Severe Events Rare in Statin-Induced Myopathy

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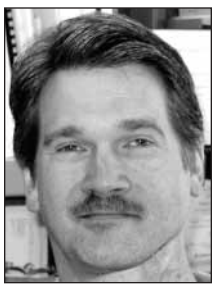
WASHINGTON — Statin-induced myopathy and myalgia may be higher than reported previously in patients with diabetes, but myositis and rhabdomyolysis are rare, Gregory A. Nichols, Ph.D., and Carol E. Koro, Ph.D., reported in a poster at the annual scientific sessions of the American Diabetes Association.

Clinical trial results suggest that statin-induced myopathy occurs in less than 1% of patients, but no previously published reports of muscle syndromes following statin initiation have come from real-world settings, said Dr. Nichols and Dr. Koro, both of Kaiser Permanente Northwest, Portland, Ore.

They compared electronic pharmacy records for 10,247 Kaiser enrollees who have type 2 diabetes and initiated statins between 1997 and 2004. Their results were compared with those of the same number



Older age, higher BMI, concurrent use of fibrates or steroids, and heart disease increased the risk for myalgia.

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of diabetic patients who did not take statins during that time period. Study subjects were followed until they experienced a myopathic event or until the end of 2005.

Kaiser Permanente recommends that any patient who presents with muscle complaints while taking statins undergo a creatine kinase (CK) test and suspend statin use pending the results. Therefore, myopathy was defined as the presence of any creatine kinase test during a break in statin dispense records, any CK test greater than three times the upper limit of normal (ULN), or any diagnosis of myopathy. Myalgia was defined as the presence of a normal CK test during a break in the statin dispense records or a diagnosis of myalgia.

During the study period, myopathy developed in 7.1% of the statin initiators and 5.5% of the controls, a statistically significant difference. The unadjusted incidence of myopathy/1,000 person-years was also significantly greater for the statin users, 21.9, than for the nonusers, 18.1. Also, the rates of CK levels between 1 and 3 times the ULN were significantly different, seen in 1.7% of the statin users and 0.6% of the controls, translating to unadjusted incidence rates of 5.5/1,000 vs. 2.0/1,000 person-years.

Similarly, the proportion developing myalgia was also significantly greater with statins (5.8%), compared with controls (4.7%), as was the incidence rate of myalgia (18.3/1,000 vs. 15.4/1,000), Dr. Nichols and Dr. Koro reported.

On the other hand, myositis—defined as a CK test with a result 3-10 times the ULN or a diagnosis—was not significantly more common among statin users, occurring in 0.21% of statin users and 0.14% of controls, with rates of 0.70/1,000 vs. 0.46/1,000. Similarly, comparable rates of rhabdomyolysis, defined as a CK test result more than 10 times above the ULN (0.13% vs. 0.12%) or a diagnosis (0.41/1,000 vs. 0.17/1,000), were seen.

Concurrent use of fibrates and corticosteroids were the strongest predictors of myopathy (hazard ratios 2.11 and 1.80, respectively). Older age, presence of cardiovascular disease, and higher body-mass index also contributed to the myopathy risk. After adjustment for those factors, the incidence rates were not significantly different between statin users and controls (21.1/1,000 vs. 19.4/1,000).

Older age, higher BMI, concurrent fibrate use, concurrent corticosteroid use, and the presence of cardiovascular disease also increased the risk for myalgia; male sex and metformin use appeared to be protective. As with myopathy, adjusting for those factors eliminated the difference between statin users and nonusers (17.3/1,000 vs. 16.4/1,000).

However, the rates of elevated CK test results of 1-3 times the ULN remained significantly higher for statin users even after adjusting for predictors such as younger age, longer duration of diabetes, male sex, concurrent fibrate use, higher BMI, and poor kidney function (4.1/1,000 vs. 1.3/1,000).

Differences between statin users and controls in rates of myositis and rhabdomyolysis remained insignificant after adjusting for male sex (a predictor of both) and for concurrent use of diuretics (a predictor of rhabdomyolysis). ■