

disease in developing country like India. Early detection and appropriate treatment of coronary lesions will help in reducing the morbidity and mortality in cases of Valvular heart disease undergoing surgical interventions. This study was undertaken to determine the prevalence of coronary artery disease in patients with rheumatic and non-rheumatic valvular heart disease undergoing valve surgery.

Aims: To estimate the prevalence of coronary artery disease (CAD) in valvular heart disease of rheumatic (RVHD) and non-rheumatic (NVHD) etiology, assessing possible predictive factors for the presence of CAD.

Methods: Retrospective analysis of data was performed on consecutive patients who underwent diagnostic coronary angiography to delineate coronary arteries prior to scheduled valve surgery.

Results: In all 105 patients were studied, out of which 35 (13(37% male & 22(63%) female) were RHD patients with a mean age of 49 years and rest 70 (45(64%) male & 25(36%) female) were NVHD patients with a mean age of 61 years. Significant CAD was present in both the groups although the prevalence was lower in RHD patients (14%) as compared to NVHD patients (29%), $p < 0.001$. However, RHD was not found to be a disease determinant as per logistic regression analysis and other parameters like age, gender, hypertension and diabetes were found to be significantly related. Patients with no chest pain were also found to be having high prevalence of CAD in both the groups.

Conclusion: We conclude that the prevalence of CAD in RHD although significant, is lower as compared to NVHD patients but the rheumatic etiology does not seem to have any beneficial effects on the prevalence of CAD. The lower prevalence has to be attributed to the demographic and clinical profile of the patients rather than any protective effect of RHD. Also we found that asymptomatic CAD is common in patients undergoing assessment for valve surgery. We therefore believe that routine coronary angiography is necessary for proper diagnosis in patients with valvular heart disease before surgery.

Peripartal hemodynamics in rheumatic mitral stenosis – An echocardiographic study

T. Jamuna Devi, M.S. Ravi, K. Meenakshi, D. Muthukumar, N. Swaminathan, G. Ravishankar, G. Justin Paul, S. Venkatesan
Madras Medical College, Chennai, India

Background: Mitral stenosis (MS) is the most commonly encountered valvular lesion in pregnancy. The mortality and morbidity are still significant. Factors that determine the maternal deterioration, fetal distress and ideal mode of delivery is poorly understood. In this context, this study is done to assess the mitral valve hemodynamics by echocardiography in pregnant females with mitral stenosis both prior to and after delivery.

Methods: This study is a single-centre prospective analytical study in which 15 consecutive women with rheumatic MS were examined. MS was assessed echocardiographically in all patients using My Lab Esote echo machine. Transmitral mean gradient and mitral valve area (MVA) by planimetry were calculated using validated methods. Right ventricular (RV) systolic pressure was estimated from the peak velocity of the tricuspid regurgitation jet. Left atrial (LA) volume was calculated by area-length method

and indexed LA volume derived from volume per body surface area. Comparisons were made between the echocardiographic measurement of the MVA, mean gradient, RV systolic pressure, and indexed LA volume in the late antepartum period and within 1 week postpartum. Data are presented as mean \pm 1SD and the characteristics were compared using t test. A p value of less than 0.05 was considered statistically significant.

Results: The mitral valve area as measured by planimetry was 1.28 ± 0.08 vs 1.3 ± 0.07 ($p = 0.47$), the mitral valve mean gradient was 14.6 ± 2.08 vs 8.3 ± 1.52 ($p < 0.001$), RV systolic pressure was 38.6 ± 8.08 vs 24.6 ± 4.50 ($p < 0.001$) and indexed LA volume was 74.3 ± 11.5 vs 50.6 ± 16 ($p < 0.001$) before and after pregnancy respectively. There were no embolic events and no maternal cardiac deaths. Vaginal delivery was the mode of delivery in 80% (12 of 15) and Cesarean delivery in 20% of pregnancies (3 of 15) for obstetric indications.

Conclusion: There was no significant difference in the mitral valve area measured by planimetry during pregnancy compared with that measured after pregnancy. However, a significant decrease occurred in mitral valve mean gradient (43%), RV systolic pressure (36%), and indexed LA volume (31%) after pregnancy. In pregnancy, mean mitral valve gradients were persistently higher irrespective of the valve area. Pregnancy as expected confers definite hemodynamic stress in patients with mitral stenosis. However most patients were able to tolerate the surge in pressure gradient during the last trimester.

Pattern of arrhythmias following PTMC – An insight into patient and procedure related factors

S. Kumaran, M.S. Ravi, K. Meenakshi, D. Muthukumar, N. Swaminathan, G. Ravishankar, G. Justin Paul, G. Manohar, S. Murugan

Madras medical college, Chennai, India

Background: Our aim of the study is to analyse the arrhythmias occurring during PTMC using Accura balloon and its impact on the outcome of procedure. Since the pattern of arrhythmias during the procedure depends upon the type of hardware used, cardiac status and the drugs taken by patient etc. This study intended to highlight the importance of maintaining adequate rate control, optimizing anti failure measures, and operators experience.

Methods: It is a single centre prospective analytical study carried out in tertiary care centre over a period of three months from April-June 2014. PTMC was performed on total of 45 patients with severe mitral stenosis having Wilkinson's score < 8 through right femoral approach with Accura Balloon, transseptal puncture done through modified Hung's technique.

Results: Out of 45 patients 30 are female and 15 are male. In our study sinus tachycardia was observed in 40% pts, non sustained RVOT ventricular tachycardia in 25% of pts, atrial tachycardia in 20%, atrial fibrillation with rapid ventricular response 10% and AV conduction block in 5%. Patients who had been stabilized on digoxin experienced less tachyarrhythmias of 15%. However they developed AV conduction block more frequently 20%. Patients who was on sinus rhythm pre procedurally had less incidence of arrhythmias altogether 18% when compared to 82% pts not on sinus rhythm. 20% of the patients developed non sustained ventricular tachycardia when the balloon accidentally slipped into right ventricle and during LV angiogram pigtail hitching against LV free