

27.4% (n=983) on ticagrelor and 3.7% (n=131) on prasugrel. Patients receiving clopidogrel were older than other groups (64.3±11.2 vs. 62.1±10.9 vs. 58.8 vs. ±11.1yrs), with higher prevalence of diabetes (33.2% vs. 20.4% vs. 25.9%), chronic kidney disease (7.3% vs. 4.5% vs. 3.0%) and prior stroke (5.6% vs. 3.0% vs. 3.0%) but lower prevalence of ACS presentation (44.6% vs. 75.2% vs. 76.3%), p<0.01 for all. Prasugrel was less often prescribed to women (24.4% vs. 23.9% vs. 12.2%, p<0.01). Clopidogrel patients less likely underwent radial PCI and received longer total stent length compared to ticagrelor or prasugrel patients. The incidence of 1-year TLF by discharge P2Y12 inhibitor is shown in Figure 1 (p=0.62). There were no significant differences between the groups in the incidence of cardiac death (1.6% vs. 1.1% vs. 1.6%, p=0.63), TV-MI (1.2% vs. 1.2% vs. 0.8%, p=0.37), def/probable ST (0.7% vs. 0.8% vs. 1.6%, p=0.54) or TLR (1.8% vs. 2.9% vs. 3.1%, p=0.09).

Conclusion(s): COMBO stent PCI in all-comer patients resulted in similar rates of 1-year TLF, TV-MI, TLR and ST irrespective of potency of discharge P2Y12 inhibitor.

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P1665

Outcomes and risk factors for recurrent restenosis in patients treated for coronary in-stent restenosis

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Introduction: Despite advances in percutaneous coronary intervention (PCI) and coronary artery stent design respectively, in-stent restenosis (ISR) remains a relatively common long-term complication of PCI with a reported incidence of 3–20%. The outcomes of patients treated for restenosis are not currently well clarified with evidence lacking regarding consensus in management of ISR cases.

Study aim: To assess trends, management and outcomes, of patients treated for ISR.

Methods and results: This was a cohort study based on this institution's PCI registry. 1012 patients who had PCI for ISR between January 2010 and January 2017 were included in the analysis. Patients with stable angina or acute coronary syndromes (excluding cardiogenic shock) were included. The primary end-points were recurrent restenosis (R-ISR) and MACE (target vessel revascularisation, myocardial infarction and all-cause mortality) recorded at a median follow up of 24 months.

1012 patients were treated for ISR during the time period with a trend to increased rates over time (p=0.02). 419 (41.4%) were treated for stable angina with 593 (58.6%) presenting acutely. 72% of patients were treated with drug-eluting stents (DES) with 28% undergoing treatment with drug-eluting balloon (DEB); with an increased trend for DEB over time. During follow-up, 31.8% had recurrent angiographically confirmed R-ISR with 176 (18.5%) having repeat PCI, 60 (6.3%) undergoing coronary artery bypass grafting (CABG), and 66 (6.9%) managed medically (due to failed PCI, patient preference or CTO). MACE events occurred in 29.7% of patients during follow-up (6.4% mortality, 23.3% TVR/MI). As expected patients with R-ISR had higher event rates during follow-up compared to those without R-ISR (P<0.0001). On multivariate analysis the following independent predictors of recurrent ISR were identified: smaller vessel size (OR 1.49, 95% CI 1.22 to 1.88), total stented length (OR 1.47, 95% CI 1.31 to 1.73, for each 10 mm increase), complex lesion morphology (OR 1.55, 95% CI 1.21 to 2.21), presence of diabetes mellitus (OR 1.32, 95% CI 1.19 to 1.46), and history of chronic kidney disease (OR 1.39, 95% CI 1.10 to 1.78).

Conclusion: Management of patients with ISR remains a persistent problem, particularly for those presenting with DES-ISR. This study shows that despite current treatments, R-ISR is still a challenge with a new focus on optimising procedural factors or new treatment options needed to solve this issue.

