complex and "real-world" disease is limited. We report the early experience with ABS from two Australian centres.
Methods: Between Aug 2010-Jun 2013, 95 lesions in 68 pts were treated with ABS (64% male, mean age 63 yrs). Diabetes was present in 22% and PCI indication was ACS in 32% pts. Lesion location was 46% LAD, 41.5% RCA, 10% RCA and 2.5% SVG. Lesion complexity was 42% B2 or C, 19% moderate/severe calcification, 4% CTO, 27% long lesions and 7% bifurcations. Pre-dilatation was used in 100% pts (rotablator/scoring balloon in 4%). In total, 107 scaffolds were implanted - average 1.6/pt (range 1-5) with average scaffold length/pt 39mm. Scaffold overlap was performed in 31% pts. Multivessel ABS implantation was performed in 8.8% pts. Post-dilatation was performed in 100% cases. Registry data was collected prospectively in hospital, day 30, 1 and 2 years post-PCI. To date, 87% of pts have reached 30 days, 34% 12 months and 4% 24 months post-ABS implantation.
Results: Procedural success was 100% and device success 99% (failure to deliver ABS in 1 pt). A "bail-out" DES was required in 2 (3%) of cases for scaffold edge dissection. An in-hospital non-Q MI occurred in 1 (1.5%) pt due to athero-thrombotic distal embolism. There were no other in-hospital clinical events (target vessel revascularization, Q wave MI, scaffold thrombosis or any death). There have been no late cases of MI (Non-Q or Q wave), target vessel revascularization, scaffold thrombosis or cardiac death. There was 1 (1.5%) non-cardiac death at 21 months post-ABS implantation due to renal failure. Overall MACE in late follow-up occurred in 2 (2.9%) pts.
Conclusions: This early Australian experience has demonstrated very high immediate ABS success in the treatment of complex coronary disease. Additionally, ABS therapy following rigorous lesion preparation and strict implantation technique is highly safe and efficacious both in-hospital and in follow-up in "real-world" disease (including long lesions, CTOs, calcification, bifurcations and muti-vessel disease).

TCT-426

Our Experience With Absorb Everolimus Eluting Bioresorbable Vascular Scaffold in All Comers with Coronary Artery Disease –"Real Absorb Registry".

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Background: The experience of the BVS in real world patients with expanded indications and lesion characterization is limited. We report our experience of the use of BVS in real world all comers patients from the "Real Absorb Registry".
Methods: Our "Real ABSORB registry" is a single centre registry of all BVS implanted in real life patients since its approval for unrestricted clinical use in December 2012 onwards.
Results: Out of 135 patients with 165 lesions were treated with 217 BVS.111 patients with 189 BVS were outside the Absorb extend criteria. The lesion characteristics are as follows 40%(54/135) had calcified lesion (CL), 8.8%(12/135) tortuous lesions with >2 45°/>90° angulation.37% (50/135) had Bifurcation lesions (BL),28.8%(39/135) had long lesion (≥ one 28 mm Absorb), 20.7%(28/135) had small vessels (<2.5 mm), 9.6%(13/135) had chronic total occlusion, 11.8%(16/135) had ostial involvement and 8.1%(11/135) had ISR. In CL, 11.1%(15/135) required Rotablation and 2.2%(3/135) had cutting balloon for bed preparation. 11.8%(16/135) required buddy wire for device delivery. 2.9%(4/135)BVS failed to deliver due to calcified tortuosity and required Guideliner™, catheter. In BL 14%(7/50) had planned 2 stent strategy and 86%(43/50) had provisional single stent strategy.6.9%(3/43)had SB stenting with TAP technique due to threatened closure. OCT/IVUS done in 17.7%(24/135) and helped to optimize the result in only 2 patients. All BVS had high pressure dilatation >20 atm within the recommended limitations of BVS expansion All BVS were deployed successfully. There is no acute/sub acute thrombosis. 130/135 patients had clinical follow up and 1(0.7%) patient had sudden death at 50 days of follow up(median 143 days,range 17-163).
Conclusions: Our early experience from the Real Absorb Registry of all the use of BVS in real world patients suggest high success and low complication rates provided there is meticulous attention to delivery and implantation techniques. While regular use of imaging tools may help especially in complex patients, We believe that routine and regular use of extensive high pressure implantation to be more valuable in optimizing results and avoiding scaffold thrombosis in all real world patients.

