

# Letters to the Editor

## Clonidine Treatment of Excessive Sweating

**Sir:** Excessive sweating is a troublesome side effect of tricyclic antidepressants that has proved difficult to treat.<sup>1,2</sup> The following case describes a patient in whom this symptom was successfully managed with clonidine.

**Case report.** Ms. A was 44 years old when she sought treatment for depression. Her symptoms included dysphoria, insomnia, anxiety, decreased energy and motivation, and feelings of helplessness. She had been prescribed imipramine and nortriptyline in the past for similar symptoms with good results, but discontinued both medications because of intolerable sweating. She was prescribed amitriptyline with complete resolution of her depressive symptoms, but again experienced sweating as an intolerable side effect. After 2 months, amitriptyline was discontinued, and she started a series of trials of other medications over the next 4 years. These other medications included phenelzine, trazodone, bupropion, fluoxetine, lithium, and a combination of lithium, fluoxetine, and trazodone. None of these caused diaphoresis, but none provided as much relief of her depressive symptoms as the tricyclics had.

Ms. A ultimately opted for another trial with amitriptyline. At a dosage of 125 mg/day, she had complete resolution of her depressive symptoms but again developed excessive sweating. Atenolol 50 to 100 mg/day was added, with no improvement in sweating. Sweating decreased slightly when the dosage of amitriptyline was lowered to 75 mg/day, but the depressive symptoms returned. The depressive symptoms completely resolved when sertraline 50 mg/day was added, but sweating persisted. Atenolol was discontinued, and clonidine 0.1 mg b.i.d. started. The addition of clonidine resulted in a dramatic elimination of sweating within 24 hours. For the past 6 months, Ms. A has remained on amitriptyline 75 mg/day, sertraline 50 mg/day, and clonidine 0.1 mg b.i.d. with no return of depressive symptoms. She has remained free of sweating on the days she has taken clonidine; on each of several days she has not taken clonidine, sweating has been a problem. The only apparent undesirable effect of clonidine has been significant dry mouth, but the patient is more than willing to tolerate this for the relief from sweating.

Clonidine has previously been reported to be effective in reducing sweating associated with menopause.<sup>3,4</sup> This is the first report of the effectiveness of clonidine in reducing tricyclic-induced sweating. It is unclear why clonidine was ineffective in reducing sweating in a patient taking imipramine.<sup>2</sup>

The greater anticholinergic action of amitriptyline compared with imipramine offers no explanation. The use of sertraline with the current patient, in combination with amitriptyline, also seems an unlikely explanation as sertraline is relatively free of autonomic actions or side effects. Perhaps Ms. A being of menopausal age is a factor.

The pathophysiology of tricyclic-induced sweating remains obscure. The anticholinergic action of tricyclics should block sweating, not induce it.<sup>5</sup> If tricyclics induced sweating by enhancing the norepinephrine activity of peripheral preganglionic sympathetic neurons, then  $\beta$ -blockers should be effective in reducing the sweating. However, as in previous reports,<sup>2,3</sup> a  $\beta$ -adrenergic blocker was unsuccessful

in alleviating sweating in this patient. Yet, the centrally active  $\alpha$ -adrenergic autoreceptor stimulant clonidine was dramatically effective. This would imply that tricyclic-induced sweating is mediated by a central noradrenergic mechanism, possibly at the level of the locus ceruleus.

Further trials of clonidine in treating tricyclic-induced sweating are clearly warranted. The risk/benefit ratio in this patient was quite low, and further studies could help elucidate the cause and cure of this troubling side effect.

## REFERENCES

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## Dose-Related Sensory Distortions With Zolpidem

**Sir:** Zolpidem is a recently released, nonbenzodiazepine hypnotic agent. While prerelease data indicate that zolpidem is both safe and well tolerated, several reports of tolerance, withdrawal symptoms, and hallucinatory phenomena have appeared.<sup>1-3</sup> I report a case of sensory distortions related to a therapeutic dose of zolpidem.

**Case report.** Ms. A, a 34-year-old woman had chronic insomnia but no history of psychosis or substance abuse. After taking 5 mg of zolpidem (one-half the usually recommended dose) on two occasions, she experienced some sedation but inadequate relief of her insomnia. She had tolerated this dose without any unusual or adverse effects. When she took the recommended dose of 10 mg, she began to experience a variety of sensory distortions approximately 20 minutes after ingestion. She described feeling as if she were "on a water bed," i.e., "as if the bed were moving." Movements of her arms or legs felt exaggerated, as if they were "carried over" beyond their actual range. She felt as if she were "swimming or weightless." She also described a "blurring of boundaries" between herself and objects in her immediate environment and commented, "If an LSD trip is a '10,' this is a '1.'" (She had used LSD once in her early 20s.) There were no psychotic symptoms, and Ms. A had an uneventful night's sleep, with full recollection of this experience in the morning. She subsequently declined to use the 10-mg dose of zolpidem.

The above report is, to my knowledge, only the third in the literature to describe psychotic-like phenomena associated with therapeutic use of zolpidem. It appears to be the second (cf. Iruela et al.<sup>2</sup>) in which the patient remembered