagnosed with another anxiety disorder, depression, or substance abuse.[26]

When screening for social anxiety disorder, the examining physician must be nonjudgmental, since patients fear being judged. Evaluation can begin by reviewing various social and performance situations.[23] A useful question is "How is it for you when you're the center of attention?" Strong positive responses to the following three questions are sensitive and specific for social anxiety disorder[26]: "Is being embarrassed or looking stupid one of your worst fears? Does fear of embarrassment make you avoid doing things or speaking to people? Do you avoid activities in which you are the center of attention?" Other helpful questions are "How is it for you when you eat in public?" and "Do you find it hard to interact with people?"

The physician must determine the severity and frequency of any panic attacks or hyperarousal and the degree of avoidance and functional im-

pairment. The diagnosis can be made only if daily routines, occupational or academic functioning, or social life is significantly affected by avoidance, fear, or anxious anticipation of a social or performance situation or if the patient is markedly distressed about the phobia.[23] A useful question to gauge the level of functional impairment is: "How would your life be different if you were free of social anxiety?"

Zeroing in on the diagnosis

Social anxiety disorder must be differentiated from other psychiatric conditions that include major depression with social withdrawal, panic disorder with agoraphobia, and generalized anxiety disorder. The defining characteristic of social phobia is that fear and anxiety are limited to social or public situations or anticipation of such situations. The chief symptom that distinguishes social phobia from other anxiety disorders is blushing.[22]

Other differentiating features include muscle twitching, trembling, sweating, and speech block in social anxiety disorder and breathing problems, dizziness, palpitations, chest pains, blurry vision, headaches, and ringing in the ears in panic disorder.[27] In addition, persons with social phobia rarely fear dying during an anxiety episode, whereas fear of dying, losing control, or "going crazy" during an attack are classic features of panic disorder. The reason for the patient's fear is key—fear of symptoms versus fear of social interaction.[22]

The significant overlap between social anxiety disorder (especially the generalized type) and avoidant personality disorder is controversial. Most researchers believe the main distinction is quantitative rather than qualitative. Avoidant personality disorder seems to signify more severe illness.[28]

Patients with pervasive developmental disorder and schizoid personality disorder avoid social situations because they have no desire to relate to others. Those with social anxiety disorder would seek personal relationships if they were not so anxious.

Persons with social anxiety that is secondary to medical causes such as a stutter or tremor are excluded from the diagnosis of social anxiety disorder, even though the anxiety symptoms and treatment responses tend to be similar.

The term secondary social phobia has been used to describe phobic avoidance in patients with a comorbid psychiatric or medical condition such as Parkinson's disease, obesity, or severe disfigurement from burns.[8] *DSM-IV* categorizes these conditions as "anxiety disorder not otherwise specified."

Two childhood temperament characteristics, namely shyness and behavioral inhibition, share some clinical features with social anxiety disorder,[19] but it is unclear where shyness ends and social phobia begins. The former is more heterogeneous, usually self-defined, and lacking in specific criteria. The distinction may center on such issues as the degree of impairment and the extent of avoidance.[29]

Chronic depression is a frequent consequence of social phobia, and many patients with the latter initially report depressive symptoms. A careful history usually reveals that symptoms of social anxiety preceded depression.

People with body dysmorphic disorder (a self-perception of ugliness or disfigurement of one or more parts of the body), major depressive disorder, dysthymic disorder, or schizophrenia may be socially anxious and avoid social situations. But they should not also be diagnosed with social phobia if anxiety and avoidance occur only with the other disorder and are better accounted for by that one.

Commonly associated conditions

About 70%-80% of patients have at least one other psychiatric disorder.[18] Social phobia precedes the other in 77% of cases, suggesting that these persons may be predisposed to additional mental illness. Comorbidity worsens symptom severity, causes more disability, and increases suicidal tendencies.[22]

The lifetime prevalence of major depression in social phobia patients in primary care settings ranges from 40%-50%,[30] and 24%-35% abuse alcohol.[21] Individuals frequently self-medicate with alcohol or other drugs in an attempt to moderate the anxiety surrounding social interactions.

