New Uses for Antidepressants: Social Phobia

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Data from recent epidemiologic surveys of community populations indicate that social phobia is a common psychiatric disorder and is associated with substantial functional impairment in a number of patients. Social phobia is also often comorbid with major depression, substance use disorders, and other anxiety disorders. Fortunately, a variety of antidepressant medications have been reported to alleviate the symptoms of social phobia. Controlled studies have shown substantial efficacy for the monoamine oxidase inhibitors phenelzine, moclobemide, and brofaromine and the serotonin selective reuptake inhibitors fluvoxamine and sertraline. Other serotonin reuptake inhibitors and venlafaxine have shown promise in case reports and open trials. *(J Clin Psychiatry 1997;58[suppl 14]:32–36)*

Social phobia is common. Data from the National Comorbidity Survey (NCS) revealed that social phobia was the third most common psychiatric disorder, after major depression (17.1 %) and alcohol dependence (14.1 %), surveyed in the United States, and that it occurred with a lifetime prevalence of 13.3% and a 12-month prevalence of 7.9%.[1] Stein and colleagues[2] recently reported a similarly high prevalence of 7.1% for current social phobia in a telephone survey on social anxiety. These recent estimates of the prevalence of social phobia in the United States are higher than those obtained from the earlier Epidemiologic Catchment Area (ECA) study, which found a lifetime prevalence of 2.73%.[3] Methodological differences among these surveys are likely to have accounted for the disparities in prevalence estimates. For example, the NCS[1] and telephone survey[2] studies used interviews that assessed a broader range of social scenarios than the diagnostic interview used in the ECA study and thus increased the sensitivity of the interview to detect the disorder.[4] In addition, the interview used in the ECA study utilized narrower criteria regarding functional impairment than the DSM-III-R[5] criteria used in the NCS, which likely contributed to a lower estimate of the prevalence of social phobia in the ECA study.[4]

Social phobia is more common among women and is associated with substantial functional impairment in many patients. Despite discrepancies in the overall estimates of the lifetime prevalence of social phobia, both the ECA and NCS studies found that women were more likely to have social phobia than men. In the ECA study,[3] the lifetime prevalence for women was 2.91% (and was highest for black women, 4.66%) compared with 2.53% for men. In the NCS study,[1] lifetime and 12-month prevalence rates for women were 15.5% and 9.1%, respectively, compared with 11.1% and 6.6% for men. There are limited data regarding the prevalence and severity of impaired social, vocational, and interpersonal functioning in patients with social phobia. In the ECA study, 33% of patients with a public eating phobia rated their impairment as severe, as did 28% with a public speaking phobia, and 30% with a phobia of speaking to new acquaintances. In a second study of impairment due to social phobia, but drawn from a clinical sample, Schneier et al.[5] reported that more than 50% of patients experienced at least moderate impairment in functioning at some point during the course of their illness. Educational, employment, interpersonal, and social (i.e., leisure activities) impairment were more commonly reported than impairment in activities of daily living. Conversely, severe social phobia may also be a sequela to disfiguring or disabling physical conditions.[6]

Social phobia is frequently associated with comorbid mood, anxiety, and substance use disorders. Two studies have systematically used structured interviews to assess the presence of psychiatric comorbidity in patients with social phobia.[7,8] In the first study, Van Ameringen et al.[7] evaluated 57 patients with social phobia by using the Structured Clinical Interview for DSM-III-R (SCID). Mood disorders were the most common comorbid syndrome; the lifetime prevalence rate for major depression was 70% and for dysthymia was 32%. The lifetime prevalence rate for panic disorder was 49%, for generalized anxiety disorder was 32%, and for obsessive-compulsive disorder was 11%. Finally, lifetime prevalence rates for alcohol abuse (28%) and other substance abuse (16%) were also high. Some investigators have suggested that many individuals with social phobia inadvertently develop alcohol or other substance abuse problems after recognizing the anxiolytic and disinhibiting influences of controlled substances,[9,10] although this relationship has re-

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Table 1. Double-Blind Controlled Studies of Antidepressants in the Treatment of Social Phobia

