

surgery. However, with newer DES and better adjunctive imaging techniques (IVUS, OCT), ULMCA angioplasty & stenting has become an attractive alternative in certain situations. Here, we present our single-unit experience in LMCA stenting over the last 7 years.

Methods: We performed 12 cases of ULMCA stenting over the last 7 years. There were 8 male and 4 female in the age group of 34 – 82 years. The etiology was atherosclerosis in 11 and aortoarteritis in one. 7 cases were emergency procedures (primary PCI in acute MI), of which 5 were in cardiogenic shock. LAD occlusion involving distal LMCA bifurcation was seen in 4, LAD occlusion with mid shaft independent stenosis in 2 and spontaneous dissection of LMCA involving LAD & LCX was seen in 1 postpartum lady. 5 cases were elective PCIs: all were approved by heart-team with high surgical risk in 3 and patient choice in 2. Two had ostial stenosis, 2 had mid-shaft stenosis and 1 had diffuse LMCA stenosis. IABP insertion was done in all emergency cases and in 2 elective cases with severe LV dysfunction.

Results: Transfemoral access was used in 11. Transradial access was done in 1 with additional transfemoral access during the procedure for SKS stenting using a novel simultaneous kissing guide technique for LMCA bifurcation stenting with large LMCA and equal sized smaller LAD & LCX. 6 & 7F guide catheters were used in all. Adjunctive techniques included catheter thrombus aspiration in 5 emergency cases, Flextome cutting balloon in 1 elective case. Adjunctive IVUS imaging was used in 2 elective cases and OCT in 1, and in none of the emergency cases. Single stent strategy was used in 10 (including crossover stenting), 1 SKS and 1 TAP. DES were used in all but 4 cases. Pharmacology was dual (8) or triple (4) antiplatelet therapy. The procedural success was 100%. In-hospital mortality occurred in 1 emergency case with cardiogenic shock; no mortality at 30-days in the rest. LV function had improved in all primary cases.

On follow up, routine coronary angiography was done in 4 patients, CT coronary angiography in 4, while 2 patients who were clinically stable opted out of repeat coronary angiography.

Conclusion: Unprotected LMCA stenting is increasingly being undertaken both in emergency situations and in selected elective cases. The results are encouraging but challenging problems are encountered in emergency cases (will be discussed).

Differential pattern of commissural split and its impact on mitral valve orifice following PTMC

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Background: Aim is to analyse the pattern of commissural split by 2D echo, in severe Rheumatic mitral stenosis (Rh MS) by PTMC. We have studied which commissure splits and what factors decide to cause maximal lumen gain without significant mitral regurgitation.

Methods: It is a single centre prospective analytical study (April - June 2014), on 35 patients aged between 15 to 40 yrs. Patients with Padial score < 10 were included. Padial preferred over Wilkinson's score, since it takes into consideration individual commissures. PTMC procedure was done by standard protocol with Accura balloon. All the patients underwent TTE by Esoate My Lab 30 Gold machine to analyse mitral commissures. Severe Rh MS defined as

MV area of less than 1.0 sq cm. Success of the procedure was defined as increasing in valve area by 50%, with at least 1+ increase in mitral regurgitation (MR). Study groups have undergone PTMC by Accura Balloon, size ranging from 24 - 26mm.

Results: Out of 35 patients 85.5% were females and 14.5% males. Free medial commissures in 15 pts with mean Padial echo score of 7.5 (6.5 to 8.5) had split through same commissure. Free lateral commissure in 11 pts with mean Padial echo score of 8.5 (7.5 to 9.5) had split through same commissure post procedurally. 9 pts had both commissures fused pre procedurally, in whom 3 developed medial commissure split, 2 pts developed lateral commissure split. Remaining 4 pts developed both commissure split on second dilatation. Bi commissural split occurred when the balloon was dilated to 26 mm in 3 pts. One patient with medial commissures free developed both commissures split on 26 mm dilatation for the second time. Medial commissure split cause gain in MV area by 35%, bi commissural split 37% and the lateral commissure split 15%.

Conclusion: Commissural split following PTMC occur in differential and unpredictable pattern. Medial commissure split more common than lateral followed by bi commissural. The gain in MVO is found maximum with medial commissure than lateral. Balloon sizing and the number of inflations predominantly decide the outcome. Current PTMC techniques doesn't allow targeted commissural split. Further refinement of PTMC procedures may be desirable.

Clinical Profile and outcomes of overlapping v/s single long stent in long coronary lesions – The Trivandrum Long Stent (TRILO) Study

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Background: Long coronary lesions represent a difficult lesion subset both from technical standpoint as well as clinical outcomes. In the current treatment of long coronary stenoses, conclusive data are lacking regarding the efficacy of multiple overlapping stents vs. single long stents. The research question of the study was to investigate whether overlapping long stents are associated with a higher number of adverse clinical events as compared to long stents of comparable length.

Methods: Retrospective study involving registry data 455 consecutive patients admitted for angioplasty over a period of one year. The patients were divided into two categories- with overlapping stents with stented length more than or equal to 40mm in a single vessel and with a single long stent of length more than or equal to 40mm. The baseline characteristics, in-hospital events and angioplasty details were analyzed. Outcomes at 6 months were compared using the Chi square test.

Results: During the study period 455 patients underwent stent implantation with a stented length more than 40mm. There were 273 patients in the overlapping stent group and 182 patients in the long stent group. There was high prevalence of conventional coronary risk factors like diabetes and systemic hypertension in study groups. A high proportion of the study cohort had a history of ACS (Past and present) reflecting the high risk nature of the study cohort (67.9% v/s 74.5%) Femoral was the preferred access route in both groups (72% v/s 52%) MACE events were comparable between two groups at the end of 6 months. Stent thrombosis

(1.6% v/s 0) and ISR (0.73% v/s 2.73%) rates were higher in the long stent group which showed a trend towards significance. The total stented length was higher in patients with events.

