



Indian Health Service
IHS National Pharmacy and Therapeutics Committee
Memantine
August 2011



Background:

The IHS National Pharmacy and Therapeutics Committee (NPTC) reviewed the agents used in the management of Alzheimer's disease at the July 2011 meeting. For that meeting, the Nashville Area IHS Elder Care Consultant served as subject matter expert and was involved with the clinical discussion associated with Alzheimer's disease. Memantine was included as part of that discussion. The NPTC did not add it to the IHS National Core Formulary (NCF) because its primary benefit is limited to those with moderate to severe Alzheimer's disease. However, because of its place in therapy, the NPTC felt it was important to develop a 1-pager to discuss its role in the management of Alzheimer's disease.

Discussion:

While there is no treatment available to cure Alzheimer's disease or stop the progression, it is thought that medications such as NMDA antagonists and Cholinesterase inhibitors (e.g. donepezil) may slow the deterioration of cognition and function associated with Alzheimer's disease. Memantine is the lone agent in the N-methyl-D-aspartate (NMDA) antagonist class. It is indicated for the treatment of moderate to severe dementia of Alzheimer's type. Cholinesterase inhibitors are considered first line in the management of Alzheimer's disease, but there is data to support the benefit of memantine in specific patients.

A systematic review from the National Institute of Clinical Excellence found that memantine improved cognition at 12 weeks, but was not maintained at 24-48 weeks.¹ Functional outcomes were not statistically significant at 12 weeks, but modestly significant at 24-48 weeks. Pooled data did not show an additional benefit when adding memantine to a cholinesterase inhibitor. A lack of robust evidence in terms of head to head trials was noted. A Cochrane review noted that memantine 20mg/day in patients with moderate to severe Alzheimer's disease saw a reduction in deterioration in cognition, function and behavior at 28 weeks with a reduction in agitation. They concluded that although some benefit was seen with mild to moderate disease, the data would only justify use in moderate to severe dementia.² A systematic review by Hansen et al. analyzed available trials for management of Alzheimer's disease.³ They found that memantine improved cognitive symptoms, daily function and reduced the requirement for caregiver time when compared to placebo, but did not show a difference in behavior. When added to donepezil, the combination improved measures of function, behavior and caregiver dependence versus placebo. Clinical trial data was a limitation of this review as only two studies were included.

Findings:

The NCF is primarily composed of standard of care medications that may be used to treat a substantial proportion of population with a given disease or syndrome. Memantine is relegated to a second line agent in the management of Alzheimer's disease. The IHS NPTC believes there is a place in therapy for memantine, but did not add memantine to the NCF due to its limited use in moderate to severe Alzheimer's disease.

If you have any questions regarding this document, please contact the NPTC at nptc1@ihs.gov.

References:

1. National Institute for Health and Clinical Excellence. Donepezil, galantamine, rivastigmine and memantine for the treatment of Alzheimer's disease (review of NICE technology appraisal guidance 111). NICE; London. 2011.
2. McShane R, Areosa Sastre A, Minakaran N. Memantine for dementia. *Cochrane Database Syst Rev*. 2006(2):CD003154.
3. Hansen RA, Gartlehner G, Kaufer DJ, Lohr KN, Carey T. Drug Class Review on Alzheimer's Drugs. Final Report. <http://www.ohsu.edu/drugeffectiveness/reports/final.cfm>; accessed June 23, 2011. Jun 2006.