

How do outcomes for in-hospital cardiac arrest differ in patients treated with dialysis?

January 7 2020

A new study indicates that there are opportunities to improve the quality of care for patients on dialysis who experience cardiac arrest while in the hospital, but survival rates are similar for these patients compared with patients not on dialysis. The findings appear in an upcoming issue of *CJASN*.

Sudden cardiac arrest is the leading cause of death for patients on [dialysis](#), and previous studies have suggested that for patients who experience cardiac arrest while in the hospital, those who are on dialysis tend to fare worse than those who are not on dialysis. Using a more comprehensive clinical registry of patients with in-hospital cardiac arrest, a team led by Patrick H. Pun, MD, MHS and Monique Anderson Starks, MD, MHS (Duke Clinical Research Institute) re-examined survival outcomes in dialysis patients, and also assessed whether the intensity and quality of cardiopulmonary resuscitation had any relationship to why dialysis patients tend to have worse outcomes. The analysis included information on 31,144 patients (27% on dialysis) who experienced cardiac arrest in 372 hospitals across the United States.

Among the major findings:

- Patients on dialysis were less likely to have a shockable rhythm (19.8% vs. 20.7%) and more likely to be outside of the intensive care unit at the time of arrest (47.1% vs. 45.8%) compared with patients not on dialysis.
- Patients on dialysis had lower overall scores for resuscitation

quality, and they were less likely to have defibrillation within 2 minutes (53.9% vs. 58.2%).

- After adjustments, patients on dialysis had a similar likelihood of surviving to hospital discharge, and they had a 33% higher likelihood of surviving at the time of the arrest. They also had better neurological function at the time of hospital discharge compared with patients not on dialysis.

"While we found that there were some resuscitation parameters that were [lower quality](#) for dialysis patients compared to non-dialysis patients, after accounting for differences in clinical comorbidities, demographics and cardiac arrest characteristics, we found that dialysis patients had similar to better survival outcomes compared with non-dialysis patients," said Dr. Pun. "In light of previous data, while overall [cardiac arrest survival rates](#) are still low at 23%, this suggests that cardiopulmonary resuscitation is not necessarily futile for dialysis patients, and it may be as effective in improving in-hospital survival for dialysis patients as it is for other patients."

An accompanying editorial stresses the importance of having conversations with [patients](#) about their wishes regarding resuscitation.

More information: "In-Hospital Cardiac Arrest Resuscitation Practices and Outcomes in Maintenance Dialysis Patients," *CJASN*, [DOI: 10.2215/CJN.05070419](#)

Provided by American Society of Nephrology

Citation: How do outcomes for in-hospital cardiac arrest differ in patients treated with dialysis? (2020, January 7) retrieved 18 December 2022 from <https://medicalxpress.com/news/2020-01-outcomes-in-hospital-cardiac-differ-patients.html>

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