Conclusion: Preliminary analysis of our data shows encouraging results with YCF stent in all comer high risk ACS population.

Coronary angioplasty in unprotected left main disease with indigenous sirolinus eluting biodegradable polymer Yukon choice flex stent

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Twenty patients with unprotected left main disease undergoing coronary angioplasty between January 2013 and August 2015 have been studied. There were 15 males (75%) and 5 females (25%), mean age 63 ± 11 (35–75 years). Risk factors were Type II Diabetes mellitus 7 (35%), Hypertension 8 (40%), Smoking 5 (25%), and Dyslipidemia 8 (40%). Clinical presentation was ACS with STEMI 3 (15%), unstable angina 7 (35%), NSTEMI 8 (40%), and stable angina 2 (10%). Mean LVEF of the group was 35 ± 5%. Three patients with STEMI presented in cardiogenic shock.
Right femoral artery was accessed in all patients. Weight adjusted heparin, aspirin and clopidogrel or prasugrel were used as anticoagulants and antiplatelets, respectively. IABP was inserted in the 3 (15%) patients with cardiogenic shock due to acute MI. GP IIb/IIIa receptor blockers were used in all patients. Distribution of disease in left main: ostial lesion 3 (15%), diffuse shaft disease 2 (10%), distal bifurcation 12 (60%), trifurcation 3 (15%). Additional triple vessel disease was seen in 10 (50%).
Technique: Left main to LAD cross over stenting without final kissing – 8 (40%), two stents strategy: TAP 6 (30%), Cullotte 1 (5%), and DK Crush 1 (5%). In one patient, single stent strategy with simultaneous kissing balloon angioplasty in Cx was done. Proximal optimization was done in all patients. Ostial stenting was done in 3 (15%) patients. Procedural success was achieved in all patients. All patients received DES. 15 patients (75%) received indigenous Yukon choice flex (Biodegradable polymer) stent, 3 (15%) received Medtronic Endeavor stent and 2 (10%) patients received Xience stent (Abott). Mean stent diameter in left main was 4.0 ± 0.53 mm. Mean number of stents per patient was 1.5. In-hospital mortality occurred in 3 (15%) patients who were in cardiogenic shock. There was no other MACE or bleeding during hospitalization. Patients were followed clinically or telephonically for a mean duration of 15 ± 6 mo (range 4–20 mo). There were no further significant events during follow-up.
Conclusion: In appropriately selected patients, PCI of unprotected left main gives gratifying results. The performance of Yukon choice flex (indigenous) stent has been satisfactory. Mortality remains high in AMI with cardiogenic shock.

Trimetazidine in the prevention of contrast induced nephropathy following coronary angiography/ angioplasty

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Background: Contrast induced nephropathy (CIN) is a known complication following coronary angiography and angioplasty. Rising creatinine levels after coronary procedures is strongly associated with poor clinical outcomes. However in clinical practice there are situations where coronary procedures are necessary for patients with pre-existing renal dysfunction. There are some clinical suggestion that trimetazidine (TMZ), an anti-ischemic drug, may prevent CIN.
Methods: To evaluate the efficacy of trimetazidine in the prevention of CIN in patients with pre-existing renal dysfunction undergoing coronary angiography/angioplasty. It was a prospective single blind randomized trial where 2 groups of patients of class III angina with serum creatinine values exceeding 1.5 mg/dl were selected. One group (group A) was administered intravenous (IV) saline (0.9%) infusion at a rate of 1 ml/kg of body weight for 24 h starting 12 h before the procedure while the other group (group B) received 35 mg twice daily of trimetazidine controlled release (CR) tablet by mouth for 72 h starting 48 h before the procedure in addition to IV saline infusion like the first group. Baseline serum creatinine was done 24 h before the procedure for enrolment. Subsequent creatinine values were obtained 1 h before, and 1, 2, and 7 days after the procedure.
Results: Over a period of 12 months from April 1, 2014 till March 31, 2015, 140 patients were included in this study. There were 98 male patients. Mean age was 67 ± 14 years. Forty eight percent had diabetes, while 34% were hypertensive and 28% were smokers. Mean serum creatinine was 1.82 ± 0.44 mg/dl. There were 70 patients in group A, who received only saline infusion and remaining 70 were in group B who had both IV saline and oral trimetazidine CR. Age, sex, risk factors, and clinical symptoms were properly matched in either group. In all nonionic contrast (Iodixanol) was used. One day after angiography/angioplasty there was no significant change of serum creatinine in either group. However on day 2 post-procedure serum creatinine dropped by mean 8.2% in group A and 9.5% in group B. The difference was not statistically significant. After 7 days of the procedure mean drop of creatinine was 8.8% in group A and 12.6% in group B. Reduction of serum creatinine after 7 days of angiography/angioplasty by TMZ therapy was statistically significant.
Conclusions: The addition of trimetazidine to normal saline significantly decreased the incidence of CIN in patients undergoing coronary angiography/angioplasty. In conclusion, trimetazidine could be considered as a potential tool for prevention of CIN in patients with renal dysfunction.