TCT-427

Comparison of Acute Stent Recoil Between the Everolimus-Eluting Bioresorbable Vascular Scaffold and Two different Drug-Eluting Metallic Stents

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Background: Recently, bioresorbable scaffolds (BRS) have been developed as a way to provide transient vessel scaffold while the post PCI healing process takes place, going away just after. Among the various BRS in clinical test, the most advanced program is the ABSORB, which combines a PLLA backbone, coated with a bio-resorbable polymer containing the antiproliferative drug, everolimus. Because this BRS is made of polymer, concerns about in human acute recoil have been raised. We sought to assess the acute recoil of two different metallic DES in comparison to ABSORB in the treatment of non-complex coronary lesions
Methods: For this study we included 50 patients with de novo lesion in native coronary arteries of 2.5-3.5mm in diameters and lesion length up to 23mm. Twenty-five patients were treated with BRS and compared to 25 patients treated with either everolimus-eluting cobalt chromium stent (EES, n=12) or biolimus-eluting stainless steel stent (BES, n=13) at a random allocation. Acute absolute recoil was defined as the difference between mean diameter of the last inflated balloon at the highest pressure (X) and mean lumen diameter of the stent immediately after the last balloon deflation (Y). Acute percent recoil was defined as (X – Y)/X and expressed as percentage
Results: The 3 cohorts did not differ regarding the basic clinical and angiographic characteristics. Mean lesion length (11.74 ± 3.91mm in the BRS vs. 10.12 ± 3.21mm in EES vs. 12.93 ± 5.7mm in the BES cohort, p=0.7) and RVD (2.62 ± 0.44mm in the BRS vs. 2.74 ± 0.34mm in the EES vs. 2.59 ± 0.42mm in the BES group, p=0.4) were also comparable as well as the rate of post dilatation and balloon to artery ratio. Notably, acute absolute recoil (0.21 ± 0.13mm with BRS vs. 0.15 ± 0.08mm with EES and 0.14 ± 0.08mm with BES, p=0.4) and acute percent recoil (7.0 ± 4.64% with BRS vs. 4.97 ± 2.22% with EES and 5.66 ± 4.10% with BES, p=0.2) did not significantly differ from different metal alloys and polymeric scaffolds
Conclusions: In this small, non-complex cohort, the use of a polymeric scaffold did not result in higher acute recoil as compared to the two most used metallic alloys. This finding should be investigated in more complex scenarios

TCT-428

Rate of bioresorbable vascular scaffolds penetration in the treatment of coronary artery disease in a Canadian high-volume center

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Background: Vascular restoration therapy using bioresorbable vascular scaffolds (BVS) is a novel approach for treating coronary disease. However, BVS penetration rate in the treatment of de-novo coronary stenosis in the real life setting is unknown.
Methods: One hundred BVS were available to be used by 6 trained operators between November 2012 and March 2013 in a high-volume center. Therefore, consecutive patients treated by the same operators with drug-eluted stents (DES) or BVS were prospectively analyzed.
Results: Two hundred and forty-five consecutive DES/scaffolds implantation to treat 144 patients were performed. Thirty-six BVS (15%) were only used in 24 patients (17%) as compared to 209 DES (85%) used to treat 120 patients (83%). Patients treated with BVS were younger (60±11 vs. 65±12 years; p<0.012), had less diabetes (21% vs. 53%; p<0.001), less type B2/C lesions (28% vs. 60%; p<0.001) and necessitate less scaffolds (1.5±0.7 vs. 1.7±0.9; p=0.032) as compared to the DES patients respectively. The reason of non-BVS implantation was documented at the end of each case and was as follow: unavailable BVS length i.e. longer than 28mm and lesion could be covered by one DES (23%); bifurcating lesions involving a side branch of 2mm diameter or more (17%,); unavailable BVS diameter i.e. superior to 3.5mm (17%); severely calcified lesions (17%); chronic total occlusion lesions (11%); intrastent restenosis (7%); ST-elevation myocardial infarction with thrombus (6%); others such as venous graft or multiple previous stenting (2%).
Conclusions: The main direct reason for the lack of BVS take-up is the lesion complexity. However, indirect unmeasured reasons such as cost, operator experience or lack of evidence on long-term follow-up can also interfere with the treating physician decision. Randomised studies showing the beneficial long-term follow-up of BVS to treat more complex lesions are warranted.