Conclusions: Angioplasty with a single long stent or overlapping stents are two suitable options for PCI in long lesions. Both strategies may be considered complementary to each other and not as mutually exclusive.

Contrast induced nephropathy in percutaneous coronary interventions – Risk prediction and clinical outcomes

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Background: Contrast- Induced Nephropathy (CIN) has been defined as a composite rise in the serum Cr level of more than 25% or 0.5 mg/dl or more from baseline, with a reduction in urine output to less than 0.5 ml/kg/hour for 6 hours after intravascular administration of iodinated contrast. In patients undergoing Percutaneous Coronary intervention (PCI), cases of CIN leading to dialysis predicts catastrophic outcomes. Transient rises in the creatinine (Cr) level relate directly to longer intensive care unit and hospital ward stays translating to differences in mortality after PCI.

Methods: The study was conducted after getting the approval from the ethical committee of Narayana Medical College. All patients taken up for a PCI over a period of 1 year for any indication were included in the study irrespective of the diagnosis & for whom a minimum of 1 follow-up visit post-discharge was available. Known patients of chronic kidney disease, irrespective of whether they were already on dialysis treatment or not & patients who were lost to follow up after discharge were excluded from the study.

Results: A total of 345 patients were included in the final analysis. 65 (18.84%) patients developed CIN as per the standard definition. 280 (80.16%) patients did not develop CIN. These 2 groups were compared with each other for various parameters to analyze the various correlations.

Conclusion: The predictors of CIN included elderly age, history of smoking, history of non-steroidal anti-inflammatory drug (NSAID) abuse, elevated C-reactive protein (CRP) levels, use of Gp IIb/IIIa inhibitors peri-procedurally, presence of congestive cardiac failure (CCF) & post-procedure blood transfusion. Mortality was higher in the CIN group with the CIN risk score being higher in the patients who developed CIN. The patients who developed CIN had a significant loss in residual renal function at follow-up as evaluated by estimated Glomerular Filtration Rate (eGFR).

Outcome of intravascular ultrasound guided percutaneous transluminal coronary angioplasty at the end of one year

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Background: Intravascular ultrasound (IVUS) is an important adjunct to angiography, providing new insights in the diagnosis

and therapy for coronary disease. Procedure related factors are important contributor of both restenosis and thrombosis after DES implantation. Stent under expansion is most important factor in DES failure.

Methods: This is retrospective single center observational study was to evaluate impact of intravascular ultrasound (IVUS)-guided percutaneous transluminal coronary angioplasty (PTCA) for the treatment coronary lesions. We retrospectively evaluated a 45 lesions in 30 patients treated with IVUS-guided PTCA. The results were compared with those of angiographic stenting in a matched group of patients. Control population was matched in terms risk factors, diagnosis, length of lesion, vessel anatomy.

The primary end points were the postprocedure measure of minimal stent dimensions by angiography (diameter) and ultrasound (area, minimal diameter). The secondary end point was independently adjudicated major cardiac events (death, MI, and TVR) determined by follow-up at 12 months.

Results: The IVUS-guided group had a larger minimal lumen diameter (3.0 ± 0.4 versus 2.7 ± 0.5 mm, $P < 0.001$) by quantitative coronary angiography and a larger minimal stent area (MSA) (7.78 ± 1.72 versus 7.06 ± 2.13 mm²) by quantitative coronary ultrasound. Target vessel revascularization, defined as clinically driven repeat interventional or surgical therapy of the index vessel at 12 month-follow-up, occurred significantly less frequently in the IVUS-guided group (8.5% versus 15.3%, $P < 0.05$; relative reduction of 44%). The average acute gain achieved was 1.84 ± 0.77 mm in IVUS group, and 1.50 ± 0.44 mm in angiography group statistically significant ($P < 0.001$). One year follow-up MACE rates were lower in the IVUS group than in the Angiography group (20% vs. 39%) [$p < 0.05$].

Conclusion: IVUS guidance for the treatment of coronary lesions is associated with good acute outcome. IVUS guidance achieved significantly larger minimal stent dimensions than that used angiographic guidance alone. This difference was associated with a 44% lower rate of TVR but no difference in mortality or MI. Angiographic restenosis and follow-up MACE rates were significantly lower with IVUS group.

Use of Absorb™ bioresorbable vascular scaffold (BVS) during transradial primary angioplasty in STEMI – A multicenter experience

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Background: Randomized controlled trials established the role of BVS in the management of coronary artery disease (CAD). Data of BVS in stable CAD and non ST elevation myocardial infarction/acute coronary syndrome is convincing. There is limited data of usage of BVS in ST elevation myocardial infarction (STEMI) management during transradial primary PCI. We report our initial experience of usage of BVS in this clinical setting.

Methods: All patients of STEMI who were treated between June 2013 and 2014 with BVS were studied. STEMI was diagnosed as per standard criteria. All patients were pre treated with chewable aspirin 150 mg to 325 mg, ticagrelor 180 mg and atorvastatin 80 mg. Patients were shifted directly to cath lab from the ER. Radial access was obtained. After the diagnostic angiogram, the infarct related artery was engaged with guiding catheter. The lesions were crossed and predilated. The scaffolds were deployed at 6 to 12 atm pressure. The scaffolds were postdilated with