LAD & CX – 01, Left main with LAD & RCA – 03.1 patient had TIMI II flow, others had good on table result. Clinical or telephonic follow-up was available in all patients and ranged from 4months to 6years. 2 patients had follow-up angiogram. 5 patients died out of 27: 1 patient was having chronic renal failure, stopped dialysis and died. 1 patient died of refractory heart failure 1year later 1 patient stopped medication after 1month and had sudden death. Of the remaining 2 PCI related deaths, 1 had TIMI II flow after PCI and other was in shock at the time of PCI. Both died in hospital. 1 patient 3years later had angina, ECG changes and developed significant re-stenosis of stent for which he successfully underwent CABG surgery.

Conclusion: Left Main PCI in selected patients is feasible effective with good long term results even in a peripheral centre.

Technical issues during native artery intervention through LIMA and RIMA graft by transradial (TRA) or transfemoral (TFA) approach

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Background: Native artery intervention through left internal mammary artery (LIMA) or right internal mammary artery (RIMA) bypass grafts is technically demanding. Transradial route is increasingly used for such interventions. We reviewed the technical details of cases done within last 2 years both through TRA and TFA.

Methods: All patients who underwent native artery intervention through LIMA or RIMA graft between January 2012 and April 2014 were identified. The clinical details, demographic characteristics, procedural characteristics were studied. All the complications and their trouble shooting were analyzed.

Results: 6 patients were identified who underwent native artery interventions through arterial grafts. 5 patients were treated through the LIMA and 1 patient through the RIMA graft. The mean age 66+11.5 years, males-6, 4 had diabetes mellitus. There were 5 cases of dyslipidemia. None were smokers. All of these patients had angina refractory to anti anginals including ranolazine. Approach was left radial in2 and femoral in 4. Guiding used- 4 IMA 2 RCA catheters. Guiding induced subclavian dissection occurred in 1 patient which was treated by ‘wire first technique’. Whisper floppy wires were used in 2 patients. Rests were done using BMW-2, all star-2 wires. One patient had persistent local LIMA graft spasm which was refractory to diltiazem intracoronary (I/C) bolus, nicorandil (I/C) bolus. The spasm responded to (I/C) nitroglycerin.

Conclusion: Native artery intervention through LIMA and RIMA graft in possible using conventional hard wires through either TRA or TFA. Guiding induced dissection at the origin of the IMA graft may occur which requires modification of technique (wire first technique). Diltiazem and nicorandil refractory spasm of the LIMA graft can be treated by nitroglycerin bolus.

Study on appropriateness of Percutaneous Coronary Interventions [PCI] done in a high volume tertiary care centre

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Background: With more widespread availability of PCI performing centres in developing world, a huge number of cases are being performed annually. Appropriateness of these procedures is vital to reduce complications and have cost effective care. This study is to assess the appropriateness of PCI procedures performed at a high volume tertiary care centre during the period of 9 months from 1st August 2013 to 30th April 2014.

Methods: This is a single centre, prospective observational study assessing appropriateness of PCI procedures done in our institute during the study period using ACCF/SCAI/STS/AATS/AHA/ASNC/HFSA/SCCT2012 Appropriate Use Criteria for Coronary Revascularization Focused Update. Results were analysed based on indication as acute or non -acute PCI.

Results: During the study period of 9 months 978 PCIs were performed, 67% [659] were men and 33% [319] were women. 81% (792) were for acute indications and 19 % (186) were for non-acute indications. Among acute PCIs [STEMI were 65.1 % (516), NSTEMI were 16.5 % (131) and Unstable Angina with high risk features were 18.4% (145)]. Among acute PCIs, 90.1 % (714) were classified as appropriate, 2.1% (17) as uncertain and 7.8% (61) as inappropriate. Among non-acute PCIs 68.3 % (127) were classified as appropriate, 26.3% (49) as uncertain and 5.4% (10) as inappropriate. Majority of inappropriate acute PCIs were performed on non-culprit artery during the index hospitalization. Majority of uncertain non acute PCIs were due to lack of stress testing evidence.

Conclusion: Majority of acute PCIs were deemed appropriate but most of inappropriate acute PCIs were performed on non-culprit artery during index hospitalisation at a later date after primary PCI and majority of uncertain non acute PCIs warrant stress testing. Such an analysis would help health care team to change practice in strictly implementing the guidelines where ever possible.

Anatomical relationship of femoral artery to femoral vein in normal Indian population

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Background: Though Radial access is gaining popularity worldwide, Femoral artery and Femoral vein still remains the standard mode of access for catheter based intervention in Adult and Paediatric populations. Femoral Artery has relatively more access site complications. Apart from technical expertise, Femoral Artery and Vein relationship is a critical determinant of access site related issues.

Traditionally we believe that Femoral Vein is entirely located in medial part in Femoral triangle. However anatomical variations are reported. In this context the relationship between the Femoral Artery and Vein is being studied.

Methods: It is a single centre analytical study carried out on 30 normal adult Indian population in our tertiary cardiac care centre. We used ESOATE SDA My LAB 25 Gold, with 7.5 MHz vascular probe frequency for analysising the relative anatomical position of vessels in the study group.
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 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 values, 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±2%. PCI procedure related complications like temporary pacing. 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/hr infusion was started. Then again in same previous view culprit vessel angiogram was repeated 3 minutes after stating the Bivalirudin 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 angi 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