Comparison of lower loading dose of prasugrel compared with conventional loading dose of prasugrel in Indian patients undergoing percutaneous coronary interventions

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Background: Although conventional 60 mg prasugrel allows for rapid and potent platelet inhibition within 30 min after loading dose, the efficacy and safety of lower doses of prasugrel in Indian patients has not yet been investigated.
Objective: The study sought to compare the efficacy of a lower loading dose of prasugrel with conventional loading dose of prasugrel in Indian patients.
Material and methods: 332 Indian patients undergoing elective PCI were enrolled in the study. Participants were randomly administered loading doses of prasugrel 60 mg (group A, $n = 166$) or 30 mg

(group B, $n = 166$) prior to percutaneous coronary intervention (PCI) in 1:1 manner. Platelet reactivity was assessed at baseline and at 30 min. Primary endpoint was composite of MACE including in hospital death, major bleeding and stent thrombosis while secondary endpoint was in hospital minor bleeding.
Results: Platelet reactivity at baseline and at 30 min did not differ significantly between the two groups ($p = 0.549$). The two groups also did not differ significantly in MACE (group A = 2.41%, group B = 1.81%, OR = 1.34, 95% CI = 0.30–6.09, $p = 0.70$). Significant less minor bleeding was observed in group B (group A = 10.24%, group B = 4.22%, OR = 2.59, 95% CI = 1.05–6.43, $p = 0.04$).
Conclusion: 30 mg prasugrel loading is as effective as 60 mg prasugrel with significant less minor bleeding in Indian patients.

Emergency endovascular management of leaking saccular abdominal aortic aneurysm

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Abdominal aortic aneurysms are relatively common, potentially life threatening conditions that are often asymptomatic and incidentally detected on routine screening for other problems.
Vague abdominal pain and backache are often the presenting complaints of this disease and are also the commonest complaints that a doctor comes across in the outpatient as well as the emergency room. Hence it is easy to misdiagnose this condition.
This report will illustrate one such case involving a 57-year-old male who presented to the gastroenterologist with vague abdominal pain and backache. On further evaluation, an abdominal aneurysm was incidentally detected on ultrasound. The patient course and complications that developed along with key points to be learnt from this case so as to identify this disease at an early stage and prevent its complications will be highlighted.

