Social Anxiety Disorder


Abstract (Summary)
Social anxiety disorder, also known as social phobia, is one of the most common psychiatric disorders, with a lifetime prevalence of 12%.1 About half that prevalence represents persons who have the generalized type of the disorder, with fear or avoidance encompassing most social situations.2 The remainder report fear and avoidance mainly limited to public speaking or other performance situations, representing the type of this disorder sometimes referred to as nongeneralized or performance type social anxiety disorder. Cognitive-behavioral therapy for social anxiety disorder addresses the vicious cycle of anticipatory negative thoughts ("My voice will shake and the audience will think I'm crazy") and behaviors (e.g., avoiding practicing before speaking in public), leading to increased situational anxiety and maladaptive behavior (e.g., cutting the speech short) and to negative self-appraisals ("My speech was a disaster") and further avoidance behavior.

Full Text (4588 words)

Copyright Massachusetts Medical Society, Publishing Division Sep 7, 2006

[Headnote]
This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the author’s clinical recommendations.

A 28-year-old man reports feeling anxious and self-conscious around people in school, work, and social situations since his early teens. He appears shy and, on questioning, describes avoidance of speaking up in work meetings, attending social gatherings, and dating. He desperately wants to be more socially active but fears he will appear nervous and embarrass himself. How should he be evaluated and treated?

THE CLINICAL PROBLEM

Social anxiety disorder, also known as social phobia, is one of the most common psychiatric disorders, with a lifetime prevalence of 12%.1 About half that prevalence represents persons who have the generalized type of the disorder, with fear or avoidance encompassing most social situations.2 The remainder report fear and avoidance mainly limited to public speaking or other performance situations, representing the type of this disorder sometimes referred to as nongeneralized or performance type social anxiety disorder. Table 1 summarizes the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, text revision.3

Social anxiety disorder typically begins during the early teenage years1,4 and is chronic. Although social anxiety disorder is more common among women than among men, approximately equal numbers of men and women seek treatment for it. Persons seeking treatment often have had symptoms for 10 years or more, and coexisting psychiatric disorders are common. Among such persons, the lifetime rate of phobias is greater than 50%; major depression and alcohol abuse occur in 15 to 20% of cases.4

Social anxiety disorder differs from shyness and performance anxiety in its greater severity, pervasiveness, and resultant distress and impairment.5 Persons with social anxiety disorder may avoid important activities, such as attending classes and meetings, or attend but avoid active participation. They achieve less in school and work and are less likely to marry than people who do not have the disorder.6 In primary care settings, social anxiety disorder contributes to poor functioning and missed work,7 yet most cases go untreated.8

Both heredity and environment contribute to the development of social anxiety disorder.9 Toddlers who appear to be shy and have inhibited temperament are at increased risk for the development of social anxiety disorder by the time they reach their teens, although the disorder does not develop in most shy children.10 Overprotective and hypercritical parenting has been associated with social anxiety disorder, although the extent to which such parenting is a contributing cause, as compared with a response to a child with social anxiety, is unclear.11 Neuroimaging studies in affected persons have shown increased reactivity in the amygdala to social cues, such as faces.12 Other studies have shown abnormalities in serotonin and dopamine systems.13 Performance-type social anxiety disorder is associated with increased reactivity in the autonomie nervous system in feared situations.14

Table 1. Diagnostic Criteria for Social Anxiety Disorder.*

STRATEGIES AND EVIDENCE

EVALUATION

People who have social anxiety disorder often have anxiety in the presence of authority figures and are self-conscious when undergoing a physical examination. They may avoid mentioning their social anxiety because of shame or fear that it will not be taken seriously. A set of three screening questions regarding avoidance of embarrassment, avoidance of being the center of attention, and fear of being embarrassed or looking stupid have high sensitivity (89%) and specificity (90%) for the generalized type of social anxiety disorder, and responses indicating fear and avoidance (positive responses) should be followed by further inquiry (Table 2).15

