Long-Term Use of Amantadine May Impact Vision

SAN FRANCISCO -- June 3, 2010

A study published in the June issue of the journal Ophthalmology shows that long-term use of amantadine in patients with Parkinson's disease can significantly reduce endothelial cell density (ECD).

Physicians have long known that amantadine treatment causes abnormal changes in the cornea in some patients with Parkinson's. Usually corneal reactions occur soon after starting the drug and disappear a few weeks after it is withdrawn. But sometimes corneal disorders appear only after years of treatment, and the corneas of these patients often do not recover when amantadine is stopped.

Won Ryang Wee, MD, Seoul National University College of Medicine, Seoul, South Korea, and colleagues studied whether the effect of amandatine on corneal endothelial cells is dependent on the cumulative dose received.

The researchers compared 169 eyes of amandatine-treated patients with an equal number of matched controls; the mean age of all patients was 59 years. They found that the patient group with the highest cumulative amandatine intake and/or longest duration of treatment (up to 8 years) had the most significant reductions in ECD.

The study noted 2 early indicators of abnormal corneal changes in response to amandatine, before ECD reduction occurred: deformation of the normal hexagonal cell shape, and increase in cell size variation. The findings also showed that ECD reduction in response to amandatine treatment does not occur quickly.

"Assuming other studies confirm these results, ophthalmologists and neurologists should consider evaluating a patient's corneal endothelium at the beginning of treatment with amandatine and reassess at regular intervals if the drug is used long term," said Dr. Wee.

"Additional monitoring would be needed for patients with other conditions that reduce ECD, such as recent cataract surgery or ongoing glaucoma, uveitis or Fuch's dystrophy because corneal oedema could develop during treatment."

SOURCE: American Academy of Ophthalmology