CONCLUSIONS IVUS assessment of obstructive lesions showed that clinical characteristics still were able to differentiate the manifestation of coronary artery disease. Negative remodelling was associated with worse angina frequency by the SAQ. Patient reported physical limitation and angina stability were, respectively, associated with necrotic core size and plaque burden.

CATEGORIES IMAGING: Intravascular

KEYWORDS IVUS, Virtual histology intravascular ultrasound, Vulnerable plaque

TCT-370
Serial Optical Coherence Tomography Assessment of the Everolimus-Eluting Absorb™ Bioresorbable Vascular Scaffold: Strut Coverage and Dynamic Malapposition Patterns at 9-month
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BACKGROUND The illumination of the spontaneous vascular healing pattern following implantation of the everolimus-eluting Absorb™ bioresorbable vascular scaffold (BVS) remains sparse. Optical coherence tomography (OCT) allows accurate and detailed in vivo assessment of the arterial recovery following BVS-implantation.

METHODS OCT was performed in 20 stable angina pectoris patients at post-procedure and at 9-month follow-up. Baseline struts were classified according to apposition (well apposed: embedded or protruding, or incompletely apposed (ISA-struts)), and 9-month struts were classified according to apposition and coverage. Also, the optical visibility of the surrounding polymer of the box-shaped struts was assessed at 9-month.

RESULTS One BVS was insufficiently flushed post-procedurally, of which 11 patients (68.8%) had acute ISA post-procedurally, of which 11 patients (68.8%) had resolved ISA at 9-month follow-up. No cases of late acquired ISA were observed at 9-month. In total, 212 struts (5.5%) were incompletely covered. Five uncovered struts were overlying SBs (2.4%), and the remaining 207 uncovered struts (97.6%) were apposed. None of the late malapposed struts were uncovered. Of the 3,671 covered struts (94.5%), 962 (26.2%) were protruding, and 2,709 (73.8%) were embedded. Three patients (15.0%) had completely covered stents at the 9-month follow-up.

CONCLUSIONS The rate of acute ISA was high following BVS-implantation in stable target lesions, probably due to underlying plaque-related factors and changes in vessel caliber. However, resolved ISA was observed in the majority of cases, and no cases of late acquired ISA developed during follow-up. A modest rate of uncovered struts was detected at 9-month, and none of these were malapposed.

CATEGORIES IMAGING: Intravascular

KEYWORDS Bioabsorbable scaffolds, OCT, Vascular healing

TCT-378
The Effect Of The Choice Of Contrast Media On Contrast-Induced Acute Kidney Injury Events In Inpatient Interventional Or Diagnostic Cardiovascular Procedures
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BACKGROUND Acute Kidney Injury (AKI) is an adverse event associated with cardiovascular (CV) procedures and may be caused by the use of contrast media (CM). Hospitals code AKI via International Classification of Diseases 9th Revision (ICD-9) and then use an add-on ICD-9 code to indicate that the AKI was a contrast-induced acute kidney injury (CIAKI). The objective of this study was to assess the relationship between iso-osmolar CM and low-osmolar CM agents (LOCM), and CIAKI for those patients undergoing inpatient interventional or diagnostic CV procedures with an AKI event.
Independent and Combined Effect of Chronic Kidney Disease and Diabetes Mellitus in Women Undergoing Percutaneous Coronary Intervention with Drug-Eluting Stents: Results from a Patient-Level Pooled Analysis of Randomized Controlled Trials

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BACKGROUND Chronic kidney disease (CKD) and diabetes mellitus (DM) are associated with increased risk of adverse events in patients with drug eluting stents (DES). Prior studies were conducted predominantly in male patients; thus the effect of CKD and DM on outcomes in women with DES remains unclear.

METHODS The purpose of this study was to characterize the independent and combined impact of CKD and DM on outcomes in women undergoing DES implantation. We pooled patient-level data from 26 randomized controlled trials of DES. The primary outcomes of interest were all-cause mortality and major adverse cardiac event (MACE) defined as the composite of all-cause mortality, myocardial infarction or stent thrombosis, at 3 years after DES placement. The study population was stratified into 4 groups: women with neither DM nor CKD, those with DM and no CKD, those with CKD and no DM, and those with both DM and CKD. Women who received a bare metal stent were excluded from this analysis.

RESULTS Out of 4210 women in the pooled dataset for whom baseline creatinine levels were available, 1794 (43.0%) had neither DM nor CKD, 965 (23.0%) had CKD alone, 972 (23.0%) had DM alone, and 479 (11.0%) had both DM and CKD. A stepwise increase in 3-year crude event rates was observed in the transition from no CKD or DM, DM alone, CKD alone, to both CKD and DM (Figure 1). Following multivariable adjustment, hazard ratios (HR) for all-cause mortality were: 1.81 (95% CI: 1.20 - 2.73) in patients with DM alone, 1.38 (95% CI: 0.93 - 2.07) in patients with CKD alone, and 3.49 (95% CI: 2.32 - 5.29) in patients with both CKD and DM (trend p value <0.0001). Conversely, the adjusted HRs for MACE were 1.24 (95% CI: 0.94-1.64) in patients with DM alone, 1.01 (95% CI: 0.76 - 1.34) in patients with CKD alone, and 2.18 (95% CI: 1.63-2.92) in patients with both CKD and DM (trend p value<0.0001).

CONCLUSIONS The presence of both CKD and DM confers a synergistic adverse effect on the risk for long-term MACE in women undergoing PCI.

CATEGORIES CORONARY: Diabetes

KEYWORDS Chronic kidney disease, Diabetes mellitus, Drug-eluting stent