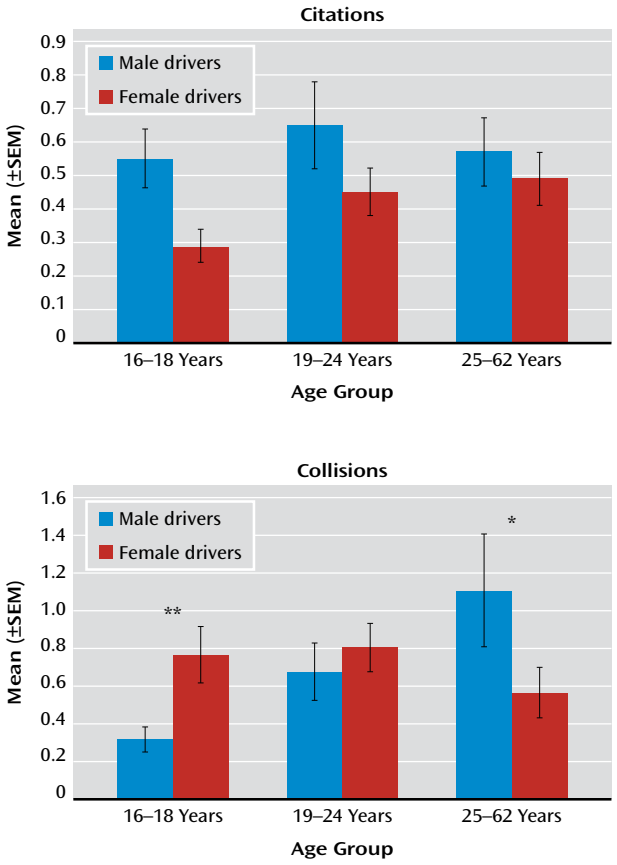
FIGURE 1. Citation and Collision Rates by Gender and Age Group[a]



[a]For citations, age effect: F=3.09, df=2, 433, p=0.05; gender effect: F=4.67, df=1, 433, p=0.03. For collisions, interaction effect: F=4.89, df=2, 433, p=0.008.
*p=0.05. **p=0.01

and frequency of citations and collisions in the previous 12 months.

Over 6 months, 156 male and 283 female licensed drivers with ADHD completed the survey. The sample was divided into three age groups: adolescents (16–18 years old, N=142), young adults (19–24 years old, N=161), and middle-aged adults (25–62 years old, N=136).

For citations, analyses of variance (age by sex [3×2]) indicated an age effect for adolescents, young adults, and middle-aged adults, respectively, as follows: mean=0.34 (SEM=0.06), mean=0.55 (SEM=0.08), and mean=0.53 (SEM=0.10) (p=0.05 in all cases). Male drivers had more citations than female drivers (p=0.03, respective means: 0.59 [SEM=0.10] and 0.41 [SEM=0.05]). There was no interaction effect.

For collisions, there were no age or sex effects, but there was an interaction effect (p=0.008). Collision rates for men increased with age while women experienced fewer collisions during middle age, similar to the general population (Figure 1). Adolescent girls reported more collisions than adolescent boys (p=0.01), while middle-aged men reported more collisions than women (p=0.05).

Although most (60%) middle-aged male drivers reported no collisions, these findings suggest that vehicular collisions and citations do not decrease with maturation for male drivers with ADHD. Additional research is needed for replication and to explore causal factors. For example, higher collision rates among young women may in part be due to greater cell phone use and text messaging (3). This study design was limited by its cross-sectional, self-report, and nonrandomized nature. For example, there may be a cross-sectional cohort effect, where older men might be more reckless drivers in general and less likely to use ADHD medication. However, this sample is unique in its size, age range, number of women, and geographic scope.

To the extent that long-acting stimulants improve driving performance of drivers with ADHD (4), it would be prudent for clinicians to ask about recent collisions, near collisions, and citations when considering whether medication is indicated.