Study	N	Design	Duration (Wk)	Results
MAOIs				
Liebowitz et al[17] 1992	74[a]	Double-blind, parallel-group phenelzine vs atenolol vs placebo	8	Response: phenelzine 64%; atenolol 30%; placebo 23%
Gelernter et al[18] 1991	65[b]	Double-blind, parallel-group phenelzine vs alprazolam vs cognitive-behavioral group therapy vs placebo	12	Phenelzine 69%; alprazolam 38%; cognitive-behavioral group therapy 24%; placebo 20%
Versiani et al[19] 1992	78[b]	Double-blind, parallel-group phenelzine vs moclobemide vs placebo	16	Phenelzine 91%; moclobemide 82%; placebo 43%
Van Vliet et al[20] 1992	30[b]	Double-blind, parallel-group brofaromine vs placebo	8	Brofaromine 80%; placebo 14%
Humble et al[21] 1992	77[b]	Double-blind, parallel-group brofaromine vs placebo	12	Brofaromine 79%; placebo 26%
SSRIs				
Van Vliet et al[23] 1994	30[b]	Double-blind, parallel-group fluvoxamine vs placebo	12	Fluvoxamine 46%; placebo 7%
Katzelnick et al[24] 1995	12[b]	Double-blind, crossover sertraline vs placebo	Not specified	Sertraline 50%; placebo 9%

[a]DSM-III criteria.
[b]DSM-III-R criteria.

cently been questioned.[11] In the second comorbidity study, Schneier et al.[8] analyzed data from 361 patients whose social phobia was identified in the ECA study by using the Diagnostic Interview Schedule and DSM-III criteria. In this study, which was drawn from a community rather than a clinical or a treatment-seeking population, overall rates of psychiatric comorbidity were lower. However, lifetime prevalence rates of major depression (17%), dysthymia (13%), panic disorder (5%), obsessive-compulsive disorder (11%), alcohol abuse (19%), and other substance abuse (13%) were similarly elevated. These high rates of comorbid mood, anxiety, and substance use disorders in patients with social phobia imply that clinicians need to be vigilant in assessing for these conditions in patients with social phobia and, conversely, to assess for social phobia in patients presenting with mood, substance use, and other anxiety disorders.

Social phobia is responsive to treatment with pharmacologic agents. Fortunately, given the prevalence of social phobia in clinical and community populations and its associated morbidity and frequent co-occurrence with other major psychiatric disorders, a variety of pharmacologic agents have been shown to be effective in the treatment of patients with social phobia. In this article, studies of antidepressants in the treatment of social phobia are reviewed.

ANTIDEPRESSANT TREATMENT OF SOCIAL PHOBIA

Overall, antidepressant agents have been the most widely reported and actively investigated pharmacologic treatments of social phobia. However, as described below, only seven controlled studies have been published to date, the majority of which have examined the efficacy of monoamine oxidase inhibitors (MAOIs). Importantly, these studies carefully excluded patients with current major depression to minimize the possibility that beneficial effects may have been due to improvement in depressive symptoms rather than specific effects on the symptoms of social phobia. These controlled trials are summarized in Table 1.

Monamine Oxidase Inhibitors

Several placebo-controlled studies of phenelzine found the drug to be superior to placebo in reducing symptoms of social anxiety.[12–14] However, these studies were limited by small sample sizes and the inclusion of mixed groups of patients who had agoraphobia and simple phobias as well as social phobia.[15] Liebowitz and colleagues[16] followed up these initial findings with an open trial of phenelzine in a homogeneous group of patients who met DSM-III criteria for social phobia. In this study, all 11 patients displayed either a moderate (N = 4) or marked (N = 7) response to phenelzine.

Subsequent placebo-controlled studies in homogeneous groups of patients with social phobia who met operational criteria to define the disorder confirmed that phenelzine is an effective treatment[19–21] (see Table 1). In the first study, Liebowitz et al.[17] found that phenelzine (mean dose = 76 mg/day) but not atenolol (mean dose = 98 mg/day) was significantly more effective than placebo in both generalized and nongeneralized (i.e., discrete) social phobia after 8 weeks. Interestingly, although phenelzine response was robust when clinician-based assessments were used to evaluate response, patient self-ratings of global severity and change were not significantly different from placebo.[10]