P1666

Impact of SYNTAX score and Clinical SYNTAX score on 5 years clinical outcomes in patients treated with cobalt-chromium everolimus-eluting stent

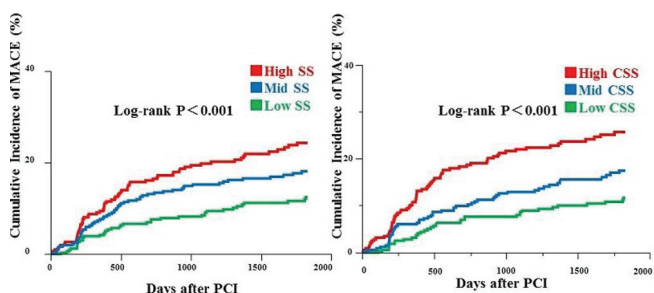
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Background: Impact of SYNTAX score (SS) and Clinical SYNTAX score (CSS) on long-term clinical outcomes after cobalt-chromium everolimus-eluting stent (CoCr-EES) implantation remains unclear.

Methods: Between February 2010 and May 2011, 1064 consecutive patients with 1440 lesions were treated only with CoCr-EES implantation. Of these, the SS was calculated in 1012 patients with 1345 lesions and the CSS was calculated in 946 patients with 1262 lesions. The CSS was calculated using age, and baseline left ventricular ejection fraction and creatinine clearance. Patients were divided into the tertile group based on SS and CSS groupings: Tertiles for SS (low SS [1–7], n=345; mid SS [7.5–14.0], n=361; and high SS [14.5–48.0], n=306) and tertiles for CSS (low CSS [1.9–17.1], n=315; Mid CSS [17.2–37.0], n=315; and high CSS [37.1–305.8], n=316). We assessed the cumulative 5-year incidences of major adverse cardiac events (MACE), defined as a composite of cardiac death,

myocardial infarction, definite stent thrombosis, and clinically driven target lesion revascularization (CDTLR) based on SS and CSS groupings.

Results: In SS date, cumulative 5-year incidence of MACE was significantly higher in the high SS group than in the other groups (25.6% vs. 18.9% vs. 12.3%, p<0.001), mainly driven by a higher rate of CDTLR (18.4% vs. 14.3% vs. 6.0%, p<0.001). No significant differences in the cumulative 5-year incidence of other events were observed among these groups. High SS group (hazard ratio [HR] 2.19 [vs. low SS], 95% confidence intervals [CI]: 1.46–3.33, p<0.001), hemodialysis (HR 4.05, 95% CI: 2.56–6.15, p<0.001), and diabetes mellitus (HR 1.38, 95% CI: 1.00–1.90, p=0.048) were predictors of 5-year MACE. In CSS date, cumulative 5-year incidence of MACE was significantly higher in the high CSS group than in the other groups (25.7% vs. 17.6% vs. 11.8%, p<0.001). The cumulative incidence of cardiac death, myocardial infarction, stent thrombosis and CDTLR were significantly higher in the high CSS group than in the other groups (11.5% vs. 3.8% vs. 3.6%, p<0.001; 4.5% vs. 3.1% vs. 0.8%, p=0.02; 2.3% vs. 1.4% vs. 0%, p=0.04; 17.0% vs. 14.0% vs. 7.5%, p=0.002, respectively). High CSS group (hazard ratio [HR] 1.96 [vs. low SS], 95% confidence intervals [CI]: 1.43–2.68, p<0.001) and diabetes mellitus (HR 1.57, 95% CI: 1.15–2.15, p=0.005) were predictors of 5-year MACE.



Days	0	365	1095	1825	Days	0	365	1095	1825
High SS group					High CSS group				
No. of lesions at risk	306	287	214	87	No. of lesions at risk	316	265	208	136
Cumulative incidence		9.4%	20.0%	25.6%	Cumulative incidence		10.8%	22.1%	25.7%
Mid SS group					Mid CSS group				
No. of lesions at risk	361	327	282	133	No. of lesions at risk	315	293	256	166
Cumulative incidence		7.6%	15.1%	18.9%	Cumulative incidence		6.1%	13.0%	17.6%
Low SS group					Low CSS group				
No. of lesions at risk	345	328	254	161	No. of lesions at risk	315	304	279	205
Cumulative incidence		4.4%	9.2%	12.3%	Cumulative incidence		3.2%	8.4%	11.8%

Cumulative incidence of MACE

Conclusions: SS and CSS have significantly impact on 5 years clinical outcomes after CoCr-EES implantation.

