Results: A total 30 cases in the age group of 14 to 57 years (median age of 28 years) were studied.

Out of the 30 cases 27 were males and remaining 3 were females. In 25 cases out of 30 (83%), the Femoral Vein was medial to Artery. In 5 cases (17%) the Femoral Vein was Postero-medial to the femoral artery. Among the 5 cases 2 cases had more than 50% overlap. No one had femoral vein completely posterior to femoral artery. In our study the mean Femoral artery size was 7.3 mm (SD-1.4) in Antero-posterior dimension and 7.5 mm (SD -1.4) in horizontal dimension. This has important implications while cannulating the artery for vascular access.

Conclusion: We conclude that there is a distinct variation in the anatomical location of the femoral artery and vein. In 17% of individuals the vein is located Postero-medial to the artery, among them one third have significant overlap (>50%) of artery and vein. This may have implicate during the femoral artery access.

Safety and efficiency of eptifibatide in primary angioplasty patients with renal insufficiency

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Aim: Eptifibatide adjustment of dosage is required in renal insufficiency patients. But when we do not know the renal status in primary angioplasty patients with significant intracoronary thrombus, we want to study the safety and efficacy of normal dose of Eptifibatide.

Methods: We analyzed the Patients who had Primary angioplasty with significant intracoronary thrombus with renal insufficiency (calculated GFR < 60 ml/min) and received bolus dose of Eptifibatide 180 microgram/kg followed by infusion of 2.0 microgram/kg/min for 12 hours. All patients in addition received loading dose of clopidogrel 600mg and Aspirin 325 mg. In all patients Platelet aggregation was tested after Primary angioplasty with chronology dual aggregometer (optical density dependent) with ADP (sustained inhibition of 10 μmol/L ADP induced aggregation). After knowing the basal serum creatinine levels, Glomerular filtration rate (GFR) was calculated using Cockroft & Gault formula (140-Age (yrs)) weight (Kgs) / S.creatinineX72 *(X0.85 correction for women).

Results: Number of primary angioplasty patients who received Eptifibatide who's GFR is <60 ml/min were 53 patients. Males were 43 and females were 10 with mean age of 59±10 years. Out of them only diabetics were 7 (13.2%), only hypertensive were 19 (35.9%) and both diabetic and hypertensive with or without smoking in 27 (50.9%) patients. Mean platelet inhibition after primary PCI was 95±2%. PCI to LAD in 23 (43.4%), LCX/ ramus in 10 (18.9%), RCA in 5 (9.4%) and two culprit lesions in 15 (28.3%) patients were done. Mean GFR in this group was 45±9ml/min and mean creatinine 1.6±0.4mg/dl. 2 (3.8%) patients had worsening of pre existing CKD possibly related to contrast (in both cases serum creatinine shooted to 2 mg/dl). Both of them recovered without any need for dialysis. Nne had either puncture site or non-puncture bleeding. Six patients required IABP and 2 required temporary pacing.

Conclusion: Even though we do not know the underlying renal status in primary angioplasty pts (who really have renal insufficiency) we can give routine dose of Eptifibatide to maintain efficiency without compromising safety.

Drug eluting balloon evaluation in de-novo non-LAD stenoses

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Background: Drug eluting balloons (DEB) are preferred therapy in cases of In-stent restenosis. However their efficacy in cases of de-novo lesions is yet to be acceptably established.

Methods: 25 random individuals with de-novo non –LAD critical stenoses (>70% angiographic stenosis) underwent coronary angioplasty with Sequent Please (Paclitaxel Eluting) Balloon between 11 May 2012 to 18 December 2012.Additional lesions in other coronaries were treated in the same sitting with drug eluting or bare metal stents. At 9 month post-procedure, all underwent coronary angiography irrespective of the symptoms.