In the second study, Gelernter et al.[18] compared phenelzine, alprazolam, placebo, and cognitive-behavioral group therapy over a 12-week period. Patients randomly assigned to phenelzine, alprazolam, or placebo also received self-exposure guidance. Response, as assessed by a reduction on the social phobia subscale of the Fear Questionnaire to below the general population mean, was greatest for phenelzine at 69%, next for alprazolam at 38%, followed by

cognitive-behavioral group therapy at 24%, and placebo at 20%. Both the phenelzine and cognitive-behavioral group therapy groups maintained their improvement for 2 months after the acute treatment study was discontinued. However, there was no significant difference among the four groups in the number of patients displaying a marked treatment response, nor were there significant differences among the four groups in the primary measures of outcome derived a priori. The failure to detect such differences in this study may have been due to a confounding effect of the self-directed exposure instructions that potentially nullified the placebo group.[10]

A further placebo-controlled study compared phenelzine (mean = 68 mg/day) and the reversible inhibitor of monoamine oxidase-A (RIMA) moclobemide (mean = 581 mg/day).[19] By 8 weeks, both drugs were significantly more efficacious than placebo as measured by the Clinical Global Impressions (CGI), Willoughby Personality Inventory, Social Avoidance and Distress scale, and Fear of Negative Evaluation scale. On some measures, e.g., Social Phobia Scale and Willoughby total score, only phenelzine was significantly better than placebo by Week 4. For patients remaining on blinded medications, at Week 16, 91% of the phenelzine-treated patients and 82% of the moclobemide-treated patients were asymptomatic compared with 43% in the placebo group. At the end of Week 16, phenelzine and moclobemide responders were randomly assigned to take active drug or placebo for an additional 8 weeks. Patients withdrawn from active drug relapsed during the follow-up period, which provided additional support for the efficacy of the active treatments. Moclobemide was better tolerated than phenelzine.

Two other placebo-controlled studies have assessed the efficacy of another RIMA, brofaromine, in the treatment of patients with social phobia.[20,21] Van Vliet et al.[20] reported that clinically meaningful improvement as reflected by significant reductions in measures of social anxiety, phobic avoidance, generalized (or anticipatory) anxiety, and interpersonal sensitivity occurred in 80% of patients who received brofaromine (150 mg/day) compared with 14% who received placebo by Week 8 of treatment. Further improvement was found in patients maintained on brofaromine therapy for an additional 12-week follow-up. Humble et al.[21] reported similar findings in a 12-week study in which 80% of patients who received brofaromine were rated as much improved compared with 26% who received placebo. Although moclobemide and brofaromine represent promising treatments for social phobia, at the present time neither drug is undergoing further development in the United States and thus, unfortunately, both are likely to remain unavailable to patients.

There are no controlled studies of tranylcypromine in the treatment of patients with social phobia. However, in an open study of 29 patients, 62% displayed marked improvement and 17% displayed moderate improvement; responses were sustained over a 1-year follow-up period.[22]

In summary, the results of the five placebo-controlled studies described above indicate that MAOIs are effective in the acute treatment of patients with social phobia. However, to date there are no long-term controlled maintenance studies with these agents, and dropouts owing to the poor tolerability of phenelzine underscore its cumbersome use in clinical practice. Unfortunately, moclobemide and brofaromine, which appear to be better tolerated than phenelzine, are not likely to be available for clinical use.

Serotonin Selective Reuptake Inhibitors

Thus far, fluvoxamine is the only SSRI studied in a placebo-controlled, parallel-design trial in the treatment of (DSM-III-R) social phobia[23] (see Table 1). In this study, Van Vliet et al. reported substantial improvement in 46% of patients receiving fluvoxamine (150 mg/day) compared with 7% receiving placebo. Patients receiving fluvoxamine displayed statistically significant reductions on measures of social anxiety and general (or anticipatory) anxiety compared with placebo. Eight (53%) of 15 patients who received fluvoxamine reported transient increases in anxiety during the first few weeks of treatment. Patients with major depression or depressed mood were excluded, thereby reducing the likelihood that response to fluvoxamine was due to its therapeutic effect on depressive symptoms. Response to fluvoxamine would likely have been greater at higher dosages than the relatively low fixed dose of 150 mg/day administered in this study.

A second double-blind, placebo-controlled, crossover study found sertraline (maximum mean dose = 134 mg/day) to be more effective than placebo in 12 patients with social phobia.[24] In this study, patients who received sertraline displayed significantly greater improvement on the Liebowitz Social Anxiety Scale, and 50% of patients who received sertraline compared with 9% who received placebo were rated as moderately or markedly improved. Several case reports[25] and small open trials[26–29] have also supported the efficacy of sertraline in the treatment of social phobia.

