

# Relapses more frequent in patients diagnosed with pediatric-onset multiple sclerosis

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Patients who develop multiple sclerosis before age 18 appear to experience more relapses of symptoms than those diagnosed with the disease as adults, according to a report in the January issue of *Archives of Neurology*.

"Although the clinical onset of multiple sclerosis (MS) typically occurs between ages 20 and 40 years, 2.7 percent to 10.5 percent of patients have been reported to develop their first symptoms before their 18th birthday," the authors write as background information in the article. Previous reports suggest the progression of MS—an inflammatory disease in which myelin, the protective coating covering nerve cells, degenerates—is slower in patients who are diagnosed in childhood.

Mark P. Gorman, M.D., of Brigham and Women's Hospital and Massachusetts General Hospital, Boston, and colleagues studied 110 patients diagnosed with relapsing-remitting MS in adulthood (average age at diagnosis, 34.4) and 21 with pediatric-onset MS (average age at diagnosis, 15.4). Relapsing-remitting is the most common type of MS, in which patients experience periods of symptoms followed by periods of symptom-free remission. Study participants developed their first symptoms in July 2001 or later, were monitored with semi-annual neurological examinations and were followed for 12 months or longer (an average of 3.67 years for pediatric-onset patients and 3.98 years for adult-onset).

Patients who developed the disease in childhood had, on average, a higher yearly rate of relapses than those who were diagnosed as adults (1.13 vs. 0.4 relapses per year). "These findings persisted in multivariate regression models when controlling for sex, race and proportion of disease spent undergoing disease-modifying treatment and when

age at onset was treated as a continuous variable," the authors write.

"In general, the disease course of MS has been divided into a relapsing-remitting phase, during which inflammatory mechanisms predominate, and a secondary progressive phase, during which neurodegenerative mechanisms predominate," they continue. "Acute relapses are the clinical hallmark of the inflammatory phase of MS. The higher relapse rate in the pediatric-onset group in our study may therefore suggest that patients with pediatric-onset MS are coming to medical attention closer to the true biological onset of their disorder than patients with adult onset during a more inflammatory phase, as has been previously suggested."

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