stress tests, coronary angiography revealed stent restenosis up to 80%. Both patients underwent repeated interventions. Restenosis of the side branch of less than 50% according to QSA was detected in 5 patients (9.6%) from group I and in 4 patients (8.3%) from group II ($p>0.05$). In patients from group I, the average MLA in the side branch (LCX) after 12 months was 5.58±1.34 and 4.21±1.21 mm, respectively ($p<0.05$), compared with data after PCI; in the ostium of the side branch (LAD) - 6.34±1.56 and 5.28±1.14, respectively ($p<0.05$). In patients from Group II, the average MLA at the end of PCI and after 12 months were, respectively, 5.38±1.24 and 5.11±1.44 mm for the ostium of LCX ($p>0.05$) and 6.68±1.75 and 6.46±1.22 mm for the ostium of LAD ($p<0.05$). All patients had complete stent endothelization, with no signs of malapposition. There were no cases of late thrombosis of the stents.
Conclusion: The use of drug-eluting balloon catheters to perform "Provisional T" stenting of true LM bifurcation stenoses is highly effective and safe, as evidenced by a significant low incidence of restenosis of the side branch according to intravascular imaging methods without affecting the MACE frequency and can be considered as an alternative two-stent strategy of bifurcation stenting.

P6369
A meta-analysis of percutaneous coronary interventions in cardiac transplantation

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Introduction: Outcomes of patients with orthotopic heart transplantation (OHT) undergoing Percutaneous Coronary Intervention (PCI) remain to be defined, especially according to the kind of stent and use of intracoronary imaging.
Methods: All studies evaluating the impact of PCI on patients with OHT were included. MACE, a composite and mutually exclusive end point of all cause death, Target Lesion Revascularization (TLR) and Stent Thrombosis (ST), was the primary end point, while MACE components along with cardiovascular death were secondary endpoints. Regression analysis was used to assess the impact of coronary stent medications (everolimus and sirolimus), use of IVUS, and use of orally administered anti-rejection drugs on TLR.
Results: 21 studies with 1.031 patients were included, with a median time from OHT of 7.1 years (6.5–8.7). An angiographic control study was the most frequent indication (65%): multivessel disease was reported in 38.8% (28.9–39.0), IVUS was used in 57% (29–80) and BMS (Bare Metal Stents) were implanted in 37.8% of cases (36.2–50.0) while Drug Eluting Stents (DES) were used in 62.2% (53.5–10). After 1.3 years, MACE occurred in 39.4% of patients (20.82–57.98), mainly driven by TLR (11.78% [5.57–17–98] for patients with DES and 34.23% [22.21–46.25] for BMS), while ST occurred in 2.03% [0.57–2.30]. By logistic regression, IVUS reduced TLR (-0.035:-0.045:-0.021), while the type of antiproliferative drug in the stents or the adjunctive immunosuppressant therapy did not impact subsequent revascularization.
Conclusion: Patients with OHT undergoing PCI are at high risk of recurrent revascularization, which is reduced by use of intracoronary imaging and DES. Although DES is preferable to BMS in preventing restenosis in OHT lesions, the type of antiproliferative drug in the DES did not impact TLR. Further studies are needed to evaluate the effectiveness of adjuvant immunosuppressant therapy.

P6370
BUDA SNUFF-BOX study: Ultrasound guided distal transradial access for coronary angiography and angioplasty using 5F guiding or 6F sheathless guiding system

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Background: To demonstrate the feasibility and safety of the distal transradial approach (snuff box) for coronary angiography and interventions.
Methods: The clinical, angiographic and ultrasonography data of 132 consecutive patients with symptomatic coronary artery stenosis between 2017.01 and 2017.12 were evaluated in a pilot study. The distal radial artery was investigated with a Doppler ultrasound and the puncture was made by ultrasound guidance. At the first postoperative day, both radial arteries were examined by vascular ultrasound. We have used 5F Terumo sheath for coronary angiography and after diagnostic angiography we have used 5F or 6.5 sheathless guiding for the intervention. Sheathless guiding was used for rotational atherectomy, left main and complex bifurcation intervention and for CTO recanalisation. We have investigated the technical success of the procedure, the rate of MACCEs and the rate of access site complications.
Results: The ultrasound guided radial artery puncture and the procedure were successful in all cases (132/132). The cross-over rate to alternative access site was 0%. The diagnostic angiography was finished in all cases (100%). PCI was performed in 100 cases with a 6.5F sheathless guiding in 20 cases and through a 5F guiding in 80 cases. Procedural success was achieved in 99 cases (99%). Mean contrast consumption was 98.21 [86.1–110.3] ml, DAP was 32.89 [26.13–39.65] Gy cm^2, fluoroscopy time 7.7 [6.36–9] minutes for PCI. The size of the radial artery in the snuff box and conventional punture area was 2.1±0.5 vs. 2.27±0.6 mm ($p<0.001$). No radial artery occlusions at the site of the forearm were encountered. Minor forearm haematoma was found in two patients (1.5%). The incidence of MACCEs at two months follow up was 0.75%.
Conclusion: Ultrasound guided distal transradial access in the snuff box area is safe and effective and the rate of radial artery occlusion is extremely low.