A number of case reports and case series suggest that other SSRIs also have efficacy in the treatment of social phobia. For example, in two small case series[30,31] and three small open trials,[32–34] fluoxetine (20–80 mg/day) was reported to markedly reduce social phobic symptoms. Interestingly, in contrast to the transient exacerbation of anxiety reported in some patients in the placebo-controlled study of fluvoxamine,[23] patients were not observed to experience similar jitteriness or activation during initiation of treatment with fluoxetine in these open studies.[32–34] Four case series have also been reported describing the successful treatment of social phobia with paroxetine[35–37] or citalopram,[38] a drug not available in the United States. In the largest paroxetine series, Stein et al.[35] described a moderate or marked response in 29 (78%) of 37 patients

over a 12-week trial (mean dose = 49 mg/day). They also reported relapse in 5 of 8 patients randomly assigned to placebo at the end of Week 12, compared with relapse in 1 of 8 patients randomly assigned to continue on paroxetine treatment for an additional 12 weeks. In a second open series, Mancini et al.[36] reported that 15 (83%) of 18 patients with social phobia, generalized type (DSM-III-R), who received paroxetine (10–50 mg/day) were rated as responders after a 12-week trial. All measures of social anxiety, phobic avoidance, depression, and disability showed a statistically significant reduction at endpoint compared with baseline. Interestingly, the two patients described in the third paroxetine report,[37] whose social phobic symptoms responded to paroxetine, had not responded to previous trials with sertraline and fluoxetine.

In summary, the SSRIs appear to be promising new treatments for patients with social phobia; initial controlled studies demonstrated efficacy for fluvoxamine and sertraline. Controlled trials in progress should expand the scientific evidence in support of the use of these drugs in social phobia.

Other Antidepressants

Curiously, despite the effectiveness of tricyclic antidepressants in the treatment of panic disorder, agoraphobia, and simple phobias,[39,40] these agents have not been actively pursued as pharmacologic treatments for social phobia. The limited available literature consists of case reports or open trials of imipramine or clomipramine used in the treatment of heterogeneous groups of patients with a variety of anxiety disorders (i.e., panic disorder, agoraphobia, simple phobia, social phobia).[41–44] Because of the diagnostic heterogeneity of the patients studied and the frequent co-occurrence of other comorbid psychiatric disorders in these patients, the results of these reports are difficult to interpret.

Buspirone, a drug with anxiolytic properties and putative antidepressant activity, has been studied in two open trials[45,46] and one double-blind study[47] in social phobia. Munjack et al.[45] reported that 9 (53%) of 17 patients receiving buspirone (mean dose = 48 mg/day) on an open-label basis (only 11 completed an 8-week trial) displayed moderate or marked improvement. In a second open trial, Schneier et al.[46] reported that 8 (47%) of 17 patients completing at least 2 weeks of a 12-week buspirone (mean dose = 46 mg/day) trial were much improved. Clark and Agras[47] compared buspirone, buspirone plus cognitive-behavioral therapy, placebo, and cognitive-behavioral therapy plus placebo in a 6-week study of 29 musicians with performance anxiety who also met DSM-III-R criteria for social phobia. Although the number of patients randomly assigned to each treatment arm was small, the groups receiving cognitive-behavioral therapy displayed significant improvement, whereas the buspirone group did not. However, the mean daily dose of buspirone was 32 mg, which may have been too low a dose to exert a substantial therapeutic effect for most patients. This possibility is supported by data from the open trial by Schneier et al[46] who found that the mean daily dose of buspirone was higher (57 mg/day) in responders than in nonresponders (38 mg/day). Finally, Van Ameringen et al.[48] recently reported the use of buspirone (mean dose = 45 mg/day) augmentation in 10 patients with social phobia who were partially responsive to treatment with SSRIs (paroxetine, N = 2; fluoxetine, N = 3; sertraline, N = 5). Seven (70%) patients were rated as having a full response after the addition of buspirone.

There are two reports to date regarding the use of venlafaxine and bupropion, respectively, in the treatment of patients with social phobia. Emmanuel et al.[49] recently reported that 5 of 10 patients with social phobia (DSM-III-R) were rated as "much" or "very much" improved on the CGI after 8 weeks of treatment with venlafaxine (75–300 mg/day). Emmanuel et al.[50] also described a patient whose symptoms of social phobia (involuntary blushing, anxiety, palpitations, choking sensations, and sweaty hands when speaking to other people) remitted within a few weeks of treatment with bupropion (300 mg/day). To our knowledge, no reports have been published or presented regarding the use of nefazodone in the treatment of social phobia.

