Antidepressants and the risk of falls in nursing home patients

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Depression and other psychiatric disorders are very common in nursing home residents. Tricyclic antidepressants (TCAs), though widely used for many years, can cause orthostatic hypotension and may aggravate confusion especially in elderly patients. The clinical concern that tricyclics would increase the risk of falls has been supported by epidemiologic studies in long-term care settings and in community residents. Newer antidepressants promised advantages over the TCAs. Trazodone did not aggravate confusion in delirious or demented patients and it improved sleep, though it too can cause orthostasis. The selective serotonin reuptake inhibitors (SSRIs) appeared free of any effects on blood pressure, did not aggravate confusion, and are non-sedating, and therefore were regarded as posing a lower risk of falls in the elderly. In this study, Thapa et. al., empirically examined the relative likelihood to cause falls of TCAs, SSRIs, and trazodone in 2,428 nursing home residents who were newly prescribed the antidepressants. They retrospectively ascertained the number of falls during antidepressant treatment, comparing each group to a group of nursing home residents who did not receive antidepressants. They did not include patients who received antidepressants for non-psychiatric reasons such as pain control or migraine prophylaxis. However, while depression or depressive symptoms were the most common reason for use of antidepressants, behavioral symptoms of dementia, insomnia, anxiety, and other miscellaneous indications were included. The study cohort was frail and highly impaired with a mean age of 82. Sixty
percent used a wheelchair or were chair- or bed-bound, 35% were incontinent, 22% had major cognitive impairment, and many also required physical restraints, benzodiazepenes or antipsychotic drugs.

As expected, patients receiving TCAs had a higher rate of falling (adjusted rate ratio 2.0, 95% confidence interval 1.8-2.2) compared to non-users of antidepressants. Surprisingly, SSRIs were associated with almost as high a rate of falls (1.8 CI, 1.6-2.0) compared to non-users. There was only a slight increase in risk in those who received trazodone (1.2, CI 1.0-1.4). Increasing doses of TCA or SSRI antidepressants were associated with higher rates of falls. Patients who received antidepressants to control behavioral symptoms of dementia had more falls than those receiving the drugs for depression. The risk of falls with TCAs, but not with SSRIs, significantly increased in patients who were taking multiple cardiovascular drugs.

The major limitation of this study is that it is retrospective and non-randomized; there were substantial and important differences between the patients receiving TCAs, SSRIs, trazodone, or no antidepressant in multiple factors that themselves could be expected to affect the rate of falls. The investigators did statistically adjust for these differences (e.g. major cognitive impairment, use of benzodiazepenes or antipsychotics, reason for starting antidepressant, etc.), but the validity of the findings may be limited by the design, nonequivalence of groups, and heterogeneous diagnoses and indications for antidepressants.

The importance of this study is that it challenges the widely held belief that SSRIs are quite benign in frail elderly patients and much safer than the older but considerably less expensive TCAs. The association between SSRI's and falls was unexpected. How might this be explained? SSRI's do not cause orthostasis, but they do frequently cause dizziness. Their stimulating effects also may have increased mobility, which in turn might be associated with a higher risk of falling. Another possibility is that the reasons for antidepressant prescription
(depression, behavioral problems in dementia) may themselves increase the risk of falls. This study does not allow any conclusion about why the rate of falls was increased. What is clear is that all nursing home residents, and perhaps elderly patients in general, receiving antidepressants should be considered at possible increased risk for falls, and appropriate prevention instituted. Since the risk for falls was dose-related, physicians should strive to use the lowest effective antidepressant dose, which in some cases will be less than the usual starting dose (e.g. fluoxetine 20mg.)