P6371
Endothelial functions are preserved in left distal radial access coronary angiography, a prospective comparison with right and left forearm radial artery access site

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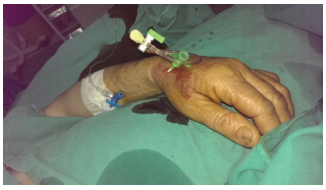
Introduction: Left distal radial access at the anatomical snuffbox as a new method for coronary angiography and interventions has recently increased its popularity.
Purpose: We aimed to investigate the endothelial functions through flow mediated vasodilatation test in three different access sites: right forearm radial artery, left forearm radial artery and left distal radial artery.
Methods: Transradial access was used in 41 patients scheduled for coronary angiograpghy and intervention from September 6-th 2017 and February 8-th 2018. They were divided into 3 groups: group 1 left forearm radial (5 patients), group 2 left distal radial (17 patients) and group 3 right forearm radial artery (19 patients) access. Flow mediated endothelial functions were measured 3 times, on admission, 24 hour after and 2 months after the procedure. The test was performed with the patient supine, relaxed for 5 minutes. Echocardiography (GE Vivid E9) linear probe was used for radial artery diameter measurement. Arm cuff inflation till 220 mmHg lasted 5 minutes. After deflation radial artery diameter and their percantage change was recorded in the 1.st, 2nd and 3rd minute. All the data was evaluated by the IBM SPSS Statistics 21.0 programme. Kruskal Wallis test and Bonferroni corrected Dunn test was performed for comparison of variables.
Results: Mean age was 57.39±13.9 with male predominance (70.1%). Smoking (90%), hypertension (75%) were the most common risk factors. Hematoma was seen in 3 patients with the right radial access site. Three patients had radial artery occlusion in the same group. One hematoma was seen in the left forearm radial group. No complications were seen in the left distal radial artery access site. Flow mediated vasodilatation was assessed in all patients and endothelial functions were found to be significantly preserved or less influenced in the left distal radial access site 24 hour after the procedure in comparison with the right forearm radial access site. This preservation continoued at 2 months after the procedure.

Flow mediated vasodilatation of the catheterized radial artery before, 24 hour after and 2 months after the coronary angiography procedure

Flow mediated dilatation 1. minute	Group 1 Percentage change	Group 2 Percentage change	Group 3 Percentage change	P value
Before	15.5 (27.4–30 mm)	22.2 (24–27mm)	21.5 (24–27mm)	0.544
24. hour	16.4 (32–33mm)	27.6 (29–31mm)	14.8 (30–31mm)	0.003
2 months	12.2 (30–31mm)	26.35 (25–28)	17.28 (27–29mm)	0.064

Values in parenthesis are the mean basal and the 1st minute dilatation measures after forearm cuff deflation.



Left distal radial artery access site

Conclusion: Left distal radial artery access is a reliable route in terms of endothelial function preservation and vascular complications

CORONARY INTERVENTIONS

P6372
The role of local hypothermia during primary PCI in patients with STEMI

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Introduction: Despite the increasing number of PCI, deaths from AMI are still high. The damage from reperfusion injury that occurs directly during the restoration of blood flow in ischemic tissue can be up to 50% of the final infarct size. Restoration of tissue blood supply with minimization of reperfusion injury is required for qualitative perfusion of the myocardium and can be achieved by cardioprotection during reperfusion.
Purpose: Analyze the effectiveness of local hypothermia in the infarct-related artery to reduce reperfusion injury of the myocardium.
Methods: We treated 21 patients with STEMI (LAD TIMI-0), which underwent primary PCI with local hypothermia in the infarct-related artery (main group (MG)). The control group (CG) included of 30 patients, with the same localization of the STEMI which was performed the standard PCI. The patient's baseline dates were similar in both group: disease up to 6 hours, age of patients 62±13 years

