BACKGROUND In the setting of primary percutaneous coronary intervention (PPCI), patients with a concurrent chronic total occlusion (CTO) in a non-infarct related artery (IRA) should undergo additional percutaneous coronary intervention of the chronic total occlusion on top of optimal medical therapy shortly after PPCI. Possible beneficial effects include reduction in adverse left ventricular remodeling and preservation of global left ventricular function and improved long term clinical outcome.

METHODS The EXPLORE trial is a global randomized, prospective, multicenter, two-arm trial with blinded evaluation of endpoints. A total of 304 patients were included after successful PCI for STEMI with a concurrent CTO in a non-IRA and were randomized to either elective PCI of the CTO within 7 days or standard medical treatment. Primary endpoints are left ventricular ejection fraction and left ventricular remodeling assessed by cardiac Magnetic Resonance Imaging at four months, analyzed by an independent corelab. All events underwent independent monitoring and were adjudicated by an independent critical events committee. Furthermore, all angiographies were reviewed by an independent corelab.

RESULTS In total, 304 STEMI patients with a CTO were included from 07-11-2007 until 30-03-2015. Data is currently analyzed.

CONCLUSIONS The ongoing EXPLORE trial is the first randomized clinical trial powered to investigate whether recanalization of a chronic total occlusion in a non-infarct related artery after primary percutaneous coronary intervention results in a better preserved residual left ventricular ejection fraction, reduced end-diastolic volume and enhanced clinical outcome.

CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS Acute myocardial infarction, Chronic total occlusion, Left ventricular function

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TCT-10 Clinical outcomes following “full-plastic jacket” bioreabsorbable scaffold implantation

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BACKGROUND When performing percutaneous coronary intervention, a long-diffuse chronic total occlusion strategy remains unclear with options including treating most of the vessel length as opposed to a focal approach. A common option is to create a “full-metal jacket (FMJ)”. However, FMJ may preclude future surgical revascularization and may be associated with higher events rates at follow-up. The use of bioreabsorbable scaffolds (BRS) is therefore very attractive by virtue of their full reabsorption 2 to 3 years after implantation. We aimed to investigate the feasibility and updated clinical outcomes following BRS implantation for very long lesions (“full-plastic jacket”).

METHODS We analyzed consecutive patients who underwent PCI with Absorb BRS (Abbott Vascular, Santa Clara, CA) between May 2012 and April 2015. Procedural “full-plastic jacket” (FPJ) was defined as a continuous implantation of BRS with 60mm length or more. During the study period, 290 lesions (196 patients) treated with BRS (total length < 60mm) and 35 lesions (35 patients) treated with FPJ were identified.

RESULTS Patients treated with FPJ had a higher prevalence of diabetes (40.0% vs. 22.4%, p=0.03), chronic total occlusion (17.1% vs. 20.4%, p=0.38), and diabetes (7.1% vs. 18.6%, p=0.01). In-hospital mortality, subacute stent thrombosis, periprocedural MI, and the need for repeat revascularization were similar between FPJ and non-FPJ.

BIORESORBABLE VASCULAR SCAFFOLDS

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CONCLUSIONS At 5 years implantation of a bioresorbable scaffold resulted in stable lumen dimensions, a low restenosis rate and a low MACE rate.

CATEGORIES CORONARY: Stents: Bioresorbable Vascular Scaffolds

KEYWORDS Bioresorbable scaffold, Intravascular ultrasound, Optical coherence tomography

TCT-12 Impact of overlap on long-term clinical outcomes in patients undergoing everolimus-eluting bioresorbable vascular scaffolds implantation in routine clinical practice: Insights from the European multicenter GHOST-EU registry

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BACKGROUND Bioresorbable vascular scaffold (BVS) overlap is frequent in long coronary lesions. Its impact into clinical outcomes is unknown. We aim to compare the short and long-term clinical outcomes between patients with overlap BVS implanted and those with no-overlap BVS.

METHODS We analyzed the clinical outcomes of 1627 patients treated with BVS in the Gauging coronary Healing with bioResorbable Scaffolding plaTforms in Europe (GHOST-EU) registry, according to implantation of overlap scaffolds. Primary endpoint was patient oriented composite endpoint (POCE) of: all-cause death, any myocardial infarction (MI) and any percutaneous coronary intervention. Device oriented composite endpoint (DOCE) of: all-cause death, target-vessel (TV) MI and TV-revascularization was also analyzed. Scaffold thrombosis, according to ARC definition, was also collected. Follow-up was performed at 1 and 12 months.

RESULTS A total of 287 (17.6%) patients were treated with overlap BVS. The remaining 1340 (82.4%) received BVS not overlap. The overlap group had significantly higher prevalence of diabetes mellitus, acute coronary syndrome, B2/C lesion type, SYNTAX score >22, lesion length >34 mm, use of intracoronary imaging during implantation, pre- and post-dilatation, dual antiplatelet duration. At 1-year, patients with overlap BVS did not differ between the overlap vs. no-overlap groups (13.6% vs. 14.6%, p = 0.712), even after adjustment for the difference between the two groups. The DOCE was also no different between the two groups (5.6% vs. 5.8%, p = 0.540). Rate of scaffold thrombosis did not differ either at 30 days (1.4% vs. 1.2%, p = 0.768) or at 1-year (2.1% vs. 2.2%, p = 1.000).

CONCLUSIONS In “Real-world” clinical practice, BVS overlap does not appear to have an impact on outcomes and in particular on scaffold thrombosis, whose rate is not negligible.

CATEGORIES CORONARY: Bioresorbable Vascular Scaffolds

KEYWORDS Bioresorbable scaffold, Clinical outcomes, Percutaneous coronary intervention