

significantly less in group 1 (0.5% vs 1.9%, $p=0.01$), like as coronary perforation (0.5% vs 3.9%, $p=0.001$) and acute stent thrombosis (2.4 vs 0%, $p=0.01$). The incidence of MACE was significantly lower in group 1 at 6 months (5.4% vs 9.8%, $p=0.03$), 1 year (7.1% and 12.2%, $p=0.001$) and 5 years (17.7% vs 31.3%, $p=0.001$).

Conclusions: RA is maybe a safe technique in the treatment of complex lesions, with high success rate. A "minimalistic approach" using small BAR and the CB (Rota-Cut technique) followed by DES implantation, seems promising in reducing complications and improving outcome. Further studies are necessary in order to support these registry data.

Bifurcation

CRT-37

Treatment Of Coronary Bifurcation Lesions: Stentcovering Of The Side Branch With And Without PCI Of The Side Branch - A Retrospective Analysis Of All Consecutive Patients

Hubertus von Korn,¹ Victor Stefan,¹ Reyn van Ewijk,² Kamalesh Chakraborty,¹ Burkhardt Sanwald,¹ Jan Hemker,¹ Ulrich Hink,³ Marc Ohlow,⁴ Bernward Lauer,⁴ Silke Kapper,¹ Thomas Münzel³

¹Hetzeltstift, Neustadt, Germany ²IMBEI, Mainz, Germany ³University Hospital Mainz, Mainz, Germany ⁴Zentralklinik Bad Berka, Bad Berka, Germany

Background: Treatment of coronary bifurcation lesions is a complex issue.

Methods: This retrospective observational study included patients (pts) who underwent PCI of a de novo coronary bifurcation lesion between January 2008 - August 2011. We included all consecutive patients where the side branch had been covered with a stent. Pts with ACS/cardiogenic shock were not excluded.

Two different methods were compared: group A represented patients undergoing a simple strategy without any treatment of the side branch (SB). Group B consisted of patients where the SB was treated (PCI and/or stenting).

For the treatment of bifurcation lesions we used the concept of "provisional stenting". Indications for the treatment of the SB included residual stenosis > 50 %, and a TIMI flow reduction < 2.

Results: We performed 1688 PCI during the study period, and of these 138 pts had a bifurcation lesion. We excluded pts with an in-stent-restenosis and pts who had been treated with a drug-coated balloon. The remainder of the population constituted our study group (n= 98) which was divided into group A (n=64, 65.3 %) and group B (n=34, 34.7 %). Mean FU duration was 14.1 (group A) vs 12.3 (group B, $p=ns$) months.

Results: basicdata

Mean age (years) was 70.3 yrs (group A) vs. 67.0 yrs (group B, $p=ns$), 65.6 % were men (group A) vs. 70.6 % (group B, $p=ns$). NSTEMI/STEMI was present in 54.7 % (group A) vs. 41.2 % (group B, $p=ns$).

Results: procedural characteristics

Primary stenting was done in 29.7 % (group A) vs. 23.5 % (group B, $p=ns$), drug-eluting stents were used in 56.3 % (group A) vs. 50.0 % (group B, $p=ns$). Duration of x-raying (min, group A vs group B) and the amount of contrast medium (ml) were both significantly lower in group A: 18.1 min vs 20.1 min and 225.8 ml vs 307.4 ml ($p=0.02$ and $p < 0.001$, respectively).

Procedural results

Final TIMI flow III inside the MB was reached in 98.4 % (group A) vs. 97.1 % (group B, $p=ns$), while inside the SB it was reached in 84.4 % vs. 94.1 % ($p= ns$, group A vs group B).

Results: FUdata

Target lesion revascularization (TLR: Re-PCI of the lesion, definite stent thrombosis or CABG related to the target lesion) and target vessel revascularization (TVR) was seen in 15.9 % (group A) vs 32.4 % (group B, $p=0.07$), while cardiac death was observed in 7.9 % (group A) vs 14.7 % (group B, $p=0.3$). A survey of all MACE in both groups (TLR plus TVR plus cardiac death) revealed the following distributions: 23.8 % (group A) vs. 47.1 % (group B, $p=0.02$).

