Dimebon Improves Cognition, Function, and Behavior in Mild and Moderate Alzheimer’s Disease: Results by Severity of a One-Year, Double-Blind, Placebo-Controlled Study

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BACKGROUND
• Dimebon is a clinically available investigational drug shown to have neuroprotective effects in models relevant to Alzheimer’s disease (AD) and Huntington’s disease.
• Dimebon improves cognition, functional ability, and behavior as compared to placebo in 1-year, double-blind, placebo-controlled studies of patients with mild to moderate AD.
• The most potent mechanism of action for Dimebon (identified) is enhancement of mitochondrial function in the setting of cellular stress.

METHODS
• The study design and methods have been previously published.1
• 183 patients with mild to moderate AD (MMSE of 15-24) were randomized to receive Dimebon 20 mg TID or matching placebo for 26 weeks. After the initial 26 weeks, patients were offered the opportunity to remain on their blinded study drug (1-year cohort, n = 134).
• Standard inclusion and exclusion criteria were utilized, although patients enrolled who consented for the entire 1-year treatment period (1-year cohort, n = 134).
• For the mild and moderate subgroup analyses, patients with mild AD were defined as those with a baseline MMSE > 18 (n = 94) and patients with moderate AD as those with a baseline MMSE > 15 (n = 90).
• The data are presented using an observational care analysis for the patient population that initially enrolled into the trial (n = 183) and also for the population of patients studied after 1 year of treatment.

CONCLUSIONS
• Patients with both mild and moderate AD demonstrated benefit from treatment with Dimebon on cognition and memory, activities of daily living, behavior, and global function.
• Patients with mild AD (MMSE of 15-24) demonstrated substantial and sustained benefit over placebo on all 5 outcome measures studied after 1 year of treatment.
• DIME AD patients treated with Dimebon remained above baseline for 1 year on the ADAS-cog.
• Patients with moderate AD demonstrated substantial and sustained benefit over placebo on 4 of 5 outcome measures at 1 year.

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BACKGROUND

Dimebon (n = 89)
Placebo (n = 94)
• The data are presented using an observed-case analysis for the patient population
• For the mild and moderate subgroup analyses, patients with mild AD were defined
• Efficacy endpoints included the Alzheimer's Disease Assessment Scale—cognitive
• Standard inclusion and exclusion criteria were utilized, although patients enrolled

METHODS

• The most potent mechanism of action for Dimebon identified to date is enhancement
• Dimebon improved cognition, functional ability, and behavior as compared to placebo in a 1-year, double-blind, placebo-controlled study of patients with mild-to-moderate AD.
• The most potent mechanism of action for Dimebon identified to date is enhancement of mitochondrial function in the setting of cellular stress.
• The data were presented using an observed-case analysis for the patient population that initially enrolled into the trial (n = 183) and also for the population of patients who completed the entire 1-year treatment period (n = 124).

CONCLUSIONS

• Patients with both mild and moderate AD demonstrated benefit from treatment with Dimebon on cognition and memory, activities of daily living, behavior, and global function.
• Patients with mild AD enrollment at or above baseline on all 5 outcome measures
• Patients with moderate AD demonstrated substantial and sustained benefit over placebo on all 5 outcome measures at 1 year.

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BACKGROUND

• Dimebon is an orally available investigational drug shown to have neuroprotective effects in models relevant to Alzheimer’s disease (AD) and Huntington’s disease.
• Dimebon improved cognition, functional ability, and behavior as compared to placebo in patients with mild-to-moderate AD.
• The most potent mechanism of action for Dimebon identified to date is enhancement of mitochondrial function in the setting of cellular stress.

METHODS

• The study design and methods have been previously published.1
• 193 patients with mild-to-moderate AD (MMSE of 10–24) were randomized to receive Dimebon 20 mg TID or matching placebo for 26 weeks. After the initial 26 weeks, patients were offered the opportunity to remain on their blinded study drug for an additional 26 weeks.
• Standard of care and exclusion criteria were utilized, although patients enrolled were not on any background anti-dementia therapy.