Avoidant personality disorder may be another

common comorbidity, but its effect on the outcome of treatment for social phobia is not currently known.

Nonpharmacologic management

• *Education* Sufferers are often ashamed of their symptoms, have never talked about them, and are convinced that their fears are strange and unique. Education thus plays a major role in demystifying the condition and helping patients understand it as a defined disorder that affects a substantial number of people. Education and social support are also important in managing isolation and communication difficulties.

• *Psychosocial therapies* Elements of cognitive behavioral therapy include exposure to feared situations in a controlled setting, cognitive restructuring (correcting dysfunctional thoughts that contribute to and amplify anxiety and modifying the tendency to focus on potential failure in social situations), and social skills training (to reduce avoidance of social interactions).[31,32]

Cognitive behavioral therapy, which can be group or individual, has been shown to maintain treatment gains over time. It may also provide synergistic or additive benefits to pharmacotherapy, although this effect has not been evaluated in large-scale studies. Further research is needed to determine the efficacy of combined therapy and that of cognitive behavioral therapy in helping to prevent relapse after medication is discontinued. Unfortunately, practical referral sources may not always be available because of the relatively limited number of trained therapists.

• *Psychotherapy* The biological and psychological factors underlying social phobia may be interdependent, and psychotherapy may thus be useful in helping patients to recognize the psychodynamic themes such as shame, guilt, and separation anxiety behind their symptom profile.

Drug therapy options

The goals of pharmacotherapy are to relieve anticipatory anxiety, reduce phobic avoidance and physiologic stress, and lessen disability. A number of effective medications are available (Table 2, page 68). A limitation of all agents studied to date is the substantial rate of relapse, even with prolonged treatment. In particular, stopping a selective serotonin reuptake inhibitor (SSRI) within 6 months carries a relapse rate of 60%-70%.[33] Because social phobia is a chronic, often unremitting condition, long-term treatment (at least 12 months) is usually the norm.[22]

The clinician-administered Liebowitz Social Anxiety Scale evaluates the three principal domains that can improve with drug treatment—symptoms, functionality or impairment, and well-being. The 24 questions assess the degree of fear and avoidance of social and performance situations[34] (Table 3, page 70).

Augmentation strategies should be considered for patients with a partial response.[5] A treatment response is considered to be a steady, clinically significant improvement in which the individual has more than minimal symptoms but not the entire range of symptoms. Full remission is a near-total resolution of symptoms for at least 3 months.[22]

• *SSRIs* have shown substantial short-term efficacy in clinical trials and are emerging as a first-line treatment for social phobia.[35,36] They also have the advantage of effectively managing common comorbid conditions such as depression, panic disorder, obsessive compulsive disorder, generalized anxiety disorder, and posttraumatic stress disorder. Given the frequency of concurrent substance abuse, their safety when combined with alcohol and lack of abuse and dependency potential are important considerations. SSRIs have a favorable side-effect profile and are relatively safe in overdose.

Paroxetine HCl (Paxil) has been approved by the Food and Drug Administration (FDA) for the treatment of social phobia. Strong evidence indicates that it reduces fear, anticipatory anxiety, and disability and is well tolerated.[22] In a recent randomized, double-blind, placebo-controlled study of 183 patients with generalized social anxiety disorder, 55% in the paroxetine group showed improvement compared with 24% in the placebo group.[36] Liebowitz Social Anxiety Scale scores were reduced by 39% in the former and 17% in the latter.

