

Statin does not appear helpful for children with learning disabilities caused by genetic disorder

Use of simvastatin by children with neurofibromatosis type 1 (NF1), a genetic disorder that can cause learning disabilities, did not result in improved cognitive function, according to a study in the July 16 issue of *JAMA*.

Characteristics of NF1 (incidence 1:3,000) include skin disorders, problems with small and large movement skills as well as the frequent occurrence of cognitive disabilities, such as visual-spatial skills, nonverbal long-term memory and attention span, according to background information in the article. Some NF1 studies involving mice suggested that use of a statin could improve cognitive deficits.

Lianne C. Krab, M.Sc., of Erasmus MC University Medical Center, Sophia Children's Hospital, Rotterdam, The Netherlands, and colleagues conducted a randomized trial to study the effect of the statin simvastatin on cognitive function of 62 children with NF1. The participants received simvastatin or placebo treatment once daily for 12 weeks.

After the treatment period, there was no significant difference between the simvastatin and placebo groups on several cognitive measures (determined by testing), including assessing nonverbal long-term memory, assessing attention and prism adaptation task (measurement of adaptation of the angle of hand movements in response to prism glass distortion, which is thought to be dependent on cerebellar function).

In the secondary outcome measures, the researchers found a significant improvement in the simvastatin group in object assembly scores, which was specifically observed in children with poor baseline performance. Other secondary outcome measures, such as attention fluctuations and a developmental test of visual-motor integration revealed no significant effect of simvastatin treatment.

"The negative outcome of this trial suggests that simvastatin should not be prescribed to ameliorate the cognitive deficits associated with NF1. Further studies to evaluate a longer treatment period and whether the object assembly finding is spurious may be warranted," the authors conclude.

Source: *JAMA* and Archives Journals

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