Cognitive Effects of Anticholinergics Blamed for Falls in Elderly

By Rita Buckley
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"The multivariate analysis suggests that the anticholinergic effects of medications might heighten the risk of falls by causing poorer balance and walking ability," Dr. Maw Pin Tan, from the University of Malaya, Kuala Lumpur, Malaysia, told Reuters Health by email.

Even drugs with mild anticholinergic properties appear to increase the risk of serious falls, she said.

In patients who take anticholinergic medications and have already fallen, medications should be reviewed to determine if any can be stopped or changed, she said.

Dr. Tan and colleagues conducted a retrospective case-control study involving 428 community-dwelling subjects aged 65 and older who participated in the Malaysian Falls Assessment and Intervention Trial (MyFAIT).

Overall, 263 subjects had suffered at least two falls, or a single fall that caused injury, in the preceding 12 months and 165 controls who had no falls during that time period.

Fallers were older (mean difference 3.2 years, p=0.0001), had significantly more comorbidities, and took significantly more medications.

Not surprisingly, measures of gait and balance were predictive of falling risk. For example, more fallers scored 13.5 seconds or more on the timed up and go test (odds ratio 2.4, p=0.0001) and had a functional reach score 18 cm or less (OR 2.8, p=0.0001).

Seventy-five (28.5%) fallers and 29 (17.6%) controls had an Anticholinergic Cognitive Burden score of 1 or more; this was also a significant risk factor for falls (OR 1.8, p=0.01).

On the Anticholinergic Cognitive Burden scale, a score of 1 indicates there's in vitro evidence that a chemical entity has antagonist activity at muscarinic receptor. A score of 2 indicates there's evidence from literature, prescriber's information, or expert opinion of a clinical anticholinergic effect. And a score of 3 means there's evidence from literature, expert opinion, or prescribers information that the medication may cause delirium. The full ACB scoring tool is online here: http://bit.ly/19ma3sh.

Conversely, there were no significant associations between an ACB score of 1 or more and grip strength, baseline blood pressure, or prevalence of orthostatic hypotension.

The relation between anticholinergic cognitive burden of 1 or greater and falls was no longer significant after adjustment for either timed up and go or functional reach.

However, the association between timed up and go, functional reach, grip strength, and falls remained significant after adjusting for age, gender, and number of comorbidities.
"We already know that drugs with anticholinergic side effects increase the risk for falls in the elderly. This study tried to explore the mechanisms by which they do so," Dr. Colleen Christmas from the Division of Geriatric Medicine and General Internal Medicine at Johns Hopkins University in Baltimore, who was not involved in the study, told Reuters Health by email.

Dr. Christmas noted that the authors didn’t adjust for important comorbidities that affect balance regardless of medication, such as diabetes, vascular disease, and hearing and vision impairment. "They also didn’t adjust for strokes, peripheral neuropathy, and neurodegenerative disorders, all of which have a significant impact on falls," said Dr. Christmas.

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SOURCE: http://bit.ly/1ONqyA0

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