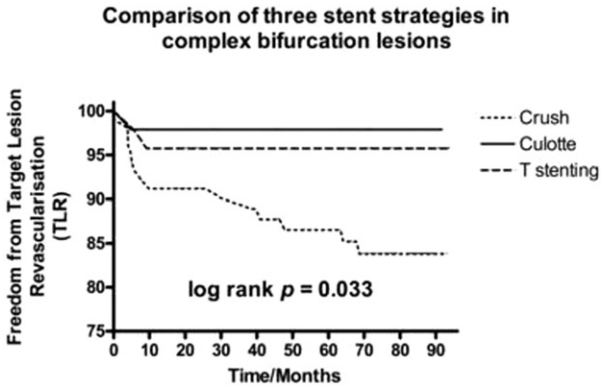
Results: Bifurcation lesion characteristics and DES use were similar in all groups. Patients undergoing CU stenting had a higher side branch stent diameter when compared to the TS and CR groups (Table). Over a mean follow up of 63 months, the TLR rate (Figure) was lowest in the CU group (CU - 2.1% vs TS - 4.3% vs CR - 16.2%; log rank p = 0.033).
Conclusions: Despite CR being used more commonly than CU and TS techniques, the CU technique is associated with lower long-term TLR rates. Anatomical factors such as SB diameter may play a role in the choice of the technique used.

	Culotte	Crush	TStent	p value
Main Branch diameter (mm)	2.91	2.95	2.95	0.762
Side Branch diameter (mm)	2.76	2.60	2.55	0.003
Medina Classification (%)				
0,1,1	4.2	13.7	17.0	0.126
1,0,1	4.1	5.0	4.2	0.973
1,1,1	85.4	79.4	70.2	0.188
Drug Eluting Stent Use (%)				
Sirolimus Stent	37.5	52.0	42.6	0.215
Paclitaxel Stent	39.6	37.3	42.8	0.825
Everolimus Stent	14.6	10.8	12.8	0.795



TCT-683

The Impact of Side Branch Predilatation on Procedural and Long-term Clinical Outcomes in Coronary Bifurcation Lesions Treated by Provisional Approach: Results from the COBIS (Coronary BIfurcation Stent) Registry

Pil Sang Song[1], Young Bin Song[2], Tae Jin Kim[1], Jae Kyun Kim[1], Dong-Kie Kim[1], Sang-Hoon Seol[1], Doo-Il Kim[1], Jeong Hoon Yang[2], Joo-Yong Hahn[2], Seung-Hyuk Choi[2], Jin-Ho Choi[2], Hyeon-Cheol Gwon[2]
[1]Inje University Haeundae Paik Hospital, Busan, Korea, Republic of, [2]Samsung Medical Center, Seoul, Korea, Republic of

Background: Whether side branch (SB) predilatation before main vessel stenting is necessary in bifurcation percutaneous coronary intervention (PCI) is uncertain. This study sought to evaluate the effect of SB predilatation on procedural and long-term clinical outcomes in provisional approach PCI for true bifurcation.
Methods: Patients undergoing PCI with drug-eluting stents for non-left main bifurcation lesions were enrolled between January 2004 and June 2006. In patients with true bifurcation treated by provisional approach, target vessel failures [TVF: composite of cardiac death, myocardial infarction (MI), or target vessel revascularization (TVR)] were compared between those undergoing SB predilatation before main vessel stenting (predilatation group, n=175) or not (non-predilatation group, n=662).
Results: Final kissing ballooning (57.1% vs. 35.8%, p<0.001) was performed more frequently and the rate of cross-over to 2-stent technique (14.9% vs. 5.1%, p<0.001) was higher in predilatation group. There were no significant difference in the rate of PCI-related acute closure in SB (6.9% vs. 7.3%, p=0.86). During median 21 months follow-up, the incidence of TVF was significantly higher (14.3% vs. 6.8%, p=0.002) in predilatation group mainly driven by higher TVR rate (12.0% vs. 5.6%, p=0.003), but not of cardiac death (1.7% vs. 1.1%, p=0.47), MI (0.6% vs. 1.4%, p=0.43), or stent thrombosis (0.0% vs. 1.2%, p=0.37) than in non-predilatation group. In multivariate analysis, predilatation group showed significantly higher occurrences of TVF (adjusted hazard ratio [HR] 2.11, 95% confidence interval [CI] 1.27-3.50, p=0.004) and TVR (adjusted HR 2.22, 95% CI 1.16-4.25, p=0.016). Also, the rate of TVF was constantly higher in predilatation group than in non-predilatation group across several subgroups (bifurcation angle >70° vs. ≥70°, moderate to severe calcification in SB, diameter stenosis of SB ostium >75% vs. ≥75%, baseline lesion length of SB >5mm vs. ≥5mm, 1-stent technique, and final kissing ballooning).
Conclusions: Based on our results, routine predilatation of SB before main vessel stenting may not be recommended in the current era of PCI for true bifurcation lesions using provisional approach.