Antidepressants offer a number of clinical advantages in the treatment of patients with social phobia. First, as the studies reviewed in this article indicate, they are effective in a substantial number of patients. Second, antidepressants are also effective treatments for many of the comorbid psychiatric disorders that are common in patients with social phobia (e.g., major depression, dysthymia, panic disorder, generalized anxiety disorder, and obsessive-compulsive disorder). Third, the availability of newer antidepressants (e.g., SSRIs, venlafaxine, bupropion) that have more favorable side effect profiles than older agents (e.g., MAOIs, tricyclics) optimizes the potential benefits associated with these agents while reducing the risks of side effects. Finally, antidepressants are devoid of the risks of dependence and abuse liability associated with benzodiazepines, which are the next most studied medication class in the treatment of social phobia.

CONCLUSION

Social phobia is a common psychiatric disorder, is associated with substantial functional impairment in many patients, and is frequently comorbid with mood, substance use, and other anxiety disorders. Antidepressants from a variety of classes may be beneficial in the treatment of patients with this disorder, although the best evidence to date from controlled trials rests with the MAOIs and SSRIs. Fortunately, research in the antidepressant pharmacotherapy of social phobia is active and should expand the therapeutic armamentarium for this disorder over the next several years.

Drug names: alprazolam (Xanax), atenolol (Tenormin), bupropion (Wellbutrin), buspirone (BuSpar), clomipramine (Anafranil), fluoxetine (Prozac), fluvoxamine (Luvox), imipramine (Tofranil and others), nefazodone (Serzone), paroxetine (Paxil), phenelzine (Nardil), sertraline (Zoloft), tranylcypromine (Parnate), venlafaxine (Effexor).

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DISCLOSURE OF OFF-LABEL USAGE

The following agents mentioned in this article are *not* indicated for social phobia: bupropion, buspirone, fluoxetine, fluvoxamine, MAOIs, paroxetine, phenelzine, sertraline, TCAs, and venlafaxine.
The following agents mentioned in this article have *not* been approved for treatment of social phobia in the United States: brofaromine and moclobemide.

Discussion

Dr. Popper: What are the current findings on the long-term outcome for patients with untreated social phobia?

Dr. Keck: The long-term outcome without treatment is that the diagnosis remains stable, and patients remain impaired. However, controlled trials of long-term treatment are lacking.

Dr. Gorman: Clinically, we see a waxing and waning of severity during the course of social phobia, but I don't think this waxing and waning has been studied or documented.

Dr. Keller: We have a cohort of about 160 subjects with social phobia (they are a subset of 700 subjects who have a targeted anxiety disorder). Three quarters of the cohort had active social phobia when they entered the study and one quarter received the diagnosis within the past year. Although these subjects are not necessarily ill at present, they have been followed for between $2^1/_2$ and 5 years (depending on when they entered the study), and we have funding to follow them for at least 8 years.

The course of social phobia is remarkably persistent. Rates of recovery are slow, and those who recover relapse rapidly. In our cohort, no more than 20% of subjects have had a recovery as defined by 8 consecutive weeks of only one or two mild symptoms. The life table shows 10% to 12% recovered at 6 weeks, 14% recovered at 1 year, and 16% at 18 months. If the definition of recovery is made less stringent and the term remission is applied to patients who have moderate symptoms but not full criteria for 8 consecutive weeks, 30% of subjects would be in remission at 2 years. If the definition is modified once again so patients would be defined as recovered if they avoided the full criteria for 8 consecutive weeks, the recovery rate would be 45% to 50%, but relapse would likely be within 5 to 12 months. Social phobia is remarkably persistent.

Dr. Hirschfeld: Dr. Keller, you have illustrated a serious problem—the trivialization of anxiety disorders. During the last decade, we have made progress in treating depression through the efforts of the federal government and also the pharmaceutical industry, which has worked to develop medications that are "user-friendly." However, we are just scratching the surface of knowledge about treating anxiety disorders even though the evidence (much of which comes from your studies) indicates that anxiety disorders have a worse course than depression and that patients with anxiety disorders are more impaired and more housebound than those with depression. Few physicians routinely evaluate patients for anxiety disorders, and patients with anxiety disorder seldom receive concern and sympathy.