(average 67 years) - in the MG, 63±8 (65 years on average) - in the CG. Men had 67% MG vs. 62% CG. Diabetes mellitus: 7% - in the MG, 9% - in the CG. Regional hypothermia was performed by an intracoronary solution of 0.9% NaCl cooled to +7C at a rate of 15 ml/min. Reperfusion arrhythmias and ST segment changes were assessed during the first day, viable myocardial volume (MRI) after 6 months.
Results: Reperfusion arrhythmias were detected in 14.3% in the MG and 32.1% in the CG ($p<0.05$), Ventricle arrhythmia were 14.9% in the MG and 16.2% in the CG. ST elevation V1-V5 more than 1500 μV, stenosis of the left main coronary artery, smoking, history of AMI, therapy with aspirin, β-blockers, and statins were an independent predictors of reperfusion arrhythmias. The size of the final zone of necrosis (MRI data) was 23±7% in the MG and 32±9% in the CG ($p<0.05$).
Conclusions: Local hypothermia of the infarct-related artery allows to reduce the reperfusion arrhythmias (14.3% vs. 32.1%) and zone of myocardial necrosis (23±7% in the MG and 32±9% in the CG ($p<0.05$)

P6373
Two generations of bioresorbable vascular Scaffold in comparison: clinical, angiographic and computed tomography follow-up

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Background: Bioresorbable Vascular Scaffold (BVS) represented an innovation in the field of PCI. Some technical issues have emerged, related to "structural" limitations of the first models: fast resorption with poor vascular support; acute recoil due to low radial strength; struts fracture over nominal diameter. These issues have led to the development "second generation" BVS, with innovative features: bioresorption profile, self-correction of diameter, fracture resistance.
We assessed mid-term performances of two generations of BVS in a single Center and investigated the feasibility of Computed Tomography for non-invasive follow-up of BVSs.
Methods: Patients receiving two different BVS, Absorb (Abbott) and DESolve (Elixir) in a single Center, have been followed-up (mean 18 months) with clinical examination, coronary CT-scan and eventually coronary angiography. Quantitative Coronary Angiography (QCA), before and after BVS implantation, measured: Minimal Lumen Diameter and Area (MLD; MLA) and % Stenosis. CT images were post-processed by experienced operators, to get similar measurements.
Results: Within 2 years, 50 patients (M/F= 4/1; mean age 54±8 years) have been treated with BVS (26 Absorb; 24 DESolve) for: stable angina (30%), UA/NSTEMI (52%), STEMI (18%). Mean diameter of implanted scaffolds was higher in the Absorb group (3.25±0.4 vs 2.97±0.39; p=0.016) but postdilation diameters were similar (3.44±0.5 vs 3.24±0.54; p=0.2) due to the higher confidence to overdilate the DESolve scaffold. CT highlighted 4 cases of Absorb restenosis, only 2 confirmed by angiography. Comparison among QCA after-BVS and CT follow-up showed "positive" differences, at 18 months, only in the DESolve group, where significant late Lumen Gain resulted: MLD (2.13±0.5 vs 2.33±0.5; p=0.03); MLA (3.73±1.6 vs 4.45±2; p=0.03). Measures from different techniques (QCA and CT) showed significant correlation. Direct comparison Absorb vs DESolve showed no differences at the follow-up.

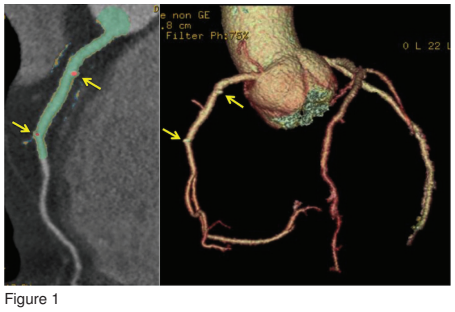

Figure 1

Conclusion: Our experience with two generations BVS showed no acute recoil or mid-term clinical events, with two cases of Absorb failure (TLF). CT resulted a useful tool for qualitative and quantitative BVS assessment, showing good correlation with QCA measures. BVSs kept similar diameters at 18m follow-up. DESolve scaffold showed greater lumen gain compared to the other BVS, due to innovative features.

