

Preoperative metformin tied to better surgical outcomes

April 15 2020



(HealthDay)—Preoperative metformin prescriptions may be associated

with decreased postoperative mortality and readmission among patients with diabetes undergoing a major surgical procedure, according to a study published online April 8 in *JAMA Surgery*.

Katherine M. Reitz, M.D., from the University of Pittsburgh School of Medicine, and colleagues used electronic health record data to identify 10,088 adults with diabetes who underwent a major operation with hospital admission (January 2010 to January 2016) at 15 community and academic hospitals within one health care system. Fifty-nine percent had preoperative metformin prescriptions. The analysis included 5,460 propensity score-matched patients (mean age, 67.7 years; 53 percent women).

The researchers found that in the [propensity score](#)-matched cohort, preoperative metformin was associated with a reduced hazard for 90-day mortality (adjusted hazard ratio [HR], 0.72 [95 percent confidence interval (CI), 0.55 to 0.95]; absolute risk reduction [ARR], 1.28 percent [95 percent CI, 0.26 to 2.31]) and hazard of readmission at 30 days (ARR, 2.09 percent [95 percent CI, 0.35 to 3.82]; sub-HR, 0.84 [95 percent CI, 0.72 to 0.98]) and 90 days (ARR, 2.78 percent [95 percent CI, 0.62 to 4.95]; sub-HR, 0.86 [95 percent CI, 0.77 to 0.97]). Preoperative inflammation was lower in those with [metformin](#) prescriptions versus those without (mean neutrophil-to-leukocyte ratio, 4.5 [95 percent CI, 4.3 to 4.6] versus 5.0 [95 percent CI, 4.8 to 5.3]).

"The advantages are likely not disease specific, but instead the pleiotropic properties may modulate the [stress response](#) generated by a major surgical intervention or confer consistently good outcomes, regardless of the [surgical procedure](#)," the authors write.

Two authors disclosed financial ties to the pharmaceutical industry.

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