The diagnosis of social anxiety disorder is made on the basis of the clinical presentation. Patients often report fear of embarrassment as well as more general fear of being evaluated negatively by others.16 Many fear that others will notice their physical manifestations of anxiety, such as sweating, trembling, and blushing, and they overestimate the visibility of these features. Panic attacks may occur in social anxiety disorder, but unlike those in panic disorder, these attacks occur only in relation to current or anticipated social situations. Whereas worry and symptoms of anxiety are also characteristic of generalized anxiety disorder, in social anxiety disorder these features are associated predominantly with social situations.*

In major depressive disorder, the coexistence of social anxiety disorder may increase the risk of suicide.17 Patients with alcoholism and social anxiety disorder may particularly avoid group-based treatments, such as Alcoholics Anonymous, and may be more likely to have a relapse than those who do not have these two disorders concomitantly.18

In persons whose social anxiety and avoidance of social situations appear to be completely secondary to embarrassing symptoms of another medical condition such as essential tremor, stuttering, or obesity, the condition does not technically meet the diagnostic criteria for social anxiety disorder.3 Nevertheless, persons with clinically significant secondary social anxiety may benefit from therapies used in the treatment of primary social anxiety disorder.19

TREATMENT

Established treatments for social anxiety disorder include cognitive-behavioral therapy and pharmacotherapy.20,21 The primary goal of treatment is to reduce social anxiety to manageable levels, but even modest reductions in avoidance and discomfort may be highly valued by affected persons.

Cognitive-Behavioral Therapy

Cognitive-behavioral therapy for social anxiety disorder addresses the vicious cycle of anticipatory negative thoughts ("My voice will shake and the audience will think I'm crazy") and behaviors (e.g., avoiding practicing before speaking in public), leading to increased situational anxiety and maladaptive behavior (e.g., cutting the speech short) and to negative self-appraisals ("My speech was a disaster") and further avoidance behavior. Techniques for cognitive restructuring help the patient identify and question maladaptive thoughts and then develop alternative perspectives. Behavioral techniques known as therapeutic exposure introduce the patient to feared situations in a graduated fashion while the patient learns to use cognitive strategies, sometimes augmented by relaxation techniques, to manage anxiety.

Cognitive-behavioral therapy has been studied in individual and group formats and typically consists of 12 to 16 weekly sessions, each lasting 50 to 90 minutes. A workbook can provide supplementary educational materials and
homework exercises. The therapist and the patient devise a hierarchy of feared situations, which serves as a template for exposure exercises. The therapist trains the patient in cognitive restructuring. For example, persons who are fearful of speaking to others are helped to recognize that, even if they speak in a voice that shakes, others are unlikely to notice or care, and they can still get the point across. Patients also learn methods to use to replace unhelpful expectations ("I shouldn't be anxious at a party") with constructive behavioral goals ("I'll start two conversations at the party"). They practice using these methods while being exposed to feared situations in role-playing with the therapist and in homework assignments.

Numerous open and controlled trials involving patients who have generalized or performance-type social anxiety disorder have provided evidence of the efficacy of this approach, as compared with no treatment, educational support groups, and placebo. Clinical improvement typically becomes apparent after 6 to 12 weeks of therapy and may progress over several months. In clinical trials, one half to two thirds of patients have been considered to have a response at 12 weeks (on the basis of global assessments that incorporate clinically meaningful improvements in social anxiety, avoidance of feared situations, and associated impairment in functioning). In one study, at the 5-year follow-up, 89% of patients who had completed a course of cognitive-behavioral therapy were considered to have clinical improvement, as compared with 44% of control subjects who had completed a course of educational therapy.

Pharmacotherapy

Placebo-controlled, randomized trials have demonstrated the efficacy of several classes of medication for the treatment of social anxiety disorder (Table 3). Most clinical trials have involved predominantly or exclusively patients with the generalized type of social anxiety disorder, in whom the high frequency and unpredictability of anxiety-provoking situations warrant standing daily doses of medication, rather than as-needed use of medication.