P1667

Efficacy and safety of an ultra-thin strut sirolimus-eluting stent with biodegradable polymer in all-comers patients undergoing coronary intervention

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Background: Thin stent struts may be associated with reduced vessel injury and use of biodegradable polymers may improve long term outcomes. However, data with earlier stents has been inconsistent thus further studies with newer devices has been needed.

Purpose: To evaluate the efficacy and safety of a new ultra-thin (65µm) strut cobalt chromium sirolimus-eluting stent with a hybrid design (closed cell at ends; open cells in middle to reduce edge injury and optimise conformability) in all-comers patients undergoing coronary intervention.

Methods: We enrolled 588 patients from 14 sites undergoing coronary intervention, into a prospective, non-randomised, multi-centre, open-label, observational registry. Inclusion of patients with complex anatomy (long stent lengths, bifurcations and chronic total occlusions) was encouraged. Clinical follow up was scheduled at 1, 9, 12 and 24 months. The primary efficacy endpoint was incidence of major adverse cardiac events (MACE) - cardiac death, non-fatal myocardial infarction (MI), or target vessel revascularisation (TVR) - at 9 months. The primary safety endpoint was the rate of definite or probable stent thrombosis at 9 months.

Results: Mean patient age was 64.1±13.2 years, 20.9% had diabetes, 58.3% had hypertension and 37.9% of patients had multi-vessel disease. Around 1 in 5 had prior MI, 1 in 4 had prior revascularisation and 1 in 4 had acute coronary syn-

drome. Mean lesion length was 25.5±14.2 mm. The primary endpoint of MACE at 9 months (from 352 patients reaching 9 months follow up) occurred in 9 patients (2.56%), including 3 (0.85%) cardiac death, 3 (0.85%) non-fatal MI and 3 (0.85%) TVR. Definite stent thrombosis was reported in 2 patients (0.57%) and probable stent thrombosis in 1 patient (0.28%).

Conclusions: Use of an ultra-thin biodegradable polymer sirolimus-eluting stent within all-comers patients undergoing coronary intervention was associated with good clinical efficacy and safety.

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NON-CORONARY CARDIAC INTERVENTIONS

P1668
Comparison of clinical outcomes between left atrial appendage occlusion with dual antiplatelet therapy versus conventional antithrombotic therapy in patients with atrial fibrillation undergoing PCI

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Background: Complex antithrombotic regimen has been recommended for patients with atrial fibrillation (AF) and percutaneous coronary intervention (PCI). However, this strategy has been criticized for high risk of bleeding.

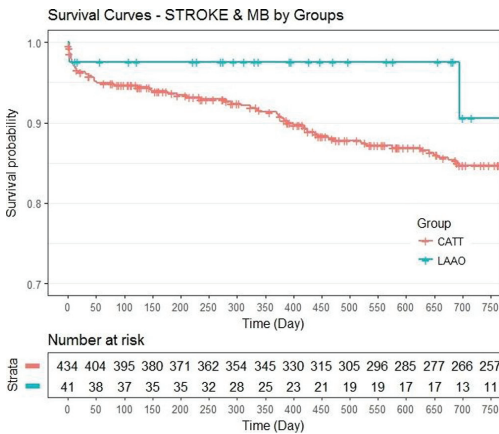
Objectives: This study compared clinical outcomes between left atrial appendage occlusion (LAO) with dual antiplatelet therapy (DAPT) versus conventional antithrombotic therapy (CATT) in patients with AF undergoing drug-eluting stent (DES) implantation.

Methods: Total of 475 patients with AF who underwent DES implantation in multicenter registries were reviewed. Among them, 41 patients who had been treated with LAO and DAPT and 434 patients with CATT were identified. A composite of stroke and major bleeding at 24 months was compared after adjusting with inverse probability of treatment-weighted model.

Results: Patients treated with LAO and DAPT had higher incidence of diabetes mellitus and prior stroke, and higher CHA2DS2-VASC (4.56 vs. 2.96; P<0.0001) and HAS-BLED score (3.24 vs. 2.13; P<0.0001) at baseline. After inverse probability of treatment-weighted adjustment, the incidence of primary endpoint was significantly lower in LAO with DAPT group (4.88%) than the CATT group (13.59%; hazard ratio 0.274; 95% confidence interval 0.136–0.553; p=0.0003).