References

1. US Department of Transportation, National Highway Traffic Safety Administration: Young Drivers Traffic Safety Facts 2004 (Report DOT HS 809 918). http://www-nrd.nhtsa.dot.gov/pubs/809918.pdf
2. Barkley RA, Cox D: A review of driving performance and adverse outcomes in adolescents and adults with attention deficit/hyperactivity disorder. J Safety Res 2007; 38:113–128
3. Faulkner X, Culwin F: When fingers do the talking. Interact Comput 2005; 17:167–185
4. Jerome L, Habinski L, Segal A: Attention-deficit/hyperactivity disorder (ADHD) and driving risk: a review of the literature and a methodological critique. Curr Psychiatry Rep 2006; 8:416–426

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Oxybutynin for Antidepressant-Induced Hyperhidrosis

TO THE EDITOR: Hyperhidrosis, or excessive sweating, can be an uncomfortable and embarrassing side effect of antidepressants. It is estimated to occur in 14% of patients taking tricyclic antidepressants (1). The presumed mechanism of tricyclic antidepressant-induced sweating is the inhibited reuptake of norepinephrine, leading to the stimulation of peripheral adrenergic receptors (2).

Sweat glands are innervated by peripheral sympathetic nerves, which are mediated by acetylcholine. Oxybutynin, an anticholinergic drug that is registered for urge incontinence, has shown to be effective in the treatment of excessive sweating in some cases (3) but has not yet been reported to be effective in cases of antidepressant-induced sweating. Here, I present two cases in which oxybutynin was successfully introduced to decrease excessive sweating.

Patient A is a 59-year-old man with a history of recurrent episodes of panic disorder, for which he had used paroxetine, venlafaxine, and escitalopram as well as high doses of oxazepam in the past. He was admitted to the hospital because of a severe depressive episode with suicidal ide-

ation. The depression was successfully treated with clomipramine, 100 mg/day, which was effective for the treatment of panic attacks as well. Although he sweated all over his body, he was willing to continue clomipramine monotherapy after discharge. Lowering the dosage did not change the situation, nor did treatment with cognitive-behavioral therapy. Finally, a trial with oxybutynin, 2.5 mg b.i.d., relieved the hyperhidrosis completely, without any side effects.

Patient B is a 60-year-old man with recurrent severe depressive episodes with psychotic symptoms and agitation. Typical for his disorder are the rapid onset of relapse and the severity of agitation, which in the past required hospitalization and seclusion. In the latest episode he was treated with clomipramine, 75 mg/day, and olanzapine, 15 mg/day, but he suffered from severe hyperhidrosis. A switch from olanzapine to haloperidol did not change the hyperhidrosis. Later, 800 mg/day of lithium was successfully added for the treatment of his depressive symptoms. Oxybutynin, 5 mg t.i.d., was added to his treatment and relieved his hyperhidrosis without side effects.

There are several preferential strategies to treat hyperhidrosis, such as lowering the dosage or altering the dosing schedule, changing clothing or food habits, or regulating anxiety (2). In the present two cases, these strategies were unsuccessful and oxybutynin maintenance treatment was introduced. With its rapid, short-term effect (within an hour), oxybutynin could also be considered "as needed" in specific social situations. One should be careful in dosing to avoid anticholinergic side effects such as constipation, urinary retention, and blurred vision. Although placebo-controlled research is necessary, the cases reported here suggest that adding oxybutynin to antidepressants can be a simple and effective treatment option for hyperhidrosis.

References

1. Marcy TR, Britton ML: Antidepressant-induced sweating. Ann Pharmacother 2005; 39:748–752
2. Cheshire WP, Fealey RD: Drug-induced hyperhidrosis and hypohidrosis: incidence, prevention, and management. Drug Saf 2008; 31:109–126
3. Mijnhout GS, Kloosterman H, Simsek S, Strack van Schijndel RJM, Netelenbos JC: Oxybutynin: dry days for patients with hyperhidrosis. Neth J Med 2006; 64:326–328

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