Incidence and impact on prognosis of bleeding during percutaneous coronary interventions in patients with chronic kidney disease.

Abstract:
Limited information exists on the prognostic impact of bleeding after percutaneous coronary intervention (PCI) in patients with chronic kidney disease (CKD). We investigated the impact of bleeding after PCI on the outcome of these patients. The study included 2,934 patients with estimated creatinine clearance < 60 ml/min. Bleeding events within 30 days after PCI were assessed using the Bleeding Academic Research Consortium (BARC) criteria. The primary outcome was 1-year mortality. Bleeding events occurred in 485 patients (16.5%). BARC classes were: class 1 (n = 155), class 2 (n = 73), class 3a (n = 182), class 3b (n = 68), class 3c (n = 6) and class 4 (n = 1). There were 212 deaths over the first year after PCI: 60 deaths in patients who bled and 152 deaths in patients who did not bleed (Kaplan-Meier [KM] estimates, 12.5 and 6.3%; odds ratio [OR] = 2.11, 95% confidence interval [CI] 1.57-2.83, P < 0.001). Nonfatal myocardial infarction occurred in 71 patients who bled and in 141 patients who did not bleed (KM estimates, 14.8 and 5.8%; OR = 2.70 [2.05-3.55], P < 0.001). After adjustment, bleeding was independently associated with increased risk of 1-year mortality (adjusted hazard ratio [HR] = 1.90 [1.33-2.72], P < 0.001) and myocardial infarction (adjusted HR = 2.74
Bleeding improved the discriminatory power of the multivariable model for prediction of mortality (absolute and relative integrated discrimination improvement [IDI], 0.011 and 15.4%; \( P = 0.004 \)) or myocardial infarction (absolute and relative IDI, 0.017 and 70.8%; \( P < 0.001 \)). Peri-PCI bleeding in patients with CKD is independently associated with the increased risk of 1-year mortality and nonfatal myocardial infarction.