Results: Twenty five lesions were treated with DEB. DEB procedure was successful in all patients. One required stenting with DES due to dissection.At 9 month angiographic follow-up, all patients were free of angina. One patient had critical restenosis. Incidentally 2 patients had in-stent restenosis in BMS and DES in other vessels but DEB segment was widely patent.

Our study group had 100% procedural success (DEB) with 96% post-procedure patency rate at nine month angiographic follow-up. Complication rate for the procedure was 4% (TIMI minor bleed) and in-segment restenosis was 4%. During the same period, restenosis rate for stents was 8% (2 in 24 stents) (Surprisingly higher than DEB).

Conclusion: DEB in small to medium non –LAD critical stenoses is safe and effective procedure.

Efficiency of bivalirudin in improving coronary flow in obstructive coronary artery disease patients

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Aim: To see whether Bivalirudin alone improve the coronary flow before PCI.

Methods: We prospectively recruited patients of acute coronary syndrome (ACS) excluding ST elevation MI with single significant coronary stenosis (not complete occlusion) undergoing percutaneous coronary intervention (PCI). Immediately after basal culprit vessel angiogram in a appropriate view, Bivalirudin 0.75 mg/kg intravenous bolus followed by a 1.75kg/mg hour infusion was started. Then again in same previous view culprit vessel angiogram was repeated 3 minutes after stating the Bivallirudin infusion. TIMI frame count was taken as indicator of coronary flow. TIMI fram count (till the last segment of that particular vessel) of culprit vessel was noted from angiogram at basal and after Bivalirudin injection. We excluded the angio analysis of cases where there is improper engagement of guide catheter or guide sizes other than 6F.

Results: In 50 eligible ACS patients lesion was in LAD in 23 (46%), LCX in 15 (30%) and RCA in 12(24%). Mean TIMI frame count before Bivalirudin was 16.92± 6.2 vs 11.4±3.8 , three minutes after starting the Bivalirudin infusion which is statistically significant (p=< 0.0001). There were no PCI procedure related complications like

acute closure, slow or no flow, acute stent thrombosis in any pt. So, also no puncture site or non-puncture site major or minor bleeds.
Conclusion: Bivalirudin seems to improve TIMI frame counts before angioplasty. Further studies are required to confirm and to postulate the mechanism of improvement of TIMI frame counts.

Antegrade corsair usage in mild/moderate calcific coronary chronic total occlusions

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Background: As a supporting catheter in CTO PCI, Fine cross micro-catheter is preferred for Antegrade and Corsair micro-catheter for Retrograde route. Corsair may malfunction in calcific coronary lesions.
Aim: As the Corsair has tapered tip and good tractability in tortuous vessels we want to see the efficiency and safety of Corsair in mid/moderately calcific Antegrade second attempt CTO PCI.
Methods: We did retrospective analysis of 15 mild/moderately calcific, symptomatic patients Antegrade CTO PCI details (second attempt) in whom corsair is used. Coronary calcification was detected by flat panel digital detector fluoroscopic system (FPDD).
Results: Out of 15 patients, 12 were males, with mean age of 59.7 yrs and historically CTO duration was varying from 1 to 11 yrs. Total no of lesions treated were 22 in 15 pts, 15 CTOs and 7 other vessel lesions and majority of lesions were in RCA 7 (46.7%). Average amount of contrast, fluoroscopic and procedural times were 146±20ml, 33.6±10.2 minutes and 63.2±30.9 minutes respectively. Unfavourable CTO lesion like moderate calcium in 10 (66.7%) lesions, significant proximal vessel tortuosity in 5 (33.3%) lesions, diffuse proximal disease in 3(20%), bent at occlusion in 4 (26.7%), bridging collaterals at occlusion in 3 (20%) and side branch at occlusion were present in 9 (60%) lesions. None of cases showed any distortion or fracture or entrapment of the Corsair. In hospital complication rate due to contrast nephropathy (one patient) and MACCE at 9 months due to TVR (one patient) was 6.6%.
Conclusion: Corsair micro catheter is useful in crossing the mild/moderate complex selected calcific Antegrade CTO PCI with low in hospital complications.

