thrombosis.NYHA functional class, LV function, site of valve, and recurrent episodes were major determinants of successful thrombolysis.

Prevalence of CAD and its risk factors in patients of rheumatic heart disease undergoing valvular surgery

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Background: Presence of clinically significant coronary artery disease (CAD) in patients undergoing valvular surgery is common cause of post-operative complication and poor outcome.The current study was designed to study overall prevalence of CAD andits risk factors in patients affected by rheumatic heart disease (RHD).
Methods: A total of 757 consecutive rheumatic heart disease patients planned for valvular surgery who had undergone routine coronary angiography in our Institute were examined. Presence of clinically significant CAD was considered if one or more arteries showed $\geq$ 50% stenosis in angiographic profile. Patients were randomly divided into two groups – Group A (RHD with CAD) and Group B (RHD without CAD), and were screened for the presence of various coronary artery disease risk factors.
Results: The overall prevalence of CAD in the patients undergoing valvularsurgery was 9.11%. The incidence of CAD in patients with mitral, aortic and double valve replacement were 24.13%, 10.81% and 6.15% respectively. The presence of smoking habit (33.3% vs. 20.9%) ($p=0.02$), diabetes (24.6% vs. 3.1%) ($p<0.0001$), hypertension (21.7% vs. 6.8%) ($p<0.0001$) and family history of CAD (17.4% vs. 8.3%) ($p<0.02$) was significantly higher in group A as compared to group B. In Group A, single vessel disease, double vessel disease and triple vessel diseasewere seen in 55.1%, 29% and 15.9 % cases respectively.In RHD patients, the most commonly involved vessel was LAD (left anterior descending artery) (63.7% overall and 30.4% alone) followed by LCX (left circumflex artery) (59.04%) and RCA (right coronary artery) (34.7%).
Conclusion: Prevalence of CAD in patients with RHD in Gujarat, India waslower than that in western countries and was seen more frequently in patients with mitral valve disease. Single vessel involvement, mostly LAD was more common among these patients. CAD in RHD patients was associated with the presence of multiple identifiable coronary risk factors.

Tenectaplase for thrombolysis of left sided prosthetic valve thrombosis – A six months follow up

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Background: Thrombosis is a serious and life threatening complication following cardiac valve replacement and is a common cause of referral to the higher centre for intervention. Although surgery has been described as the traditional choice of therapy for the PVT all over the world, thrombolytic therapy is a promising alternative to valve re-operation in PVT.
Methods: Twelve consecutive patients (6 males, 6 females) (2 AVR, 9 MVR and 1 DVR) were included in the study from January 2013 to January 2014. Mean age were 29±10 years. Diagnosis is confirmed both by TTE and fluoroscopy. Mean gradient of patients with mitral PVT were 24.4±4.86 and for aortic PVT was 43.3±13.1. All patients were taking Acenocumarol derivatives. INR on presentation was 1.79±0.34 and 2.53±1.31 for aortic and mitral PVT. Thrombus burden was measured in all patients by TEE. Tenecteplase is given at a dose of 0.5mg/ kg bolus in all the patients with clinical and Echocardiographic examinations repeated at 6 and 24 hours after starting thrombolytic therapy. Doppler echocardiography was the primary method to follow for response to therapy.
Results: Thrombolytic therapy was successful in all the patients. Mean gradient decrease to 10.3±3.4mmhg and 5.7±3.1 mmhg at 6 and 24 hours for mitral valve ($p<0.001$) and 8.2±4.6 mmhg and 5.8±2.5 mmhg for aortic valve ($p=<0.001$). Leaflets movements were complete in 7 and partial in 5 patients. Thrombus burden significantly reduced in all the patients. Two patients had CVA (infarct) and 1 had large sheath site hematoma. None of the patients expired. At 6 months follow up, Mean gradient were 8.3±2.8mmhg and 10.3±4.72mmhg for mitral and aortic valve. All patients were asymptomatic with no complications on follow up.
Conclusion: Present study demonstrates that Tenectaplase is a safe, feasibile and effective thrombolytic treatment for patients with PVT and should be considered as first line therapy for prosthetic heart valve thrombosis.

Comparative study of Ivabradine versus atenolol in symptomatic mitral stenosis patients

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Background: Pure HR reduction with Ivabradine without undesirable hemodynamic side effect associated with B-blockers may be better for symptomatic improvement in mitral stenosis (MS) patients with normal sinus rhythm (NSR).
Methods: 100 mitral stenosis patients with NSR were randomized in a ratio of 1:1 to receive either Ivabradine (5mg-BD) or atenolol (50mg-OD) for 12 weeks. Clinical assessment, TMT and echo-Doppler evaluation was done to compare efficacy and side effect of two drugs.
Results: Mean dose of Ivabradine and Atenolol was 6.05±1.25mg and 60±26.7 mg respectively at 12 weeks. Results are shown in table. Resting HR reduction was similar in both groups. On TMT peak HR reduction, increase in Total exercise duration & Time of Symptom onset showed similar improvement in both groups. MDG & EDG reduction was similar in both groups. Significant RVSP reduction was seen in Ivabradine group but not in Atenolol group. NYHA class showed similar improvement with both drugs. Total 13 drug side effects were noticed. 2 in Ivabradine and 11 in atenolol group. There was 1 case of bradycardia in each group, 10 patients complained of increased fatigability with Atenolol.1 patient had visual symptoms with Ivabradine.
Conclusion: Ivabradine is a useful alternative to B-blockers treatment in patients with symptomatic mitral stenosis, having efficacy similar to B-blockers with lower side effects.