Dr. Gorman: Some epidemiologic studies (e.g., telephone surveys) show extremely high rates—around 30%—of social phobia.

Dr. Hirschfeld: The National Comorbidity Survey [Kessler RC, McGonagle KA, Zhao S, et al. Arch Gen Psychiatry 1994;51:8–19], which was carefully done, had a rate around 8%.

Dr. Gorman: Yes, but some investigators define patients with social phobia as being unable to deliver a speech. While that may be a form of social phobia, my guess is that it is a mild form, which will respond to behavioral psychotherapy or even placebo treatment. Many people have never had and will never have occasion to give a public speech, but if they say they are unable to deliver a talk during a telephone survey, they are classified as having social phobia. If subjects with this form of the disorder are entered into clinical studies, the rate of medication response will be artificially inflated.

Dr. Yonkers: Your concern holds true for diagnosing many psychiatric illnesses such as premenstrual dysphoric disorder, dysthymia, and subsyndromal symptomatic depression. Severity criteria that would allow researchers to find that difference in terms of treatment response are missing in many clinical trials.

Dr. Popper: To what degree are serotonin reuptake inhibitors effective for social phobia?

Dr. Keck: About 50% of patients in both the sertraline [Katzelnick DJ, Kobak KA, Greist JH, et al. Am J Psychiatry 1995;152:1368–1371] and fluvoxamine [Van Vliet IM, den Boer JA, Westenberg HGM. Psychopharmacology (Berl) 1994;115:128–134] studies had full remission of symptoms. Another 20% had a reduction in symptoms, and the rest had no response. However, these were small studies.

Dr. Popper: Are there any sequential drug studies that would allow us to determine how many patients may require two to five drug trials or require drug combinations? How many patients remain unchanged after a complete course of treatment?

Dr. Keck: There are no controlled studies. One small case series reports on patients who responded to paroxetine after failed trials with fluoxetine and sertraline [Ringold AL. J Clin Psychiatry 1994;55:363–364].

Dr. Keller: Would someone comment on the relationship of childhood disorders to adult manifestations? For example, selective mutism might be an anxiety disorder.

Dr. Leonard: As you all know, Jerome Kagan and colleagues [Science 1988;240:167–171] followed two cohorts of children who were identified as either behaviorally inhibited or uninhibited for over a decade. Biederman

et al. [J Am Acad Child Adolesc Psychiatry 1993;32: 814–821] followed up with interesting work that suggests that some children who are behaviorally inhibited at 18 months and 4 years continue to be anxious and sometimes have social phobia.

Dr. Keck: The study compared children with different temperaments, and the inhibited, shy group did the worst in school.

Dr. Leonard: Right. The same investigators have also found a high rate of behavioral inhibition in children of adults with anxiety disorders [Rosenbaum JF, Biederman J, Gersten M, et al. Arch Gen Psychiatry 1988;45:463–470]. Intuitively, it makes sense that some shy, inhibited children have anxiety disorders when they mature.

My group has been studying children who have selective mutism (the DSM-IV term as opposed to the former term, elective mutism). These children do not speak in social settings; they are mute at school and chatterboxes at home. One hypothesis is that elective mutism is a childhood model for adult social phobia. I have now seen about 50 of these children and think they are a mixed group; a large percentage are excessively shy and inhibited. We are in the midst of a controlled treatment trial of fluvoxamine for selective mutism.

Dr. Hirschfeld: What would happen if you treated them with diazepam?

Dr. Leonard: I treat them with serotonin reuptake inhibitors. Strong evidence exists that selective mutism is a childhood form of adult social phobia.

Dr. Gorman: Is there any reason to think the noradrenergic system is involved in social phobia and that noradrenergic drugs would or would not work? I have a few data that tricyclics are not particularly helpful.

Dr. Keck: I can respond with only my clinical experience. I have seen patients with social phobia respond to bupropion and venlafaxine, but these patients generally have comorbid social phobia and a mood disorder (depression or dysthymia). It is hard to sort out the effects of a drug on one disorder versus another in the same patient.

Dr. Popper: Are there controlled studies with β-blockers?

Dr. Keck: Liebowitz et al. [Arch Gen Psychiatry 1992;49:290–300] found that atenolol was less effective than phenelzine for social phobia.