Table 2. Self-Administered Screening Questions for Generalized Social Anxiety Disorder.*

Selective Serotonin-Reuptake Inhibitors

The selective serotonin-reuptake inhibitors (SSRIs) and the serotonin-norepinephrine-reuptake inhibitor (SNRI) venlafaxine (Effexor, Wyeth-Ayerst) have emerged as first-line pharmacotherapy for the generalized type of social anxiety disorder. The efficacy and safety of these medications in the treatment of social anxiety disorder have been established in more than 20 randomized, controlled trials. Response rates typically range from 50% to 80% after 8 to 12 weeks of treatment. However, studies of fluoxetine (Prozac, Lilly) in social anxiety disorder have had inconsistent results (one of three controlled trials showed efficacy). Head-to-head trials comparing SSRIs with one another or with an SNRI have not demonstrated that any one medication is superior to the others in the treatment of social anxiety disorder.

Treatment with an SSRI or an SNRI is commonly initiated at half the usual effective dose, and the dose is increased after 1 week (Table 3). The dose-response curve for these agents is relatively flat in social anxiety disorder, but because some patients may benefit from higher doses, clinicians commonly increase the dose as tolerated in those who have no response after 4 weeks of the therapy. Although many patients report improvement during the first few weeks of treatment, more than a quarter of those who do not have a response at week 8 may have a response during an additional 4 weeks of treatment at the same dose, suggesting that an initial trial should last 12 weeks. Patients who have a response during those 12 weeks should receive maintenance treatment to minimize the risk of relapse. The usefulness of these medications during longer periods of treatment is limited in some cases by adverse effects, including sexual dysfunction and weight gain (Table 3).

Table 3. Medications Used in the Treatment of Social Anxiety Disorder.*

Benzodiazepines

Although evidence of the efficacy of benzodiazepines in social anxiety disorder is more limited than that for SSRIs and SNRIs, benzodiazepines are commonly used in the treatment of patients who cannot tolerate or do not have an adequate response to SSRIs or venlafaxine. The relatively long-acting benzodiazepine clonazepam (Klonopin, Roche), given daily in divided doses, appeared to be highly effective in generalized social anxiety disorder in a controlled trial (response rate, 80%) and in several open trials. A single controlled trial of alprazolam (Xanax, Pharmacia and Upjohn) was inconclusive. In most patients, tolerance rapidly develops to the sedative effects of benzodiazepines, but not to the anxiolytic effects. Long-term use (more than 2 weeks) may result in physical dependence, and abrupt discontinuation of the medication should be avoided because of the risk of rebound anxiety and withdrawal symptoms (including tremor, insomnia, and in rare cases, seizures). A gradual tapering of the dose of
clonazepam (a decrease of 0.25 mg every 2 weeks), however, has been shown to be well tolerated by patients with social anxiety disorder. Benzodiazepines are not recommended as monotherapy for patients who have major depression in addition to social anxiety disorder and should be avoided in patients with a history of substance abuse.

Other Medications

Gabapentin (Neurontin, Pfizer) and pregabalin (Lyrica, Pfizer) are structurally related anticonvulsants that have been reported to be significantly superior to placebo in reducing symptoms of generalized social anxiety disorder in single controlled trials, although response rates for each were less than 45%.\textsuperscript{41,42} In a recent small, placebo-controlled trial, mirtazapine (Remeron, Organon), an antidepressant with a mechanism of action different from that of other available antidepressants, was shown to be effective at a fixed dose of 30 mg per day in women with social anxiety disorder.\textsuperscript{43} The monoamine oxidase inhibitor (MAOI) phenelzine (Nardil, Parke-Davis) has been shown to be effective in social anxiety disorder in randomized clinical trials,\textsuperscript{21,28,44} but it is generally reserved for the treatment of refractory disease because of the risk of severe hypertensive reaction to dietary tyramine or sympathomimetic medication. Moclobemide, a reversible inhibitor of monoamine oxidase A, appears to be safer than standard MAOIs, although metaanalyses have found it less effective in social anxiety disorder than the SSRIs\textsuperscript{21}; it is not available in the United States.

MAINTENANCE THERAPY

Several controlled studies have shown that the initial clinical improvement seen with pharmacologic treatment generally persists during up to 12 months of maintenance treatment.\textsuperscript{21,45,46} Discontinuation of pharmacotherapy after 5 to 12 months of treatment has resulted in relapse rates of 20% to 60% during follow-up periods of 3 to 6 months; discontinuation of therapy after only 2 to 3 months appears to result in higher rates of relapse than when therapy is continued for a longer period. Although more data are needed, these findings suggest that continuing medication for 6 to 12 months, followed by tapering and discontinuation, and then follow-up for relapse, is reasonable.

