RESEARCH HIGHLIGHTS

Dialysis is associated with cardiovascular and noncardiovascular mortality

The risk of cardiovascular mortality in patients on dialysis is known to be increased compared with that of the general population. According to a new study, however, patients on dialysis also have an increased risk of noncardiovascular mortality. "These findings demonstrate that we should not only aim to prevent cardiovascular mortality in dialysis patients, but also noncardiovascular mortality", explains lead researcher, Dinanda de Jager.

According to de Jager, the increased risk of mortality associated with dialysis is widely believed to result from the increased risk of cardiovascular mortality. However, the presence of risk factors for noncardiovascular mortality in patients on dialysis suggests that noncardiovascular mortality may also be increased in these individuals. The researchers involved in the current study therefore aimed to investigate whether cardiovascular mortality really is the most important cause of death in patients on dialysis.

The researchers compared mortality rates of 123,407 dialysis patients from the ERA–EDTA registry with those of the general population, over a maximum follow-up of 3 years. Standardization with weights derived from the age distribution of the general population was used to correct for age differences between the two groups.

As in previous studies, cardiovascular mortality was much higher in patients on dialysis than in the general population (relative risk [RR] 8.8; 95% CI 8.6–9.0). However, noncardiovascular mortality was also found to be higher in dialysis patients than in the general population (RR 8.1; 95% CI 7.9–8.3). As de Jager explains, "cardiovascular and noncardiovascular mortality in dialysis patients are equally increased relative to the general population ... the importance of noncardiovascular mortality in dialysis patients is therefore often underestimated".



The researchers hope that their findings will lead to further research to investigate methods for the prevention of noncardiovascular mortality.

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Original article de Jager, D. J. *et al*. Cardiovascular and noncardiovascular mortality among patients starting dialysis. *JAMA* **302**, 1782-1789 (2009)