

Cholesterol-lowering drug linked to sleep disruptions

November 7 2007

A cholesterol-lowering drug appears to disrupt sleep patterns of some patients, researchers reported at the American Heart Association's Scientific Sessions 2007.

“The findings are significant because sleep problems can affect quality of life and may have adverse health consequences, such as promoting weight gain and insulin resistance,” said Beatrice Golomb, M.D., lead author of the study and an associate professor of medicine and family and preventive medicine at the University of California at San Diego School of Medicine.

In the largest study of its kind, researchers compared two types of cholesterol-lowering drugs called statins — simvastatin, which is lipophilic (soluble in fats), and pravastatin, which is hydrophilic (soluble in water).

Because simvastatin is fat soluble it can more readily penetrate cell membranes and cross the blood brain barrier into the brain. The brain controls sleep, and many of the brain's nerve cells are wrapped in a fatty insulating sheath called myelin.

“The results showed that simvastatin use was associated with significantly worse sleep quality. A significantly greater number of individuals taking simvastatin reported sleep problems than those taking either pravastatin or the placebo,” Golomb said. “On average, the lipophilic statin had a greater adverse effect on sleep quality.”

In past studies and case reports, some people on statins reported having insomnia or nightmares.

“Several small studies were done early on, including those focused on lipophilic versus hydrophilic statins,” Golomb said. “Most (researchers) didn’t see a difference in sleep, but they had short durations of follow-up and enrolled just a handful of people — often fewer than 20, which was not enough to see a difference unless it was very large.

“One of these studies did report a significant difference between pravastatin and simvastatin. But without more and bigger studies, an effect was not considered to be established.”

In this study, researchers tested 1,016 healthy adult men and women for six months in a randomized, double-blind, placebo-controlled trial using simvastatin, given at 20 milligrams (mg), pravastatin at 40 mg, or a placebo. They assessed outcomes with the Leeds sleep scale, a visual analog scale of sleep quality, and a rating scale of sleep problems. Both scales were measured before and during treatment.

“Those who reported developing much worse sleep on study medication also showed a significant adverse change in aggression scores compared to others,” Golomb said “We should also point out that although the average effect on sleep was detrimental on simvastatin, this does not mean that everyone on simvastatin will experience worse sleep.”

Researchers did not include patients with heart disease or diabetes due to concerns about assigning these people to placebos.

“Patients taking simvastatin who are having sleep problems should consult with their doctor,” Golomb said. “Sleep deprivation is a major problem in a minor number of people.”

Source: American Heart Association

Citation: Cholesterol-lowering drug linked to sleep disruptions (2007, November 7) retrieved 25 April 2024 from

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