Metformin Cut Deaths in Patients With CVD Risk

BY MICHELE G. SULLIVAN

FROM THE ANNUAL MEETING OF THE AMERICAN DIABETES ASSOCIATION

ORLANDO — Metformin use was associated with a significant decrease in the risk of all-cause death among diabetic patients at risk for cardiovascular events.

The subanalysis of the Reduction of Atherothrombosis for Continued Health (REACH) Registry found that subjects with type 2 diabetes who took metformin were 24% less likely to die of all-cause mortality over a 2-year period than were those who did not take the drug. The association remained significant even after researchers controlled for age and sex, and after factoring in several baseline characteristics that varied significantly between the groups.

"Given the diversity of the 44 countries and widely different practice settings involved in the registry, we think these data are highly relevant," Dr. Ronan Roussel said at the meeting. While perhaps not sufficient to make practice recommendations, he did say the results are strong enough to prompt clinical trials, especially when viewed in the context of the growing body of evidence about metformin's cardioprotective effects.

The REACH Registry was established to track outcomes in patients with atherothrombosis or atherothrombotic risk factors. Almost 70,000 patients were enrolled. They were either symptomatic, with documented cardiovascular, coronary artery, or peripheral artery disease; or asymptomatic with at least three risk factors for atherothrombosis.

Of this group, 19,699 had type 2 diabetes and 2-year outcomes data. Dr. Roussel of the Groupe Hospitalier Bichat-Claude Bernard, Paris, and his colleagues compared those who were taking metformin at baseline with those who were not. Metformin was taken by 40% of the patients.

There were some significant baseline differences between the groups, Dr. Roussel noted. Patients taking metformin were significantly younger (67 vs. 69 years), had a higher average fasting blood glucose (138 mg/dL vs. 131 mg/dL), and higher systolic blood pressure (138 mm Hg vs. 136 mm Hg).

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Prior arterial disease was present in 80% of those taking metformin and 75% of those not. Metformin users were also taking significantly more cardiovascular drugs, including aspirin (74% vs. 69%), statins (75% vs. 67%), and angiotensin-converting enzyme inhibitors (54% vs. 49%).

Over the 2-year follow-up period, there were 1,270 deaths. After researchers adjusted for sex and age only, metformin was associated with a 33% reduction in the risk of all-cause death.

After adjustment for the other factors, the mortality difference still remained significant in favor of metformin use, with a 24% risk reduction in all-cause death. When the researchers examined the sexes separately, they found no statistically significant differences.

In an age analysis, with subjects split into groups 40-65 years, 65-80 years, and older than 80 years, the risk reductions were significant for the youngest group (37%) and the middle group (23%). The oldest subjects did not have a survival advantage with the drug.

Metformin also improved the odds of survival in patients with existing heart failure, conferring a significant 31% reduction in the risk of death.

Subjects who were taking insulin as well as metformin benefited more than did those who were taking metformin alone (hazard ratio, 0.64 vs. 0.80).

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