Research reports improved outcomes with mineralocorticoid receptor antagonists across different types of heart failure

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Mineralocorticoid receptor antagonists (MRAs) reduced the risk of cardiovascular death or heart failure (HF) hospitalization in patients with HF and reduced ejection fraction (HFrEF) and also in those with mildly

reduced or preserved ejection fraction (HFmrEF/HFpEF), according to late-breaking research presented in a Hot Line session at ESC Congress 2024.

"There is strong evidence for the use of MRAs to improve cardiovascular outcomes in patients with HFrEF, but their benefits in patients with HFmrEF/HFpEF are less clear. We examined the effects of MRAs using data from four trials across both types of HF," said study presenter, Professor Pardeep Jhund of the University of Glasgow, UK.

This was a pre-specified, individual patient-level meta-analysis of four placebo-controlled trials: RALES (spironolactone) and EMPHASIS-HF (eplerenone), which enrolled HFrEF patients, and TOPCAT (spironolactone) and FINEARTS-HF (finerenone), which enrolled HFmrEF/HFpEF patients.

The effect of MRAs was estimated for the outcomes of cardiovascular death or HF hospitalization, components of this composite, total HF hospitalizations (with and without cardiovascular deaths) and all-cause death. An interaction between trials and treatment was tested to examine the heterogeneity of effect in the populations.

In 13,846 patients, MRAs reduced the risk of cardiovascular death or HF hospitalization (hazard ratio [HR]; 0.77; 95% confidence interval [CI] 0.72–0.83). There was a significant interaction by trials and treatment (p for interaction=0.0012) due to the greater efficacy in HFrEF (HR 0.66; 95% CI 0.59–0.73) compared with HFmrEF/HFpEF (HR 0.87; 95% CI 0.79–0.95). The effects were consistent across all subgroups in the HFrEF and HFmrEF/HFpEF trials.

Significant reductions in HF hospitalization were observed in the HFrEF trials (HR 0.63; 95% CI 0.55–0.72) and the HFmrEF/HFpEF trials (HR 0.82; 95% CI 0.74–0.91). The same pattern was observed for total HF

hospitalizations with or without cardiovascular death. Cardiovascular death was reduced in the HFrEF trials (HR 0.72; 95% CI 0.63–0.82) but not the HFmrEF/HFpEF trials (HR 0.92; 95% CI 0.80–1.05).

The risk of hyperkalemia was doubled with an MRA compared with placebo, but the incidence of serious hyperkalaemia (potassium >6.0 mmol/L) was low (2.9% vs. 1.4%). The risk of hypokalemia (potassium