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In-hospital initiation of Angiotensin Receptor-Neprilysin Inhibitors

Heart failure (HF) is a major health problem and results in significant morbidity and mortality. The use of Angiotensin Receptor-Neprilysin Inhibitor (ARNI) in patients hospitalised for HF may be a good strategy to improve morbidity and mortality in patients with heart failure with reduced ejection fraction (HFrEF).

Different studies have shown the benefit of using sacubitril-valsartan in heart failure patients, but its adoption in clinical practice has been slow. Evaluation of the Get With The Guidelines-Heart Failure registry shows that only 2.3% of eligible hospitalised patients were discharged with an ARNI prescription.

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The Prospective Comparison of Angiotensin Receptor-Neprilysin Inhibitor (ARNI) With Angiotensin-Converting Enzyme Inhibitor (ACEI) to Determine Impact on Global Mortality and Morbidity in Heart Failure (PARADIGM-HF) trial enrolled patients with HFrEF who were hospitalised with a primary diagnosis of acute decompensated HF. Patients received either sacubitril-valsartan or enalapril. Findings showed that patients with HFrEF who received sacubitril-valsartan experienced a 20% relative risk reduction in cardiovascular death or hospitalisation for HF. Patients with HFrEF who received sacubitril-valsartan also experienced a 16% relative risk reduction in all-cause mortality compared with those who received enalapril.

Similarly, findings from the Comparison of Sacubitril-Valsartan vs. Enalapril on Effect on NT-proBNP in Patients Stabilized From an Acute Heart Failure Episode (PIONEER-HF) trial also demonstrated a greater decrease in NT-proBNP (N-terminal pro-B-type natriuretic peptide) levels in the sacubitril-valsartan group compared with the enalapril group. No differences were observed in rates of worsening renal function, hyperkalaemia, symptomatic hypotension, or angioedema between the 2 groups. Randomisation to ARNI was also associated with a reduction in serious clinical events including death, rehospitalisation for HF, implantation of a left ventricular device and inclusion on a heart transplant eligibility list. The rate of drug discontinuation due to adverse effects was around 20% for both groups thus demonstrating no significant difference between the two.

Findings from the PIONEERHF trial also demonstrated the safe and effective use of ARNI therapy in patients with acute decompensated HF after medical stabilisation. This trial provides an excellent protocol for ARNI initiation and uptitration to target dosing.

Overall, inpatient ANRI initiation represents an opportunity to improve morbidity and mortality among patients with HFrEF. It is projected that the optimal use of ARNI therapy could prevent 28,484 deaths per year. The use of ARNIs can reduce 30-day-all-cause readmissions and increase mean survival by 1 to 2 years. In addition, ARNI therapy could improve the health status of the patients as well as provide overall cost-reduction benefits associated with heart failure.

Source: JAMA Cardiology
Image Credit: Pixabay

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