Prognostic role of restenosis in 10 004 patients undergoing routine control angiography after coronary stenting.

Routine control angiography is a valuable tool with high-sensitivity in detecting restenosis after coronary stenting. However, the prognostic role of restenosis is still controversial. We investigated the impact of restenosis on 4-year mortality in patients undergoing routine control angiography after coronary stenting. All the patients undergoing successful implantation of coronary stents for de novo lesions from 1998 to 2009 and routine control angiography after 6-8 months at two centres in Munich, Germany were studied. Restenosis was defined as diameter stenosis >=50% in the in-segment area at follow-up angiography. The primary outcome was 4-year mortality. The study included 10 004 patients with 15 004 treated lesions. Restenosis was detected in 2643 (26.4%) patients. Overall, there were 702 deaths during the follow-up. Of these, 218 deaths occurred among patients with restenosis and 484 deaths occurred among patients without restenosis [unadjusted hazard ratio: HR: 1.19; (95% confidence interval CI: 1.02-1.40); P = 0.03]. The Cox proportional hazards model adjusting for other variables identified restenosis as an independent correlate of 4-year mortality [HR: 1.23; (95% CI: 1.03-1.46); P = 0.02]. Other independent correlates of 4-year
mortality were age [for each 10-year increase, HR: 2.34; (95% CI: 2.12-2.60); P< 0.001], diabetes mellitus [HR: 1.68; (95% CI: 1.41-1.99); P< 0.001], current smoking habit [HR: 1.39; (95% CI: 1.09-1.76); P = 0.01], and left ventricular ejection fraction [for each 5% decrease, HR: 1.39; (95% CI: 1.31-1.48); P< 0.001]. In this large cohort of patients, the presence of restenosis at follow-up angiography after coronary stenting was predictive of 4-year mortality. Whether routine control angiography after coronary stenting is beneficial and influences outcomes should be evaluated by properly designed randomized trials.