Conclusion: In patients with coronary bifurcation lesions, a simpler strategy without SB-PCI has a significantly lower MACE rate.

CRT-38

Bifurcations

Shugushev Zaur,¹ Maximkin Daniil²

¹Central Clinical Hospital No2 Russian Railways, Moscow, Russian Federation

²Peoples' Friendship University of Russia, Moscow, Russian Federation

Aim: The purpose of this study was to determine the long-term (up to 4 years) results of endovascular treatment of patients with true coronary artery bifurcation lesions.

Methods: This study enrolled 240 patients. Inclusion criteria were: the presence of true coronary artery bifurcation lesion; side branch diameter more than 2 mm; III and IV functional class of angina. During the first phase of the study all bifurcational lesions were treated with provisional T stenting technique. During the second phase of the study treatment strategy of bifurcational stenting was discussed for every patient prior to intervention. Only drug eluting stents were used. Endpoints of the study were determined as the presence of major adverse cardiac events.

Results: 70 patients were enrolled during the I phase of the study. In 9 (12,8%) patients provisional T stenting technique was unsuccessful and "two stent" strategy were used. Technical success of the procedure was observed in 100% of patients. The incidence of death during the hospitalization period was 0%. Risk factors that leads from provisional T stenting strategy to "two stent" strategy were: angle of bifurcation less than 70°, length of the side branch lesion more than 2,1 mm, diabetes mellitus, calcinosis of the main and side branch, side branch diameter more than 2,3 mm, age more than 61 years. During the second phase of the study all patients were divided into two groups. I group consists of 132 patients in whom "one stent" strategy was used to treat bifurcational lesion. "Two stent" strategy was used in 38 patients. Survival rate was 97,47% and the incidence of myocardial infarction was 6,25% in the long term follow up period. The rate of restenosis was 2,08% in the side branch and 0% in the main branch. Definite late stent thrombosis was observed in 0,8% of patients. The rate of MACE didn't differ significantly between the "one stent" strategy and "two stent" strategy (10,64% and 5,24%, $p=0,172$).

Conclusion: The results of this study showed that differentiated approach used for selection and treatment of patients with true coronary artery bifurcational lesions leads to significant increase of clinical success in the long term follow up period.

CRT-39

Clinical Outcome Of Bifurcation Lesions Treated By Everolimus-eluting Stent With Final Kissing Balloon; Results From Tokyo-MD PCI Study

Ken Kuribara, Takashi Ashikaga, Youichi Ohtaki, Tatsuya Fujinami, Taro Sasaoka, Shunji Yoshikawa, Mitsuaki Isebe

Tokyo Medical and Dental University Department of Cardiovascular Medicine, Tokyo, Japan

Background: Some study reports that the rate of major adverse cardiac events (MACE) rises when final kissing ballooning (FKB) was performed in the single stent strategy. However, the effects of FKB in everolimus-eluting stent (EES) implantation are still unclear.

Purpose: To clarify the prognosis of patients who were implanted EES at bifurcation lesions.

Methods: The case of bifurcation lesions with single stent strategy was investigated by Tokyo-MD PCI study, a multicenter study including 22 institute around Kanto region. Rate of target lesion revascularization (TLR) and MACE (any cause death, myocardial infarction, TLR, stent thrombosis, and cerebral infarction) were analyzed.

Results: 184 bifurcation lesions treated by single EES were available. 49 lesions were treated with FKB (FKB group), and 135 were treated without FKB (none-FKB group). FKB group had significantly high rate of left main bifurcation lesions and low rate of left circumflex lesions. Other clinical characteristics were similar in both groups. Mean follow up term were 455±254 days. Cumulative incidence of TLR in main branch was 6.2% in FKB group and 6.3% in none-FKB group at 2 years follow up ($p=1.0$). Incidence of MACE was 8.5% in FKB group and 11.5% in none-FKB group ($p=0.7$).

Conclusion: FKB group has showed no inferior rate of TLR and MACE despite of high left main bifurcation rate when EES was implanted.