

Role of Huperzine A in Alzheimer's Disease

Alzheimer's disease is the most common form of dementia, a brain disorder that seriously affects a person's ability to carry out daily activities. It is estimated that 5 million Americans currently have Alzheimer's disease. Usually, the disease begins after age 60 and the likelihood of developing Alzheimer's disease increases as you get older.

Alzheimer's disease begins slowly, first involving parts of the brain that control thought, memory and language. People with Alzheimer's disease may have trouble remembering things that happened recently or names of people they know. Over time, symptoms become worse until the patient may not recognize family members, have trouble speaking, and be unable to read and write. They may forget how to brush their teeth or comb their hair, become anxious or aggressive, or wander away from home. Eventually, they need total care.

There are no drugs that can cure Alzheimer's disease, but some medications may slow progression of the disease (see Box). Most of these



medications are thought to work by boosting a chemical in the brain called acetylcholine; one medication seems to work by protecting brain cells from becoming too "excited." The effects of medication are modest and benefits last only a short time. A test called the Mini-Mental State Examination is often used to help diagnose Alzheimer's disease, and it may also be used to evaluate the effectiveness of medication. This test assesses memory, problem solving, attention, counting, and language. Drugs are expected to increase a patient's score by only 1 or 1.5 points on the Examination.

In China, a plant-derived product called huperzine A is approved to treat Alzheimer's disease. It is thought to work the same way that the prescription medications work and may be even more effective and better tolerated. In the United States, huperzine A is considered a dietary supplement and has not been evaluated by the FDA for safety or effectiveness.

EXAMPLES OF MEDICATIONS USED TO TREAT ALZHEIMER'S DISEASE

Donepezil (Aricept)
Galantamine (Razadyne)
Memantine (Namenda)
Rivastigmine (Exelon)

A recent review of the literature found that at doses of 0.1–0.5 mg daily, huperzine A improves memory and language in people with Alzheimer’s disease. Additionally, the supplement has been associated with a 1.0- to 5.0-point increase on the Mini-Mental State Examination score and improvements on other tests that assess brain function. Side effects from huperzine A are similar to those associated with prescription medications for Alzheimer’s disease, including dizziness, lack of appetite, constipation, nausea, difficulty falling asleep, fatigue, changes in liver function, stomach upset, and fluid retention.

Although the supplement appears promising, there are flaws in the few studies that have tested huperzine A to date. Typically, those studies were of short duration, and involved only small numbers of patients who were often allowed to continue using other medications for their Alzheimer’s condition. Several studies did not include a placebo group (patients receiving an inactive pill [placebo]) for comparison. The studies used different outcomes and different testing tools, and there was no consistency or standardization among the products that were used or the dose that was administered.

A better-designed trial with larger numbers of patients and a placebo group is currently being conducted in the United States. The results of this study may indicate whether huperzine A will have a role in the management of Alzheimer’s disease. Little is known about this natural product, so even if huperzine A is found to be effective, additional trials will be needed to address safety concerns such as drug interactions and side effects.

FOR MORE INFORMATION

Alzheimer’s Association
www.alz.org/alzheimers_disease_standard_prescriptions.asp
National Institute of Aging
www.nia.nih.gov/Alzheimers/Publications/adfact.htm
National Institute of Neurological Disorders and Stroke
www.ninds.nih.gov/disorders/alzheimersdisease/alzheimersdisease.htm