The initial dosage is 10 mg/d for 2-4 weeks, which can be increased as necessary.[22] Improve-

Table 2

Pharmacotherapy for social anxiety disorder

Agent	Dosage	Comment
SSRIs		
Fluoxetine HCl (Prozac)	10-60 mg/d	SSRIs have no potential for abuse or dependency, making them good choices for patients with substance abuse problems; paroxetine is FDA approved for social phobia
Paroxetine HCl (Paxil)	Start at 20 mg/d; usual range, 20-60 mg/d	
MAOIs		
Phenelzine sulfate (Nardil)	Start at 15 mg tid, titrate to 60-90 mg/d in divided doses	Side effects and necessary dietary and drug restrictions limit MAOIs to patients who do not respond to other treatments
Tranylcypromine sulfate (Parnate)	Start at 15 mg tid, titrate to 30-60 mg/d in divided doses	
Benzodiazepines		
Alprazolam (Xanax)	Start at 0.25-0.5 mg tid, titrate to maximum of 4 mg/d in divided doses	Benzodiazepines have the potential for dependence; reserve for patients with severe symptoms; rapid onset of action
Clonazepam (Klonopin)	Start at 0.25-0.5 mg tid, titrate to 1-3 mg/d	
Lorazepam (Ativan)	Start at 2-3 mg bid or tid, titrate to 6 mg/d in divided doses	
β-Blockers		
Propranolol HCl (Inderal)	10-40 mg as needed	β-Blockers reduce peripheral symptoms of anxiety (tremors, palpitations); contraindicated in patients with sinus bradycardia, CHF; propranolol is contraindicated in patients who have asthma
Atenolol (Tenormin)	50-100 mg as needed	

Key: CHF = congestive heart failure; FDA = Food and Drug Administration; MAOI = monoamine oxidase inhibitor; SSRI = selective serotonin reuptake inhibitor.

ment should be seen within 8 weeks, but several months of therapy may be needed to obtain full remission.[21]

• *Monoamine oxidase inhibitors (MAOIs)* A number of controlled trials have documented the efficacy of MAOIs (phenelzine sulfate [Nardil] and tranylcypromine sulfate [Parnate]) in patients with social phobia.[37,38] But despite proven efficacy, their use is limited by concerns about hypertensive reactions and serotonin syndrome, which require strict adherence to dietary restrictions on tyramine-containing foods and the avoidance of sympathomimetic agents. Other side effects are weight gain, insomnia, and sexual dysfunction. As a result, MAOIs are generally reserved for those who do not respond to safer and better-tolerated interventions.

• *Benzodiazepines* In a placebo-controlled trial, 78% of patients treated with the high-potency benzodiazepine, clonazepam (Klonopin), were much or very much improved, compared with 20% in the placebo group.[39] Benzodiazepines with longer half-lives avoid rebound anxiety between doses. These agents have a potential for dependence, however, and should be used only for rapid anxiety reduction in patients with severe symptoms. Clonazepam can be initiated at 0.5 mg tid, although some may not tolerate more than 0.25 mg tid because of drowsiness.

The advantages of benzodiazepines are their

Table 3

Liebowitz Social Anxiety Scale

Complete the following questionnaire, basing the answers on your experience in the past week.
Fear or anxiety is rated as follows: 0 = not at all; 1 = mild; 2 = moderate; 3 = severe.
Avoidance is rated as: 0 = never; 1 = occasionally; 2 = often; 3 = usually.

	Fear or anxiety	Avoidance
Telephoning in public (speaking on the phone in a public place)	_____	_____
Participating in small groups (having a discussion with a few other people)	_____	_____
Eating in public places—do you tremble or feel awkward handling food?	_____	_____
Drinking with others in public places (any beverage, including alcohol)	_____	_____
Talking to people in authority (such as a boss or teacher)	_____	_____
Acting, performing, or giving a talk in front of a large audience	_____	_____
Going to a party (at which you know some but not all of the people)	_____	_____
Working while being observed (job, school work, or housework)	_____	_____
Writing while being observed (such as signing a check in a bank)	_____	_____
Calling someone you don't know very well	_____	_____
Talking with people you don't know very well	_____	_____
Meeting strangers (who are of average importance to you)	_____	_____
Urinating in a public bathroom (assuming others may be present)	_____	_____
Entering a room where others are already seated (a small group and no one has to move seats for you)	_____	_____
Being the center of attention (telling a story to a group of people)	_____	_____
Speaking up at a meeting (while seated in a small meeting or standing up in a large meeting)	_____	_____
Taking a written test	_____	_____
Expressing appropriate disagreement or disapproval to people you don't know very well	_____	_____
Making (appropriate) eye contact with people you don't know very well	_____	_____
Giving an oral report to a small group	_____	_____
If you are single, trying to initiate a relationship with a stranger	_____	_____
Returning items to a store that normally accepts returns	_____	_____
Giving an average party	_____	_____
Resisting a high-pressure salesperson (avoidance refers to listening to the sales pitch for too long)	_____	_____