P6374
Acute and long-term relocation of minimal lumen area after Absorb bioresorbable scaffold or Xience metallic stent implantation

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Aims: Although late luminal loss (LLL) is commonly used for device evaluation, it is often overlooked that LLL is assessed irrespective of the axial location of minimal lumen diameter (MLD) in the treated area. Relocation of MLD and minimal lumen area (MLA) after bioresorbable scaffold (BRS) implantation has not been investigated.
Methods and results: In the ABSORB II randomized trial [BRS vs. everolimus-eluting stent (EES)], lesions were investigated by serial intravascular ultrasound pre-procedure, post-procedure, and at 3-year. Taking into account the motion of the epicardial vessel around the catheter, relocation was defined whenever longitudinal MLA position changes by more than 2.4 mm, either proximally or distally. Acute relocation was defined as relocation from pre-procedure to post-procedure; and late relocation was defined as relocation from post-procedure to follow-up. Serial and matched changes of the MLA pre-, post-procedure, and at follow-up were investigated in the two cohorts.
In lesions with complete set of IVUS pre-, post-procedure, and at 3-year (n=366), acute and late relocations were observed in 200 (54.6%) and 238 (65.0%) lesions, respectively. Late MLA relocation was observed in 163/237 (68.8%) and 75/129 (58.1%) of lesions treated by BRS and EES, respectively (p=0.041). When matching pre-procedural MLA site with the same topographical sites post-procedure and at 3-year, BRS showed significant late lumen enlargement and expansive remodelling compensating for significant plaque increase, whereas EES showed significant late lumen narrowing with significant plaque growth not compensated by expansive remodelling from post-procedure to 3-year. In multivariate analysis, female gender (Odds ratio (OR) 2.05 [95% CI: 1.16, 3.63], p=0.014), previous PCI (OR 1.71 [95% CI: 1.05, 2.79], p=0.031), BRS implantation (OR 1.68 [95% CI: 1.02, 2.78], p=0.043), total device length (OR 1.04 [95% CI: 1.01, 1.07], p=0.006), maximal pressure either at device implantation or post-dilatation (OR 1.08 [95% CI: 1.00, 1.16], p=0.042) were independent predictors of MLA relocation.
Conclusions: Late MLA relocation was more frequent in lesions treated with BRS than EES. Late lumen enlargement and expansive vessel remodelling at the pre-procedural MLA site was observed in BRS, but not in EES.
Funding Acknowledgements: Abbott Vascular

P6375
A novel sirolimus-eluting stent with unique coating technology for Diabetic patients: a long-term, multi-centre analysis

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Background: Diabetic patients are a major challenge for PCI due to the high incidence of complex disease and the higher rate of cardiac events compared to non-diabetics.
Purpose: To assess the performance and clinical outcomes of the novel sirolimus-eluting stent ABLUMINUS DES (Envision Scientific, India) on long-term FU in diabetic patients with coronary artery disease.
Methods: ABLUMINUS DES is a new generation sirolimus eluting stent with fusion coating technology (Sirolimus coating on stent as well as exposed parts of balloon). Of the 2430 patients enrolled in the ongoing prospective, multicentre en-ABL e-registry, 834 patients presented with Diabetes and were included in a pre-specified subgroup. The primary endpoint was major adverse cardiac events at 1 year [MACE: cardiac death, target vessel myocardial infarction (TV-MI), and target lesion/vessel revascularization (TLR/TVR)]. Secondary end-point was the Stent Thrombosis (ST) at 1-year.
Results: 1-year clinical outcome was available for 723 (86.69%) diabetic and 1355 (84.90%) non-diabetic patients. The MACE rate at 1 year was 3.32% in the diabetes cohort, actually similar to non-diabetic patients, 2.21% with p=0.131. The secondary endpoint (ST) occurred in 14 (0.67%) patients with a similar rate in diabetic and non-diabetic patients (0.97% vs. 0.52%, respectively, p=0.264). Primary and secondary endpoints were similar between insulin and non-insulin dependent diabetic patients (MACE: 5.77% vs. 2.61%, respectively, p=0.116 and ST: 1.92% vs. 0.37%, respectively, p=0.126). The low MACE rate was confirmed for the pre-specified subgroups at the 1-year follow-up: acute myocardial infarction (N=279): 2.64%, small vessels (N=520): 4.24%, long lesions (N=500): 4.0% and long lesions in small vessel (N=319): 4.51%.
Conclusion: In conclusion, for the treatment of coronary artery disease in patients with diabetes, PCI with the novel ABLUMINUS DES demonstrated to be safe and effective with respect to the composite of cardiac death, target vessel myocardial infarction, and target lesion at 1 year. To the best of our knowledge, this is the first DES showing consistent results in diabetic as well as non-diabetic patients.