To study the safety and efficacy of vascular closure devices (VCD) after transfemoral PCI

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Background: In recent years, vascular closure devices have gained popularity and are being used for rapid hemostasis and early ambulation as an alternative to manual compression.
Transradial interventions has been associated with a reduced risk of vascular complications compared with femoral artery access, especially access site related bleeding complication leading to reduction in morbidity in PCI. The transradial access has several advantages over transfemoral approach. The radial artery is easily compressible, thus bleeding is controllable and hemorrhagic complications are significantly reduced. Moreover, no major nerves or veins are located near the artery, minimizing the risk of injury of these structures. Finally, post procedural bed rest is not required, permitting immediate ambulation, more comfort, and early discharge. This last advantage has shown to improve quality of life for patients and to reduce the costs of hospitalization. Despite this large amount of benefits, the transradial approach is more demanding than transfemoral access and requires a longer learning curve for the operator. Furthermore, it does not give the possibility to use other devices such as a temporary pacemaker or intra-aortic balloon pump and to perform coronary interventions requiring 8-F catheters.
Multiple studies have identified the incidence of major bleeding as a strong independent predictor of increased risks of early and late death or major adverse cardiovascular events (MACE) in patients presenting with acute coronary syndromes (ACSs) and undergoing invasive procedures. The access site bleeding represented 50–80% of all major bleeding, and thus, it is possible that TRA through its association with lower bleeding risk could favorably influence the risk of death and MACE after PCI. Clinicians who performed PCIs in the early years of the procedure achieved hemostasis after femoral sheath removal via manual and/or mechanical compression approaches. These hemostasis strategies required that patients remain immobilized for extended periods of time (up to 8 h after a procedure). This approach created substantial discomfort and extended hospital stays. Alternative methods of achieving hemostasis were introduced into cardiac catheterization laboratories approximately 20 years ago, loosely termed as vascular closure devices (VCDs); these alternatives may potentially allow earlier sheath removal and ambulation with a similar or decreased complication rate compared with manual compression. VCD allow improved patient satisfaction and comfort related to the avoidance of prolonged sheath insertion and manual compression. VCD use allows immediate removal of the femoral sheath regardless of anticoagulation status. These devices have the potential to reduce the time to hemostasis, facilitate patient mobilization, decrease hospital length of stay, and improve patient satisfaction. Therefore, introducing VCD to close the arterial access site after hemodynamic interventions was designed to reach the same goals as the introduction of TRA into clinical practice: early mobilization of the patient, decreased incidence of bleeding complications, and enhanced patient and staff comfort. Using VCD to close the puncture site after interventions performed via the traditional femoral artery (FA) approach may offer the same advantages as the TRA, while achieving a shorter time to reperfusion in patients with acute coronary syndrome.
Three types of VCDs are commonly used. First are collagen plug VCDs, second type are suture-based VCDs, and last one are nitinol clip-based VCDs used for femoral artery hemostasis after PCI. The suture based Perclose device is used to close the femoral artery access sites percutaneously following coronary intervention in fully anticoagulated patients. The Perclose ProGlide Suture-Mediated Closure (SMC) System is designed to deliver a single monofilament polypropylene suture to close femoral artery puncture sites following diagnostic or interventional catheterization procedures. This Perclose ProGlide device is composed of a plunger, handle, guide, and sheath. The Perclose ProGlide tracks over a standard 0.038'' (or smaller) guide wire. A hemostasis valve restricts the blood flow through the sheath with or without the guide wire in place. The guide houses the needles, and the foot, and precisely controls the placement of these needles around the puncture site. The handle is used to stabilize the device during use. The plunger advances the needles and is used to retrieve the suture. A marker lumen is contained within the guide, with the intraluminal port of the lumen positioned at the distal end of the guide. Proximally, the marker lumen exits from the body of the device. The marker lumen allows a pathway for back-bleeding from the femoral artery to ensure proper device positioning.
Methods: In this study after the completion of PCI, the local access site was closed by the suture based Perclose Proglide VCD of Abbott Company in patients with transfemoral PCI. The radial compression band was used for patients who underwent transradial PCI. The study was done to see the safety and efficacy of vascular device closure following transfemoral PCI. The patients were observed for local site complications like oozing of blood, hematoma, infection, pseudoaneurysm, A-V fistulae, and death in both femoral VCD group and radial group. The mean time to ambulation and discharge were calculated in both group and the results were