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Risk of Infective Endocarditis in Patients with End Stage Renal Disease

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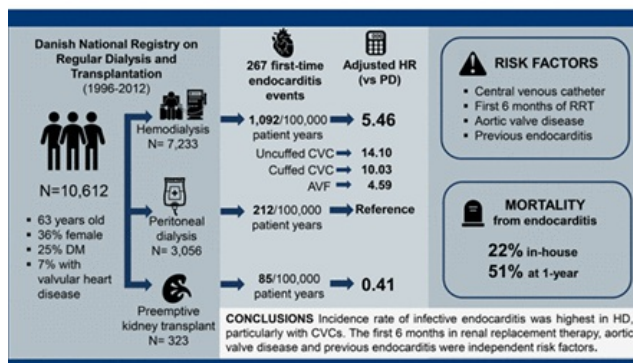
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Visual Overview

Infective Endocarditis in Patients with ESKD



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Abstract

Background and objectives Endocarditis is a serious complication in patients treated with RRT. The study aimed to examine incidence and risk factors of endocarditis in patients with ESKD.

Design, setting, participants, & measurements The Danish National Registry on Regular Dialysis and Transplantation contains data on all Danish patients receiving renal replacement (hemodialysis, peritoneal dialysis, or kidney transplantation) for ESKD. Incidence of endocarditis was estimated for each RRT modality. Independent risk factors of endocarditis were identified in multivariable Cox regression models.

Results From January 1st, 1996 to December 31st, 2012, 10,612 patients (mean age 63 years, 36% female) initiated RRT (7233 hemodialysis, 3056 peritoneal dialysis, 323 pre-emptive kidney transplantation). Endocarditis developed in 267 (2.5%); of these 31 (12%) underwent valve surgery. The overall incidence of endocarditis was 627 per 100,000 person-years in patients receiving RRT. Incidence was higher in patients receiving hemodialysis compared with those receiving peritoneal dialysis or kidney transplantation (1092 per 100,000 person-years, 212 per 100,000 person-years, and 85 per 100,000 person-years, respectively). Adjusted hazard ratios for endocarditis in patients receiving hemodialysis were 5.46 (95% confidence interval [95% CI], 3.28 to 9.10) and 0.41 (95% CI, 0.18 to 0.91) for kidney-transplanted recipients, respectively, as compared with patients in peritoneal dialysis. The incidence of endocarditis in hemodialysis recipients with central venous catheters was more than two-fold higher as compared with those with arteriovenous fistulas. Overall mortality, subsequent to endocarditis, was 22% in-hospital and 51% at 1 year. The first 6

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months in RRT, aortic valve disease, and previous endocarditis were identified as significant risk factors of endocarditis.

Conclusions Patients receiving RRT have a high incidence of endocarditis, in particular during hemodialysis treatment using central venous catheters. The first 6 months in RRT, aortic valve disease, and previous endocarditis are significant risk factors for developing endocarditis.

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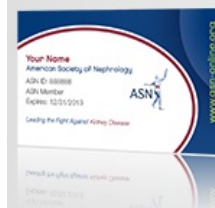
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