RESULTS

CONCLUSIONS

• Patients with both mild and moderate AD demonstrated benefit from treatment with Dimebon on cognition and memory, activities of daily living, behavior, and global function.
• Patients with mild AD maintained or above baseline on all 5 outcome measures studied after 1 year of treatment.
• BMI-AD patients treated with Dimebon remained above baseline for 1 year on the ADAS-cog.
• Patients with moderate AD demonstrated substantial and sustained benefit over placebo on all 5 outcome measures at 1 year.

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Background

- Dimebon is a currently available investigational drug shown to have neuroprotective effects in models relevant to Alzheimer’s disease (AD) and Huntington’s disease.
- Dimebon improved cognition, functional ability, and behavior as compared to placebo in patients with mild to moderate AD.
- The most potent mechanism of action for Dimebon identified to date is enhancement of mitochondrial function in the setting of cellular stress.

Methods

- The study design and methods have been previously published.1 183 patients with mild to moderate AD (MMSE of 10-24) were randomized to either Dimebon or Placebo in a 1-year, double-blind, placebo-controlled study of patients with mild to moderate AD.
- Standard inclusion and exclusion criteria were utilized, although patients enrolled were not on any background anti-dementia therapy.

Results

- Dimebon improved cognition, functional ability, and behavior as compared to placebo in a 1-year double-blind, placebo-controlled study of patients with mild to moderate AD.
- Patients with moderate AD demonstrated substantial and sustained benefit over placebo on all 5 outcome measures at 1 year.
- Patients with moderate AD treated with Dimebon demonstrated sustained benefit over placebo on all 5 outcome measures at 1 year.

Conclusions

- Dimebon is safe and well tolerated.
- Dimebon improves the clinical course of patients with both mild and with moderate AD.

Reference

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BACKGROUND

• Dimebon is a centrally available investigational drug shown to have neuroprotective effects in models relevant to Alzheimer’s disease (AD) and Huntington’s disease.
• Dimebon improved cognition, functional ability, and behavior as compared to placebo in mild-to-moderate AD.

• The most potent mechanism of action for Dimebon identified to date is enhancement of mitochondrial function in the setting of cellular stress.

METHODS

• The study design and methods have been previously published.1
• 183 patients with mild-to-moderate AD (MMSE of 10–24) were randomized to receive Dimebon 20 mg TID or matching placebo for 26 weeks. After the initial 26 weeks, patients were offered the opportunity to remain on their blinded study drug for an additional 26 weeks.

• Standard inclusion and exclusion criteria were utilized, although patients enrolled who consented for the entire 1-year treatment period (1-year cohort, n = 134).

• 183 patients with mild-to-moderate AD (MMSE of 10–24) were randomized to receive Dimebon 20 mg TID or matching placebo for 26 weeks. After the initial 26 weeks, patients were offered the opportunity to remain on their blinded study drug for an additional 26 weeks.

RESULTS

• Patients with both mild and moderate AD demonstrated benefit from treatment with Dimebon on cognition and memory, activities of daily living, behavioral, and global function.

• Patients with mild AD enrolled in the mild cohort and moderate AD enrolled in the moderate cohort.

• Dimebon treatment was well tolerated.

CONCLUSIONS

• Patients with both mild and moderate AD demonstrated benefit from treatment with Dimebon on cognition and memory, activities of daily living, behavioral, and global function.

• Patients with moderate AD demonstrated substantial and sustained benefit over placebo on all 5 outcome measures at 1 year.

• – Moderate AD patients treated with Dimebon improved 3.7 points over placebo on the ADAS-cog.

• Dimebon was safe and well tolerated.

• Dimebon improves the clinical course of patients with both mild and moderate AD.

REFERENCE