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Cardiac resynchronisation therapy reduces mortality in heart failure patients

Approximately 6.5 million adults in the US are affected by heart failure. The prevalence of heart failure continues to increase.

Cardiac resynchronisation therapy, when used in appropriately selected heart failure patients, can help improve left ventricular function, improve quality of life and reduce mortality and hospitalisation.

CRT implantation in patients hospitalised for heart failure can provide benefit if patients who are the highest risk of adverse outcomes are targeted. This particular analysis examines whether the timing of CRT implantation relative to admission for heart failure can result in differences in all-cause mortality and rehospitalisation.

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The analysis included 15,619 patients who required hospitalisation for a primary diagnosis of heart failure. These patients were discharged between January 2005 and December 2012.

Outcomes of interest included all-cause mortality and heart failure rehospitalisation. Patients were categorised on the basis of the timing of CRT implantation: prior to admission for heart failure, during hosptialisation, CRT prescribed at discharged or no CRT.

Key Findings

- CRT implantation during heart failure hospitalisation was associated with improvements in mortality and rehospitalisation compared to no CRT.
- CRT prescribed at discharge was associated with improved mortality compared with no CRT, but the effect was not as large as that seen in patients with CRT implantation during hospitalisation.
- CRT prescribed at discharge was not associated with improved rehospitalisation rates compared with no CRT.
- Pre-existing CRT at the time of hospitalisation was associated with worse clinical outcomes compared with no CRT.

Overall, the analysis showed that in appropriately selected patients admitted with a primary diagnosis of heart failure, CRT implantation prior to discharge can improve mortality and hospitalisation rates compared to those with no CRT. However, in current practice, CRT implantation is quite uncommon during hospitalisation. Among the patients included in this analysis, only 8% received CRT therapy prior to discharge.

Findings from this study suggest that CRT implantation should be considered in patients admitted for heart failure prior to discharge. Findings also show that patients who are prescribed CRT at discharge only get a modest clinical benefit from it as compared to those who receive CRT therapy during hospitalisation.

Source: Clinical Investigations
Image Credit: iStock

Published on : Wed, 19 Dec 2018