

# Research reveals likelihood, onset of MS diagnosis among patients with inflammatory eye disease

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The results of the largest retrospective study of multiple sclerosis (MS) in uveitis patients has revealed that nearly 60 percent of patients with both diseases were diagnosed with each within a five-year span. The study is being presented today at AAO 2014, the 118th annual meeting of the American Academy of Ophthalmology. While it has long been known that there is an association between the eye condition and MS, this is the first study to provide a detailed description of the relative onset of uveitis and MS and to calculate the likelihood of an MS diagnosis among uveitis patients.

Diagnosed in approximately 38,000 Americans a year, uveitis causes swelling and irritation of the middle layer of the eye and can lead to permanent vision loss if left untreated. It is well established in the medical community that uveitis can be a sign of MS and it is estimated that 1 to 10 percent of MS patients have uveitis. The disease affects approximately 2.3 million people worldwide, causes irreversible nerve deterioration and is notoriously difficult to diagnose.

To achieve a better understanding of the association of the two diseases, researchers from Casey Eye Institute at the Oregon Health and Science University and the University of Heidelberg, Germany conducted a database search of approximately 3,000 patients with uveitis from the Casey Eye Institute and 5,319 patients from the University of Heidelberg between 1985 and 2013. Of these, 24 patients from the Casey Eye

Institute and 89 patients from the University of Heidelberg fulfilled the inclusion criteria of diagnoses for both uveitis and MS and were included in the study.

Based on the prevalence of MS in American and European populations, the researchers found that MS is 18 times and 21 times more likely in an American and European population with uveitis, respectively, relative to the general population. The study found that MS was diagnosed before uveitis in 28 (29 percent) of patients, simultaneously in 15 (15 percent) of patients and after uveitis diagnosis in 54 (56 percent) of patients.

"With a population size four-times larger than any study to date on this topic, our study provides a wealth of clinical information to allow clinicians to make more accurate diagnoses while giving patients a better understanding of their prognosis," said Wyatt Messenger, M.D., lead researcher from the Casey Eye Institute (now a research fellow at the University of Utah). "Knowing more about the onset may enable patients to seek treatment earlier, therefore slowing the progression of the disease and limiting the damage done to the nervous system."

Additionally, this is the first study to estimate the relative frequency of anatomical sub-types of uveitis in patients with MS. Traditionally, uveitis in patients with MS is said to present with intermediate uveitis (also referred to as pars planitis). While 80 percent of cases in this study had intermediate uveitis at the time of MS diagnosis, researchers found that nearly 1 in 6 of participants presented with anterior uveitis. The study also showed that visual acuity is generally stable in this population; the majority of patients improved during follow up following treatment.

The researchers noted that a major limitation of the study is the lack of availability of brain magnetic resonance images on all of the [patients](#) or detailed neurological studies, which would have allowed correlation of the patient's [uveitis](#) with their neurological disease.

Provided by American Academy of Ophthalmology

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