The back records of the time of their angioplasty (at time of presentation) were tracked and referred. Average age of the study population was found to be 58.7 years (SD: 9.2 years, ranging 29–79 years, comprising 97 males and 39 females). Mean age of patients with ST and ISR requiring TLR was 61.8 years and without stent restenosis was 58.3 years. All 7 patients who had ISR were suffering from diabetes and hypertension. Association between diabetes and ISR (Chi square = 5.488; $p = 0.01$; considering 95% CI) and hypertension & ISR (Chi square = 6.756; $p = 0.00$) is significant. While comparing the two stents: everolimus-eluting and sirolimus-eluting coronary stents with the outcome, i.e., in-stent restenosis and target lesion revascularization (Chi square = 0.005; $p = 0.94$) with 95% CI, no significant difference between the two stents was found. Hence the null hypothesis, that there is no significant difference between use of everolimus-eluting and sirolimus-eluting coronary stents on clinical and angiographic follow-up is accepted.
Therefore EES implantation was non-inferior to and had similar results to SES implantation after one year in terms of clinical and angiographic outcome. Both the SES and EES groups showed a similar efficacy and excellent outcome after one year with a very low rate of in-stent restenosis, stent thrombosis, and target-lesion revascularization.

Non-right coronary sinus origin right coronary artery intervention: Our experience over 3 years

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Non-right coronary sinus origin RCA interventions are technically demanding. Proper selection of hardware is the key to success. Over last 3 years we had total 16 such interventions (7 RCA from left coronary sinus and 9 from non-coronary sinus). RCA from Left-coronary cusp were more difficult to engage than non-coronary cusp. Mean fluoroscopic time (22.6 min [11.6–66.5] vs 16.5 min [13.4–38.6]) as well as mean volume of contrast used (206 ml [112–322] vs 168 ml [110–280]) were both higher in left coronary sinus origin RCA interventions. In our series, RCA from non-coronary cusp were most frequently engaged with AR guiding catheter whereas RCA from left-coronary cusp were most frequently engaged with JL guiding catheter.

Bioresorbable scaffolds for coronary artery in-stent restenosis

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Introduction: Management of coronary artery in-stent restenosis (ISR) is a challenging as well as debatable topic. Options include plain old balloon angioplasty (POBA), metallic stent, cutting or scoring balloon and drug-eluting balloon (DEB). All the techniques have their own advantages and drawbacks. Till date the optimum treatment strategy is undefined.
Methods and results: In the current series we implanted five bioresorbable vascular scaffolds (BVS) in ISR over a period of 1 year. Most of the procedures were guided by intravascular imaging (OCT in 2 cases and IVUS in 1 case). The patients were followed up subsequently (for a mean period of 5 months). All the patients were symptom free till date. No repeat target vessel revascularization had to be performed.
Discussion: BVS is the latest advance in the armamentarium of interventional therapies for treating de novo significant coronary artery disease. Recent data from trials have suggested many advantages of BVS over DES. The rationale of using BVS in ISR is based on the concept of local drug delivery as achieved by DEB with the benefits of a scaffold to stabilize dissection flaps, and prevent acute recoil as provided by metallic stent, without the permanent bi-layer of metal, that in some vessels, may in and by itself create flow abnormality.
Conclusion: BVS based treatment strategy for ISR have appealing biologic advantage. Efficacy and outcomes of this new therapeutic option need to be evaluated in comparison to other established PCI based therapies, such as repeat metallic stent implantation, in a randomized setting.

An interesting case report of coronary artery perforation following PCI

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Background: Coronary artery perforation is a rare complication of PCI with a reported incidence of 0.2–0.6%. Development of pericardial tamponade has been associated with a high mortality. We present a report of one such patient highlighting the key learning points from the case.
Case Report: A 69-year-old male admitted with a history of angina equivalent since 2 months, CAG done revealed significant proximal LAD complex bifurcation lesion. PTCA/stent to mid to distal LAD was done using 3.0–2.5 mm × 60 mm BIOMIME MORPH DES. Post-stenting patient developed sudden hypotension and asystole. Angiogram revealed coronary leak with dye staining of pericardial sac and 2D Echo showed gross pericardial fluid collection suggestive of tamponade. Pericardiocentesis was done via pigtail catheter and the aspirated blood was autotransfused via the femoral vein. Patient was intubated, started on inotropes. His vitals stabilized transiently but within minutes patient once again became hypotensive and developed bradycardia. Echo revealed gross reaccumulation of pericardial fluid. Pericardiocentesis and autotransfusion was done repeatedly. CAG revealed a persistent significant leak from the mid part of the LAD stent. A 3 mm × 16 mm coronary covered stent was placed in stent in the mid-LAD, which effectively sealed the leak. Pericardiocentesis and auto transfusion was repeated post procedure. Patient was stabilized and shifted to ICCU. Serial repeat 2D Echo did not reveal any reaccumulation of fluid in pericardial sac. Patient was on ventilator for 72 h due to neurological impairment and was started on neuroprotective agents by neurophysician. He showed gradual improvement, was extubated and shifted to the ward after 7 days in ICU. With regular physiotherapy, rehabilitation and optimal medications, patient recovered well with minimal residual neurological deficit. He was discharged after 15 days and is hemodynamically stable on regular follow-up.
Conclusion: Pericardial tamponade due to coronary artery perforation has a high mortality. Surgical intervention has been cited as the only life-saving option in such cases. Expertise in the use of covered stents may provide a quick and valuable rescue option for this serious complication.

A single center experience of device closure for ventricular septal rupture in acute myocardial infarction

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Background: Post-infarction ventricular septum rupture (VSR) is a rare mechanical complication of an acute myocardial infarction