Coronary Artery Disease and Cardiovascular Outcomes in Heart Failure: Insights from the VerICiguaT Global Study in Patients With Heart Failure and Reduced Ejection Fraction (VICTORIA)

AUTHORS

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BACKGROUND

Concomitant coronary artery disease (CAD) is associated with worse long-term cardiovascular (CV) outcomes in patients with heart failure (HF) as compared with non-CAD patients with HF.

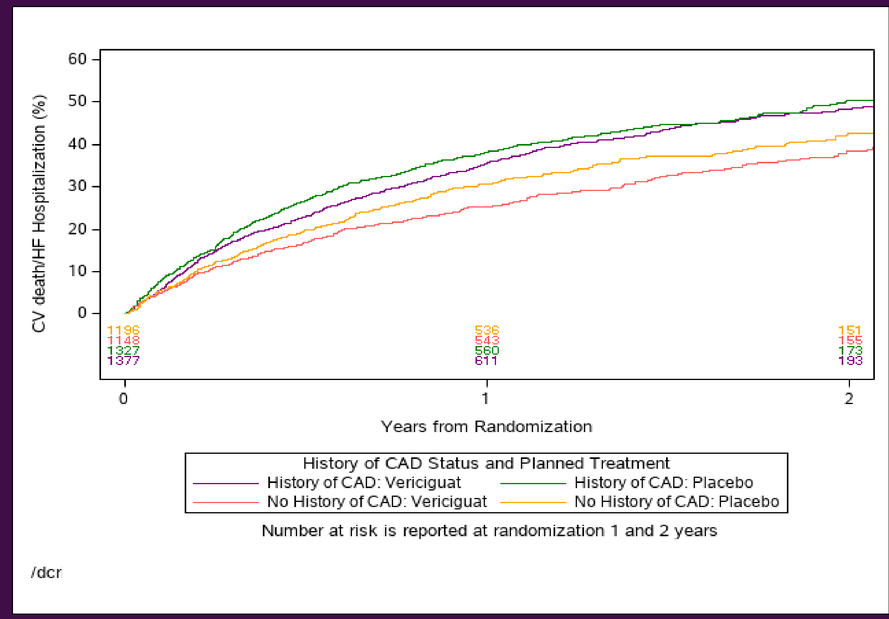
OBJECTIVE

To describe the characteristics of high risk patients with HF with reduced ejection fraction (HFrEF) and recent worsening HF according to the presence of CAD in the VICTORIA trial (NCT02861534), and evaluate whether a history of CAD was associated with differing outcomes and benefits afforded by vericiguat.

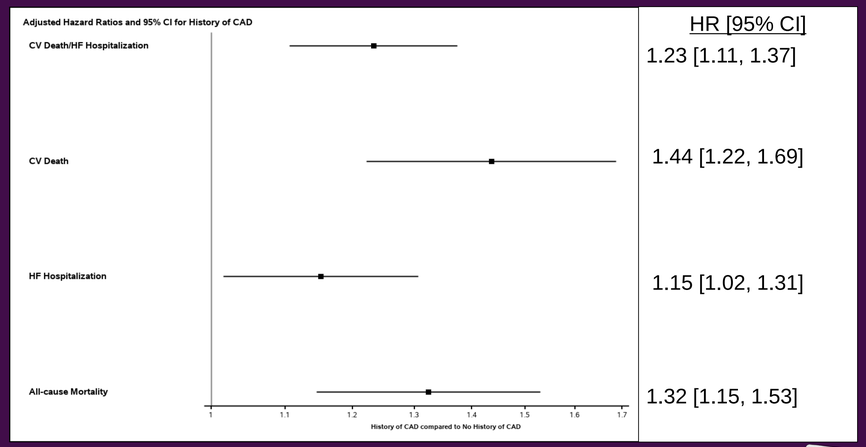
METHODS

Cox proportional hazard models were generated for the primary endpoint of CV death/HF hospitalization and the secondary outcomes of CV death, HF hospitalization and all-cause mortality. The presence of CAD was defined as previous MI, PCI, or CABG.

History of CAD status and vericiguat treatment: CV death or HF hospitalization



Adjusted HRs and 95% CI of history of CAD vs. no history of CAD



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RESULTS

A total of 5048 patients were included. Of these, 2704 (58.3%) had CAD. Patients with CAD versus those with no CAD were older (70 vs 66 yrs; p<0.0001), more frequently male (81.2 vs 70.1%; p<0.0001), diabetic (53.7 vs 39.1%), smokers (64.2 vs 52.5%), and had more COPD (19.1 vs 15.0%; p<0.0001). Additionally CAD vs non-CAD patients had a mean LVEF of 30.0 vs 29.0%, and lower GFR (53.5 vs 63.3 mL/min/1.73m^2; both p<0.0001). CAD patients were less often treated with ACE inhibitors or ARBs (71.1 vs 76.0%; p<0.0001) and MRAs (66.7 vs 74.5%; p<0.0001) whereas the use of sacubitril-valsartan was similar (14.3 vs 14.7%; p= 0.65) between the groups. The use of implantable cardioverter defibrillators and cardiac resynchronization therapy was higher in the CAD group (33.5 vs 21.1%; p<0.0001 and 16.3 vs 12.8%; p=0.0006, respectively). After multivariable adjustment, the primary endpoint of CV death or HF hospitalization was significantly higher in the CAD group (52.7%) than in the non-CAD group (45.0%; adjusted HR 1.23; p<0.001). All-cause mortality was also higher in the CAD group (34.8 vs 27.2%; adjusted HR 1.32; p<0.001). Vericiguat's treatment benefit was similarly expressed in both CAD and non-CAD patients.

CONCLUSION

CAD is associated with increases in both the composite endpoint of CV death and HF hospitalization and each of its components in patients with HFrEF and worsening HF. Vericiguat exerted its beneficial effects irrespective of a concomitant history of CAD in this high-risk HF population.

DISCLOSURE

VICTORIA was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA and Bayer AG, Wuppertal, Germany. Saldarriaga: Speaker for Novartis, Amgen, Pfizer, AstraZeneca, Boehringer Ingelheim and Medtronic. Principal investigator for Novartis, Pfizer , Merck and Bayer trials