Randomized trials directly comparing cognitive-behavioral therapy with pharmacotherapy in populations with predominantly generalized social anxiety disorder have not demonstrated consistently greater efficacy for either approach,\textsuperscript{24-28} although one meta-analysis of trials of 6 to 16 weeks’ duration suggested that pharmacotherapy is superior in the short term.\textsuperscript{23} Trials comparing the outcomes of these two approaches at 6 to 12 months after discontinuation of the therapy, however, have suggested that cognitive-behavioral therapy has more durable benefit.\textsuperscript{24,45} Studies of combined cognitive-behavioral and pharmacologic treatment\textsuperscript{24,25} have not demonstrated efficacy superior to that of either approach alone, although the combined treatment may be helpful for some patients.

Nongeneralized Social Anxiety

Medication may be useful on an as-needed basis in the treatment of patients with nongeneralized (performance-type) social anxiety disorder, whose feared situations (such as public speaking) occur predictably and with less than daily frequency (Table 3). Data to guide treatment in this setting are derived primarily from controlled trials involving persons with performance anxiety, rather than those who have received a formal diagnosis of performance-type social anxiety disorder.

Several studies suggest that beta-blockers such as propranolol (Inderal, Wyeth-Ayerst), taken as needed about an hour before a performance, may be helpful in performance-type social anxiety disorder.\textsuperscript{47-49} Benzodiazepines may also be useful.\textsuperscript{47} These are typically taken at least 30 minutes before a performance, and the effect of a single dose may last up to several hours. Although tolerance and physical dependence are unlikely to develop when benzodiazepines are used less than daily, psychological dependence may occur, and the immediate side effects of sedation and cognitive dulling sometimes outweigh the anxiolytic benefits. With either beta-blockers or benzodiazepines, patients may benefit from being given a trial dose outside their feared situation to confirm tolerability.

AREAS OF UNCERTAINTY

RESISTANCE

Data from controlled studies are lacking to guide the optimal treatment of patients who do not have a response to an initial course of pharmacotherapy, and clinically useful predictors of response to particular therapies are also lacking. Clinical experience suggests that patients who do not have a response to one medication may have a response to another of the same or a different class or may benefit from cognitive-behavioral therapy. Clinical experience also
suggests that a partial response to an SSRJ or SNRI may be augmented by cognitive-behavioral therapy or by use of a benzodiazepine, gabapentin, or pregabalin. A MAOI is contraindicated in combination with an SSRJ or SNRI because of the risk of the serotonin syndrome, which is characterized by neuromuscular and autonomic hyperactivity and agitation.

TREATMENT OF CHILDREN AND ADOLESCENTS

Social anxiety disorder in children and adolescents may sometimes be difficult to differentiate from age-appropriate social awkwardness, but treatment of persistent and impairing symptoms holds promise for restoring normal social development and preventing further impairment. Although the treatment of children has been studied less than the treatment of adults, cognitive-behavioral therapy appears to be effective in children and adolescents with social anxiety disorder. Several placebo-controlled trials have also provided evidence of the efficacy of pharmacotherapy with an SSRI or SNRI for social anxiety disorder in children 6 to 17 years of age.50 A recent report51 of the increased risk of suicidal ideation among adolescents receiving SSRIIs or SNRIIs, although derived primarily from studies of depression in adolescence, suggests that youths prescribed these medications for social anxiety disorder must be closely monitored.

GUIDELINES

No formal guidelines for the management of social anxiety disorder have been issued by U.S. or European professional societies.