TCT-684

Regular Drug Eluting Stent versus dedicated bifurcation paclitaxel eluting stent (BiOSS®) in coronary bifurcation treatment - POLBOS (POLish Bifurcation Optimal treatment Strategy) randomized study

Robert Gil[1], Dobrin Vassilev[2], Jacek Bil[1], Adam Kern[3], Radoslaw Formuszewicz[4], Slawomir Dobrzycki[5], Imre Ungi[6]
[1]Central Clinical Hospital of the Ministry of Internal Affairs and Administration, Warsaw, Poland, [2]National Heart Hospital, Sofia, Bulgaria, [3]WSS, Olsztyn, Poland, [4]10 WSK, Bydgoszcz, Poland, [5]KKI USK, Białystok, Poland, [6]University of Szeged, Szeged, Hungary

Background: The provisional T-stenting (PTS) is the recommended strategy for the coronary bifurcation treatment. However, results obtained with use of regular drug eluting stents (DES) are not optimal and relatively often associated with a side branch compromise and restenosis. Dedicated bifurcation stents are claimed to be a solution for these complications.
Methods: The POLBOS study was to compare two strategies for the bifurcation treatment – PTS with any regular DES or with a dedicated bifurcation paclitaxel-eluting stent BiOSS® Expert (Balton, Poland). BiOSS® stent consists of two parts with different diameters connected with two 1.5-mm bridges. A single stent implantation in the main vessel-main branch (MV-MB) across a side branch (SB) was the default strategy. A stent in SB was implanted only in case of the significant flow impairment. Sequential envelope system located in each center was used for blinded randomization (1:1). The primary end-points were MACEs (in-hospital and after 1, 3, 6, 12 months). An angiographic control was planned at 9 months in all patients. Here are presented results up to 3rd month, however 1 year data for 180 pts will be available at the time of TCT 2012.
Results: To date, 190 patients (67% males) were randomized. The average age was 67±11 yrs. The dominant vessel was LAD (60%) followed by LMS (23%), LCx (13%) and RCA (4%). 70% of cases were true bifurcations. Except for 2 cases in a DES group and 1 in a BiOSS group all stents were implanted successfully. There were 14% and 10% of cases, respectively in a DES group and BiOSS group, with a stent implanted in SB. Postprocedural MLD was significantly bigger and a stent was significantly shorter in the BiOSS group (respectively: 3.69±0.37mm and 17.1±1.42mm vs 3.27±0.48mm and 20.56 ±5.44mm). After 1st and 3rd month all patients were uneventful. To date, control angiography was performed in 25% of patients.
Conclusions: Collected data demonstrate comparable clinical results for both studied group. However, BiOSS® stent allowed to complete the procedure in a shorter time period with reduced volume of contrast media and radiation time.

TCT-685

Push and Bend technique for coronary bifurcations

Achim Gutersohn[1], Thomas Calvelage[1], Matthias Heckmann[1], Reinhard Klocke[1], Wolfram Rechenberg[1]
[1]Marienhospital Vechta, Vechta, Germany

Background: Coronary bifurcation lesions are still a challenge for the interventional. Current techniques, crush and culotte techniques have not proven to serve all patient needs. Yet an ideal stenting system has to be found. We elucidated whether conventional stenting of main branch and additional push and bend technique would create ideal results.
Methods: A total of 50 pts with bifurcation lesion were included in the study these included single (n=39) and 2 stent (n=11) approach. Our primary interest and end point was success of the procedure and a good angiographical result. Due to the fact that stents are usually cut out of the metal crushing results in deformation of side struts which leads to a variety of problems like malapposition, new carina formation and strut spraoting into the inner lumen even strut breaking has been reported. We were interested whether the continuous sinusoid technology of the Integrity® platform (Medtronic) is able to tackle these problems. We have developed a special technique to form the sinusoid structure like the anatomical existing vessel with avoiding crush and destruction. Bend and Push technique constists of primary main vessel stenting and rewiring the side branch of interest. Main branch Stent is then dilated using an oversize round balloon (Falcon bravo ®, Medtronic) to ensure bending of sinusoid structures into the lumen of the side branch. Using side branch wire a regular ballon is then inserted half way into the side branch. Using low pressure (4-6 atm) balloon is then pushed while inflated into the side branch resulting in another anatomical correct adoption. Finally side branch balloon is retracted and repositioned half way into the side branch and then fully inflated (14-16 atm). If needed a kissing balloon technique follows the procedure, but mostly it is not needed.
Results: Overall procedural success was 95%. Fluoroscopy times and contrast volumes were similar to conventional procedures like crush and culotte. The rates of procedure-related increase in biomarkers of myocardial injury were 2.5 per cent of patients
Conclusions: The push and bend technique is easy and feasible. We are underway with a study to compare this technique to crush and culotte.