Table 1. IPTW adjusted clinical outcomes between LAO with DAPT and conventional antithrombotic therapy during 24 month of follow-up period

	LAO with DAPT (n=41), n (%)	Conventional anti-thrombotic therapy (n=434), n (%)	HR (95% CI)	P-value
Stroke or major bleeding	2 (4.88)	59 (13.59)	0.274 (0.136–0.553)	0.0003
Stroke	1 (2.44)	26 (5.99)	0.493 (0.208–1.17)	0.109
Major bleeding	1 (2.44)	38 (8.76)	0.119 (0.032–0.438)	0.001
Myocardial infarction	1 (2.44)	11 (2.53)	0.251 (0.047–1.345)	0.341
Major adverse cardiac and cerebral event	3 (7.32)	55 (12.67)	0.383 (0.218–0.673)	0.001



KM curve for composite endpoint

Conclusions: In this study, LAO with DAPT was feasible for preventing stroke and major bleeding in patients with AF and DES implantation. Ongoing large randomized trial will provide further evidences on the present findings.

P1669
Prognostic impact of computed tomography-derived abdominal fat area in patients undergoing transcatheter aortic valve implantation

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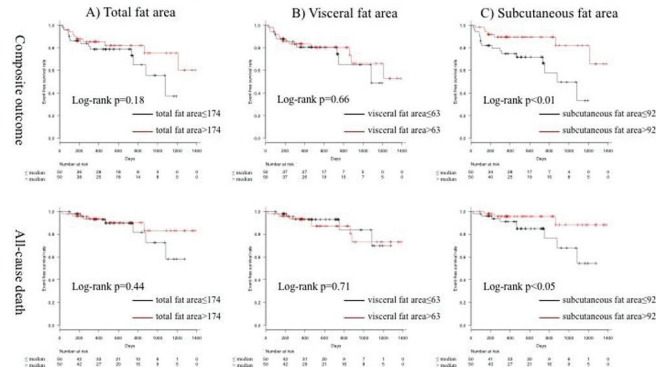
Background: Obesity has previously been identified as an indicator of good prognosis in patients undergoing transcatheter aortic valve implantation (TAVI), which is known as the “obesity paradox”.

Purpose: We aimed to investigate whether abdominal total fat area (TFA), visceral fat area (VFA), or subcutaneous fat area (SFA) can be a prognostic indicator for long-term clinical outcomes in patients undergoing TAVI.

Methods: We retrospectively analyzed 100 consecutive patients who underwent TAVI at our institution from December 2013 to April 2017. TFA, VFA, and SFA were measured from routine pre-procedural computed tomography (CT) images. Patients were divided into two groups according to the median values of TFA, VFA, or SFA. The primary endpoint was the composite of all-cause death and re-hospitalization due to heart failure after TAVI. The secondary endpoint was all-cause death.

Results: At a median follow up of 492 days, patients with higher SFA, compared with lower SFA, showed significantly lower incidence rates of the composite outcome and all-cause death (10.5% vs. 28.2%, p<0.01; 4.4% vs. 15.0%, p<0.05, respectively). However, patients with higher TFA or VFA did not show significant reduction in the composite outcome or all-cause death (TFA:18.0% vs. 21.4%, p=0.18; 9.9% vs. 10.2%, p=0.44, respectively. VFA: 19.8% vs. 19.4%, p=0.66; 12.9% vs. 6.9%, p=0.71, respectively). After adjustment for age and gender, higher SFA was independently associated with lower incidence of composite outcome (HR 0.32, 95% CI: 0.12 to 0.88; p=0.03).

Kaplan Meier Analysis for the composite outcome and all-cause mortality



Conclusion: Among abdominal fat area, only SFA had a long-term predictive value for patients undergoing TAVI. Higher SFA was associated with better clinical outcomes. SFA, which is readily measured from pre-procedural routine CT images, might be a simple and useful prognostic indicator for patients undergoing TAVI.

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ABSTRACT WITHDRAWN