Direct culprit vessel primary PCI to LAD followed by contra lateral angiography by transradial route in acute myocardial infarction – Direct Study

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Background: Percutaneous coronary intervention (PCI) of the infarct related artery (IRA) during primary PCI for ST elevation myocardial infarction (STEMI) is appropriate. Two retrospective analyses suggested that, direct PCI to the IRA without knowledge of the anatomy of the contra lateral artery is feasible .This approach would shorten the door to balloon time which is a validated surrogate for mortality in AMI. We have reported the feasibility in a pilot study (Direct prospective Pilot study). In the presentstudy we tested the hypothesis that in anterior STEMI, direct PCI to left anterior descending (LAD) artery before right coronary artery angiography is feasible and this would shorten the door to balloon (d2b) time.
Methods: Anterior wall STEMI was diagnosed by standard criteria. All consecutive patients of anterior MI admitted between March 2012 and April 2014 were studied prospectively. Patients with cardiogenic shock were excluded. Patients were treated with aspirin 150 to 325 mg, ticagrelor 180 mg and atorvastatin 80 mg and shifted to cath lab. Radial access was obtained by anterior wall puncture. LMCA was hooked with 6F XB guiding catheter and primary PCI to LAD was done as per standard protocol. After successful PCI to LAD, the RCA angiogram was performed with a 5 F TF catheter. All the intervals were recorded.
Results: 41 patients of anterior MI were treated. 30 DES and 12 BVS were deployed. The median d2b time was 35+11.8 minutes and the mean d2b time was 36.46+14.3min. Prior RCA angiogram would have prolonged the median d2b time by 2.45 minutes (p=0.05) and mean d2b time by 4.76 minutes (p=<0.05).
Conclusion: From this multicenter study, we conclude that in anterior wall STEMI, it is feasible to perform PCI to LAD directly without knowing the RCA anatomy which significantly shortens the d2b time. Randomized controlled trial is warranted.

Factors determining stent length & outcomes

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Background: In the previous studies it was shown that longer the stent length more the chances of ISR .In the present study we aimed to identify whether the stent length and type of stent and risk factors determining the outcomes.
Methods: Retrospective analysis of 58 patients records who underwent PCI were included. Patients were grouped into stent length <15mm (G1) & Stent length(G2) >15mm. Analysis of various factors determing stent length and its out come were done using ANOVA test & regression analysis. Primary out comes were new leisons & In Stent Restenosis.
Results: Mean age of the study population was 55 years and female were11, among them hypertensive patients were 39, diabetics were 31, and smokers were 16. Out of 58, acute coronary syndromes (ACS) were 34 and total number of lesions was 76. PCI was done through the radial puncture in 23 patients. Culprit vessels were LAD in 29, LCX in 14, LMCA in 1, and rest RCA. Type of lesions included B1 in 1, B2 in 45 and C in 12. In G1- 14 & G2 -42, of which total events were 2 in G1 (P-0.14) & 11 in G2 (P-0.26). P value of the two p-(0.3) gives there is no difference when total events vs stent length (p=0.3).
G1 had 2 new lesions & no ISR, G2 had 6 new lesions & 5 had ISR, But significant difference in occurrence of ISR and stent length (p=0.02). BMS group -4 had new lesions & 1 ISR, & DES group-4 new lesions & 4 ISR. If we see the type of stent either DES or BMS there is no difference in occurrence of either ISR (p=0.5) or total events (0.34). General Regression Analysis: stent length versus age, Hemoglobin, PCV, DM etc showed DM (P-0.03), RBS(P-0.006), Type of CAD(p-0.021) suggest that length of the stent is more in DM, hyperglycemic pts and ACS patients.
Conclusions: Most important factors determining stent length are DM, new hyperglycemia and ACS status.