**TCT-539**

Clinical outcomes following percutaneous coronary intervention with Absorb BVS in patients with distal coronary artery disease. Results from the Italian RAI multicenter registry

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**BACKGROUND**

The treatment of coronary artery disease involving distal segments remains a challenge. Differently from metallic platform stents (MPS), bioresorbable vascular scaffolds (BVS) may potentially provide extensive remodeling, the return of vessel vaso-motion and permit surgical revascularization. Notwithstanding, data at late follow-up in this setting are scant.

**METHODS**

The Italian RAI Registry is an ongoing, spontaneous, multicenter prospective data collection which evaluates all patients treated by BVS at participating centers with the second-generation everolimus-eluting Absorb BVS. Our analysis was restricted to patients who received Absorb BVS implantation in at least one distal segment of an epicardial coronary artery.

**RESULTS**

Between March 2012 and June 2015, 1089 consecutive unselected patients were treated by BVS. 121 patients (mean age 59 years, 86% males) were included in this analysis. A total of 135 lesions involving distal segments were treated with Absorb BVS in this cohort. Seventy-six (63%) patients had an acute coronary syndrome. Diabetic patients were 29 (24%). Multivessel coronary artery disease was present in 69% of patients, and the median SYNTAX score was 17 ± 12. Multivessel implantation occurred in 40 (33%) patients and 21% of patients received metallic stents proximally. The total number of BVS implanted was 269, with an average of 2.2/patient. Final scaffold length was >28 mm in the majority of patients (52%) with 79 overlaps. Prosthetic coverage in 96% of patients. At a median follow-up of 25 months (interquartile range, 12–37 months), target lesion failure rate was 5.8%. More in detail, adverse events were: 1 cardiac death, 5 target vessel myocardial infarctions, 4 target lesion revascularizations because of definite scaffold thrombosis (3 sub-acute, 1 very late).

**CONCLUSIONS**

By the data of the RAI registry, the implantation of Absorb BVS in distal segments is promising. Randomized studies are needed to assess the potential benefit of BVS to treat distal coronary lesions compared to MPS or incomplete revascularization.

**CATEGORIES CORONARY:** Bioresorbable Vascular Scaffolds

**KEYWORDS** Bioresorbable scaffold, Distal, Percutaneous coronary intervention

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Scaffold Thrombosis Following Percutaneous Coronary Intervention With Absorb Bioresorbable Vascular Scaffold: A Systematic Review And Meta-Analysis

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**BACKGROUND**

Percutaneous coronary intervention (PCI) with bioresorbable vascular scaffold (BVS) placement holds great potential, but concern has recently been raised regarding the risk of scaffold thrombosis (ST). The aim of this study was to determine the risk of ST following PCI with placement of an ABSORB BVS by conducting a systematic review and meta-analysis.

**METHODS**

Medline/PubMed, Cochrane CENTRAL, and meeting abstracts of all studies that provided outcomes data in patient following PCI with BVS placement. For studies comparing BVS with drug-eluting stents (DES), pooled estimates of outcomes, presented as odds ratios (OR) [95% confidence intervals], were generated with random-effect models.

**RESULTS**

Our analysis included 10,021 patients (8,303 with BVS and 1,718 with DES) with a follow-up of 6.4±1.1 months, age of 60±11, 78% were male, 38% had stable angina, and 56% had ACS. CV death occurred in 0.6% of patients with BVS, MI in 2.1%, target lesion revascularization in 2.0%, and definite/probable ST in 1.2% of patients. Among BVS patients, 0.3% had acute ST and 0.6% had subacute ST, yielding a risk of 0.9% for ST in the first month. Meta-analysis demonstrated that patients that received BVS were at a higher risk of MI (OR 2.06 [1.26-3.36], p<0.004) and definite/probable ST (OR 2.14 [1.02-4.50], p<0.05) during follow-up (Figure).

**CONCLUSIONS**

Patients undergoing PCI with BVS had increased definite/probable ST and MI during follow-up compared with DES. Measures to minimize scaffold thrombosis are warranted. Further randomized controlled trials with the long-term follow-up will determine the overall utility of BVS compared to DES implantation in high-risk patient subgroups.

**CATEGORIES CORONARY:** Bioresorbable Vascular Scaffolds

**TCT-540**

Impact of postdilation on procedural and clinical outcomes in long and complex lesions treated with bioresorbable vascular scaffolds- a prospective registry study

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**BACKGROUND**

There is limited data on the impact of postdilation (PD) on acute procedural and clinical outcomes in patients with long and complex lesions treated with bioresorbable vascular scaffolds. We sought to evaluate the effect of PD on procedural and clinical outcomes in a ‘real world’ population.

**METHODS**

We performed an analysis of patients who underwent BRS implantation and enrolled into our institutional BVS STEMI FIRST and EXPAND registries. Pre and post dilation were encouraged with at least 1.1 pre-balloon: artery (B: A) and post-balloon: scaffold (B: S) ratios respectively. Baseline clinical and angiographic (including quantitative coronary angiographic analysis; QCA) characteristics were collected. The effect of PD on angiographic outcome were also evaluated using appropriate views taken immediately after BRS implantation (before postdilation) and final procedure when available. Patients were followed up routinely through telephone call and hospital visits. Procedural end points studied included device and procedure success and complication rates. Major adverse cardiovascular events (MACE) studied included all-cause mortality, myocardial infarct, target lesion revascularization and scaffold thrombosis.

**RESULTS**

294 patients with 387 lesions treated with 529 BRS were studied of which 164 patients with 211 lesions underwent PD (Post B:S: