Statins Urged for Diabetes Patients in Their 40s

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A public health strategy of prescribing statins to patients with diabetes to prevent cardiovascular disease would be most effectively and efficiently carried out at about 40 years of age in men and 45 years in women, according to a recent study.

"From this study, we advocate that in the absence of specific indications for statin therapy (e.g., microalbuminuria, strong family or personal history of CVD risk), statins should still be routinely prescribed to all men and women with diabetes aged [older than] 40 years and 45 years, respectively, for primary CVD prevention," Dr. Sajith Siyambalapitiya, of the University of Sheffield (England), and colleagues wrote.

To determine which of four strategies would be the most effective at reducing CVD in diabetes patients while also being the most efficient, Dr. Siyambalapitiya and coinvestigators conducted a cross-sectional cohort study with anonymous patient data from the U.K. Health Improvement Network, which comprises 304 general practices throughout England and Wales.

The four strategies considered involved using statins to treat patients belonging to one or more of the following groups:

- All patients with diabetes aged 30-74 years.
- Patients whose baseline CVD risk was moderate (10-year CVD risk of greater than 10%) or high (10-year CVD risk of greater than 20%).
- Patients whose cholesterol level was greater than 5 mmol/L.
- Patients older than a sex-specific age cutoff (determined by combining the first and second strategies).

The investigators found 62,258 patients in the network with type 1 or 2 diabetes, and included 11,005 of them in the study. All of the patients were aged 30-74 years (average 54 years) and had no history of taking lipid-lowering drugs or of having atherosclerotic disease, according to the study (Diabetes Care 2007;30:2025-9).

The investigators found that for diabetic patients with a 10-year CVD risk greater than 10%, a strategy of prescribing statins to men older than 40 years and to women age 45 years "would potentially prevent the largest number of CVD events and would recommend treatment to the least number of patients."

The use of those ages as the cutoffs for prescribing a statin—representing the age of transition from low baseline risk to moderate to high baseline risk of developing CVD—gave 92% sensitivity and 84% specificity in men and 90% sensitivity and 81% specificity in women.

The study showed that prescribing statins to men older than 40 years and to women 45 years and older would prevent the largest number of CVD events.

A strategy of prescribing statins to all patients with diabetes aged 30-74 years was highly effective in that it prevented a large number of CVD events, but it was not efficient and would have involved treating the largest number of patients to prevent one CVD event. On the other hand, a strategy in which all patients with a 10-year CVD risk greater than 20% were treated with statins was less effective, but was the most efficient because it involved the lowest number needed to treat to prevent one CVD event. The strategy of treating all patients with cholesterol levels greater than 5 mmol/L was the least effective and nearly the least efficient.

For each strategy, the researchers calculated the number of CVD events that were potentially avoided by multiplying the patients' 5-year baseline risk and an estimate of 33% relative reduction of CVD events, which was based on the effect of 40 mg simvastatin (Zocor) in the primary prevention of CVD events over 5 years in the U.K. Heart Protection Study. They estimated the efficiency of the strategy—or the number needed to treat to prevent one CVD event over 5 years—by dividing the number of patients treated by the number of CVD events prevented.

The investigators added that further studies "are required to clarify whether this treatment strategy can be extrapolated to diabetic patients outside the [United Kingdom], and longitudinal data are required to confirm the absolute risk reduction estimated using this strategy." ■