Scoring: 55-65 = moderate social phobia; 65-80 = marked social phobia; 80-95 = severe social phobia; > 95 = very severe social phobia.
Source: Adapted from Liebowitz MR. Social phobia. In: Klein DF, ed. Mod Probl Pharmacopsychiatry. Anxiety. Vol 22. Basel, Switzerland: Karger;1987:141-173.

rapid onset of action, efficacy, and tolerability; disadvantages include sedation, ataxia, cognitive impairment, and the potential for abuse and withdrawal problems. Because of these side effects, benzodiazepines are not generally considered first-line therapy, but may be combined with an SSRI to provide rapid anxiolysis when initiating antidepressant therapy.

• *β-Blockers* Limited social phobia, in which symptoms emerge only during specific performance situations, may be treated with β-blockers on an as-needed basis to reduce peripheral symptoms such as tremor and palpitations. Although atenolol (Tenormin) and propranolol HCl (Inderal) were no better than placebo in one controlled investigation,[40] anecdotal experience suggests benefits for specific and circumscribed performance anxiety. Propranolol, 10 mg, is taken 45-60 minutes before a performance, with the effects lasting about 4 hours. A test dose is always advisable. β-blockers cannot be used in patients with asthma, so a thorough medical history is important.[22] Controlled trials in discrete social phobia are needed.

Conclusion

Social anxiety disorder, the third most common psychiatric disorder in this country, is often unrecognized. An awareness of its characteristics and its effective treatments will help clinicians recognize and treat or refer these patients appropriately, thus helping reduce complications and chronicity. Psychopharmacology has a high rate of success for what is otherwise a chronic and disabling illness. Management requires a thoughtful integration of therapeutic modalities. The initial selection of pharmacotherapy or cognitive behavioral therapy may hinge on patient preference and the availability of trained cognitive behavioral therapists. ■

Disclosure *Dr. Vollmer has no relationships with any commercial entity that might represent a conflict of interest with the content of this article.*

SELF-EXAMINATION

1. Social anxiety disorder affects about ___ million people in any given year in this country.
   a) 1
   b) 3
   c) 5
   d) 10

2. Which of the following statements about the onset and course of social phobia is not true?
   a) Mean age at onset is 15.5 years.
   b) Onset after 11 years of age is associated with a poor prognosis.
   c) Average duration of the disorder is 20 years.
   d) Spontaneous remission is unlikely.

3. The suicide attempt rate among social anxiety disorder patients with comorbidities is 16 times higher than among those without comorbidities.
   a) true
   b) false

4. About ___% of social phobia patients have at least one other psychiatric disorder.
   a) 10
   b) 25
   c) 50
   d) 75

5. Which of the following statements about pharmacotherapy for social anxiety disorder is not true?
   a) Improvement is usually seen within 4 weeks after starting SSRI therapy.
   b) Paroxetine is FDA-approved for the treatment of social phobia.
   c) MAOIs should be reserved for patients who do not respond to other therapies.
   d) Benzodiazepines are appropriate for those with severe symptoms who require a rapid reduction of anxiety.

Answers at end of reference list.

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■ *Answers: 1)c, 2)b, 3)a, 4)d, 5)a*