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Early aspirin use may lower mortality risk in adults hospitalized with COVID-19

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Among patients hospitalized with moderate COVID-19, those who received aspirin on the first day of hospitalization had a significantly lower risk for 28-day mortality than those who did not, according to a recent observational cohort study.

The findings are consistent with previous observational studies, **Jonathan H. Chow, MD,** an associate professor in the department of anesthesiology and critical care medicine at George Washington University School of Medicine and Health Sciences, and colleagues wrote in *JAMA Network Open*.

"This is our third study and the culmination of 15 months of work looking at aspirin use in hospitalized COVID-19 patients," Chow said in a press release. "We continue to find that aspirin use is associated with improved outcomes and lower rates of death in hospitalized patients. What's more, it's low cost and readily available, which is important in parts of the world where more expensive therapeutics might not be as accessible."

The current trial is the largest cohort study to date that evaluated the impact of early aspirin use in patients hospitalized with moderate COVID-19. The analysis included 112,269 adults who were enrolled from Jan. 1, 2020, through Sept. 10, 2021, at 64 U.S. health care facilities participating in the NIH's National COVID Cohort Collaborative. The median age of the patients was 63 years. Most patients (52.7%) were white; 16.1% were African American, 3.8% were Asian, 5% were of another race and ethnicity and 22.4% had an unknown race and ethnicity.

The overall in-hospital mortality rate was 10.9%, according to the researchers. After inverse probability treatment weighting, Chow and colleagues reported that the 28-day in-hospital mortality rate was 10.2% among patients who received aspirin on the first day of hospitalization vs. 11.8% among those who did not receive early aspirin (OR = 0.85; 95% CI, 0.79-0.92). In addition, there was a significantly lower

rate of pulmonary embolism — but not deep vein thrombosis — in patients who received early aspirin compared with those who did not (1% vs 1.4%; OR = 0.71; 95% CI, 0.56-0.9).

Patients who particularly benefited from early aspirin use included those aged older than 60 years (61-80 years: OR = 0.79; 95% CI, 0.72-0.87; > 80 years: OR = 0.79; 95% CI, 0.69-0.91) and those with comorbidities (6.4% vs 9.2%).

The researchers also investigated whether aspirin use increased the risk for hemorrhagic complications. They found that patients who received early aspirin did not have higher rates of gastrointestinal hemorrhage (0.8% vs. 0.7%), cerebral hemorrhage (0.6% vs. 0.4%) or blood transfusion (2.7% vs. 2.3%). Further, a composite of hemorrhagic complications was not more prevalent in the early aspirin group (3.7% vs. 3.2%), according to Chow and colleagues.

"Although the composite of hemorrhagic complications was not significantly higher in the early aspirin group, aspirin's risks must be carefully weighed before treatment," they wrote. "An RCT in a diverse patient population with high-risk conditions is needed to confirm our findings because our study cannot definitively establish causality."

References:

Aspirin may reduce death in hospitalized COVID-19 patients. https://www.eurekalert.org/news-releases/947456. Published March 24, 2022. Accessed March 24, 2022.