SUMMARY AND RECOMMENDATIONS

Social anxiety disorder is common, impairing, and responsive to treatment, yet it remains underrecognized. Randomized, controlled trials support the use of either cognitive-behavioral therapy or pharmacotherapy. For most patients, such as the one described in the vignette, I would initiate treatment with cognitive-behavioral therapy, given the data supporting its potential long-term benefit. SSRIIs or venlafaxine are alternative first-line treatments for patients who prefer medication, have prominent coexisting depression, or lack access to a trained therapist. I would start with a low dose for 1 week, to minimize initial side effects, then increase it to the usual effective dose for several weeks, and if the response is incomplete, gradually increase to the maximal dose, as tolerated. Patients should be encouraged to try to increase their social activities gradually, and they may benefit from adjunctive use of self-help literature oriented toward a cognitive-behavioral approach. Because the data suggest a higher rate of relapse with a shorter duration of therapy, I would recommend that when medication is used it be continued for 6 to 12 months, followed by an attempt to taper and discontinue the medication, although the risk of relapse must be recognized. In patients with recurrent symptoms, treatment may be reinstituted for a longer period.

The Anxiety Disorders Association of America (www.adaa.org) and the National Institute of Mental Health (www.nimh.nih.gov) are good sources of information for patients. The site of the Anxiety Disorders Association of America includes listings of clinicians with expertise in the treatment of social anxiety disorder.

Dr. Schneier reports having received grants from Eli Lilly and Forest. No other potential conflict of interest relevant to this article was reported.

[Photograph]
Lighthouse overlooking Lake Superior

Choose the single best answer to each of the questions below.

Social Anxiety Disorder


QUESTION 1

Which one of the following statements is true regarding social anxiety disorder?

A. The majority of persons with social anxiety disorder also have major depression.
B. Only a small minority of patients with social anxiety disorder have the generalized type of the disorder.

C. Social anxiety disorder is more common among men than among women.

D. Social anxiety disorder typically begins during the early teenage years.

QUESTION 2

Which one of the following statements most closely characterizes cognitive-behavioral therapy for social anxiety disorder?

A. Patients are generally taught to recognize and reprimand themselves for unhelpful responses.

B. Patients are guided to explore the influences that contributed to the unhelpful reaction.

C. Patients are guided through a hierarchy of feared situations.

D. Patients are helped to become tolerant to the Stressor through repeated exposure to the same stressful stimulus.

QUESTION 3

According to the results of controlled clinical trials, which one of the following treatments for generalized social anxiety disorder appears to be the most effective?

A. Alprazolam.

B. Gabapentin.

C. Pregabalin.

D. Venlafaxine.

QUESTION 4

Which one of the following agents is most appropriate for the treatment of performance anxiety?

A. Clonazepam.

B. Moclobemide.

C. Phenerazine.

D. Propranolol.

OBJECTIVES

After evaluating a specific article published in the New England journal of Medicine, participants in the NEJM Weekly CME Program should be able to demonstrate an increase in, or affirmation of, their knowledge of clinical medicine. Participants should be able to evaluate the appropriateness of the clinical information as it applies to the provision of patient care.

PARTICIPANTS

This program is designed for physicians who are involved in providing patient care and who wish to advance their current knowledge of clinical medicine.
CREDITS

The Massachusetts Medical Society designates each NEJM Weekly CME program for a maximum of 1 category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he or she actually spent in the activity.

The Massachusetts Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

[Reference]
REFERENCES

Copyright © 2006 Massachusetts Medical Society.

[Author Affiliation]
Franklin R. Schneider, M.D.

[Author Affiliation]
From the Anxiety Disorders Clinic, New York State Psychiatric Institute; and the Department of Psychiatry, Columbia University College of Physicians and Surgeons - both in New York. Address reprint requests to Dr. Schneider at the Anxiety Disorders Clinic, New York State Psychiatric Institute, 1051 Riverside Dr., Unit 69, New York, NY 10032, or at frs1@columbia.edu.
Copyright © 2006 Massachusetts Medical Society.

Indexing (document details)

Subjects: Anxieties, Shyness, Behavior, Panic attacks, Fear & phobias, Medical treatment, Cognitive therapy

Author(s): Franklin R Schneider

Author Affiliation: Franklin R Schneider, M.D.

From the Anxiety Disorders Clinic, New York State Psychiatric Institute; and the Department of Psychiatry, Columbia University College of Physicians and Surgeons - both in New York. Address reprint requests to Dr. Schneider at the Anxiety Disorders Clinic, New York State Psychiatric Institute, 1051 Riverside Dr., Unit 69, New York, NY 10032, or at frs1@columbia.edu.
