

# Cholinesterase inhibitors reduce aggression, wandering and paranoia in Alzheimer's disease

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Cholinesterase inhibitors, used to treat cognitive symptoms of Alzheimer's disease, are also a safe and effective alternative therapy for the behavioral and psychological symptoms of dementia, according to a study that appears in the December 2008 edition of *Clinical Interventions in Aging*.

Investigators from the Indiana University School of Medicine, the Regenstrief Institute and Wishard Health Services reviewed nine randomized, double-blind, placebo-controlled clinical trials evaluating the effectiveness of three popular cholinesterase inhibitors in managing behavioral and psychological symptoms displayed by patients with Alzheimer's disease.

The researchers report that the trial results indicate cholinesterase inhibitors led to a statistically significant reduction in behavioral and psychological symptoms such as aggression, wandering or paranoia when using the same dosage as administered for improving cognitive impairment.

Nine out of 10 Alzheimer's disease patients display behavioral and psychological symptoms of their disease. The review of the clinical trials revealed that cholinesterase inhibitors are safe, producing no major side effects.

"There is a need for safe alternatives to the anti-psychotic drugs currently used to manage the behavioral and psychological symptoms of Alzheimer's disease. The results of the studies we analyzed are encouraging and suggestive that cholinesterase inhibitors are safe and effective alternatives. However, they are underutilized and typically prescribed for less than three months and for less than 10 percent of patients with Alzheimer's disease. Our findings might provide clinicians with useful data to justify the appropriate

use of these medications," said Malaz Boustani, M.D., corresponding author of the *Clinical Interventions in Aging* paper. Dr. Boustani is assistant professor of medicine at the IU School of Medicine, a Regenstrief Institute research scientist, a research investigator with the IU Center for Aging Research, and chief research officer of the Indianapolis Discovery Network for Dementia.

In Alzheimer's disease there is a decrease in acetylcholine, a chemical in the brain that assists memory, thought and judgment. Cholinesterase inhibitors raise acetylcholine levels. Increased concentrations of acetylcholine in the brain leads to increased communication between nerve cells and may improve or stabilize the symptoms of Alzheimer's disease in the early and moderate stages of progression.

Noll Campbell, PharmD, a clinical pharmacy specialist in geriatric psychiatry with Wishard Health Services and corresponding author of the paper, said that, "This class of medications has already been approved by the Food and Drug Administration to manage symptoms of Alzheimer's-type dementia, although their potential benefits on behavioral symptoms are not frequently identified by many prescribers. Clinical trials of cholinesterase inhibitors have shown benefits in several domains of cognitive function as well as behavioral symptoms associated with dementia, and may improve the management of behavioral problems while reducing the use of more harmful medications that are needed to control behaviors."

Dr. Boustani noted that the vast majority of busy primary care physicians, the doctors who see the majority of patients with Alzheimer's disease, are unaware of the details of the studies analyzed in the *Clinical Interventions in Aging* paper and he hopes that this new paper, which reviewed the

studies, will encourage them to prescribe cholinesterase inhibitors, with its benefits for both cognition and behavior symptoms to their Alzheimer's disease patients.

Source: Indiana University

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