

CARDIORENAL SYNDROME: AN UPDATE

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Abstract

Cardiorenal syndrome (CRS) refers to clinical conditions in which cardiac and renal dysfunctions coexist. Renal dysfunction is highly prevalent among patients with heart failure and is a strong predictor of adverse outcomes. Likewise, patients with kidney disease have a significantly higher mortality from cardiovascular disease when compared to the general population. Although it has not been fully elucidated, several pathophysiological mechanisms can contribute to a reduction of glomerular filtration rate in patients with heart failure, including activation of the renal-angiotensin-aldosterone and the sympathetic nervous systems, increase in the release of antidiuretic hormone and endothelin-1, reduced renal perfusion, increased renal venous pressure, and right ventricular dysfunction and dilatation, among others. Management includes measures to improve cardiac function, diuretics, RAS blockers, vasodilators, inotropic drugs, and ultrafiltration. New investigational therapies have been tried with limited success.