

TCT@ACC-i2: Invasive and Interventional Cardiology

LATE CATCH-UP PHENOMENON IN THE TREATMENT OF CORONARY BIFURCATION LESIONS WITH FIRST GENERATION DRUG-ELUTING STENTS USING SIMPLE AND COMPLEX TECHNIQUES

Poster Contributions

Poster Sessions, Expo North

Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: Left Main and Bifurcation Intervention

Abstract Category: 46. TCT@ACC-i2: Coronary Intervention, LM/Bifurcations

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Background: Single stent strategy of the main vessel (MV) with provisional side branch (SB) stenting in the treatment of bifurcation lesions (CBL) is associated with favourable short term outcomes. Limited data is available to confirm its long term benefit using first generation drug eluting stents (FGDES)

Methods: We report the outcomes of consecutive patients undergoing simple and complex CBL stenting using paclitaxel and sirolimus DES over a mean follow up of 4 years (Oct 2003 to Mar 2011). Clinical and procedure data was collected from internal and provincial databases

Results: 568 patients (77.9% male, mean 62 years) underwent stenting of 635 CBL. 474 lesions were treated with MV (simple) stenting only with 161 lesions treated with MV and SB (complex) stenting. There were more diabetic patients in the complex group. Patients in the complex group had more SB disease as per Medina classification. Lower fluoroscopy times and contrast volumes were used in the simple group whereas final kissing balloon inflation was favoured in the complex group. There was no difference in mortality and stent thrombosis in either group at 1 and 4 years. At 12 months, target lesion revascularisation rate was higher in the complex group. This trend was however not observed at 4 years

Conclusion: Our study demonstrates for the first time that although a simple stenting strategy confers a short term benefit when bifurcation lesions are treated with FGDES this loss in benefit can be explained by a "late catch up" phenomenon in the long term.

Patient characteristics	Simple N = 434	Complex N = 181	p value
Age(years)	61.9	63.3	0.387
Male(%)	78.5	76.4	0.582
Diabetes(%)	22.9	31.7	0.029
Hypertension(%)	68.6	75.3	0.001
Smoker(%)	27.1	27.5	0.914
Family history(%)	44.9	46.9	0.67
LVEF<25(%)	5.9	5.6	0.891
Previous CABG(%)	5.1	3.8	0.496
Previous PCI(%)	21.1	28.1	0.16
eGFR<30 ml/min(%)	6.3	9.3	0.127
Procedure characteristics			
Medina classification(%)			
0,1,1	3.6	12.4	<0.0001
1,0,1	2.5	3.7	0.429
1,1,0	27.2	4.9	<0.0001
1,1,1	48.1	78.3	<0.0001
Paclitaxel stent(%)	36.9	44.7	0.079
Main branch diameter(mm)	2.90	2.97	0.008
Final kissing inflation(%)	26.8	52.8	<0.0001
Vessel territory treated(%)			
Left main	2.9	9.8	0.127
Left anterior descending	60.1	62.7	0.546
Circumflex	23.9	19.3	0.225
Right coronary	13.1	18.7	0.392
Antus intermedius	1.3	9.6	0.007
Contrast volume(ml)	258	382	<0.0001
Fluoroscopy time(min)	19.8	33.5	<0.0001
Procedure outcomes(%)			
Mortality at 3 year	1.3	2.5	0.582*
Mortality at 4 years	4.6	9.9	0.271*
Definite Stent Thrombosis	0.6	1.9	0.174
TLR at 3 year	2.5	6.3	0.026*
TLR at 4 years	6.2	8.3	0.338*

