



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

ABCSI21232**TO STUDY THE ANATOMY AND FUNCTION OF LEFT ATRIAL APPENDAGE AND ITS CORRELATION WITH THE INCIDENCE OF LEFT ATRIAL AND APPENDAGE THROMBUS FORMATION IN PATIENTS WITH RHEUMATIC MITRAL STENOSIS**

Ahmad Tanweer, Monika Bhandari, Varun Shankar Narayan, Akshaya Pradhan. *King George's Medical University, Lucknow, India*

Background: Rheumatic heart disease is still prevalent in developing countries like India and many patients have mitral stenosis (MS) as the only lesion. Patients with MS have increased chances of LAA/LA clot formation because of LA enlargement and atrial fibrillation (AF). The main modality of treatment for rheumatic MS is percutaneous mitral commissurotomy (PTMC), since this procedure involves atrial septostomy, presence of LA/LAA thrombus must be ruled out to avoid stroke. Hence, we wanted to carry out a study to evaluate anatomy and function of LAA in rheumatic MS to find out their correlation to thrombus formation both in patients with AF and in sinus rhythm.

Method and Results: A prospective study including 49 RHD patients with severe MS who underwent TEE before PTMC, further anatomy was evaluated and classified as per cardiac CT-scan. Results were tabulated and expressed in absolute numbers, mean, percentage and proportions. Chi-square test and p-value was analysed. P-value of less than 0.05 was considered statistically significant. The predominant age group was in the range of 20-29 years and females predominated, with a M:F ratio of 1:1.45. Normal sinus rhythm was the most common ECG finding. SEC was observed in 7/49 cases. The predominant LAA anatomical pattern was Chicken wing>Cauliflower>Cactus>Windsock. A significant correlation of LAA velocity with SEC and LA/LAA thrombus was observed. Decrease in LAA velocity was associated with an increase in SEC findings and LA/LAA thrombus formation. A significant correlation of Mitral inflow velocity was observed with LA/LAA thrombus- Decrease in mitral inflow velocity was associated with an increase in LA/LAA thrombus formation.

Conclusion: Amongst 49 cases, there was female predominance. The predominant LAA anatomical pattern on CT-scan was chicken wing>cauliflower>cactus>windsock. Chicken wing anatomical pattern was associated with an increase in LA/LAA thrombus formation. A decrease in LAA velocity was significantly associated with an increase in LA/LAA thrombus formation and SEC findings.

ABCSI21233**OUTCOME OF VENTRICULAR SEPTAL RUPTURE FROM A TERTIARY CARE CENTRE IN SOUTH INDIA**

Deepanjan Bhattacharya, Vishwanatha Kartik Sambaturu, K.N. Harikrishnan, V.K. Ajitkumar. *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India*

Background: Ventricular septal rupture was once a common complication of myocardial infarction associated with poor outcome. It is significantly associated with poor outcome, and mortality rate has been reported to be 88-100%. There is lack of data from the Indian subcontinent regarding the outcome of VSR, and hence we analysed our cohort of patients over the last 10 years to look at outcomes and predictors of mortality.

Methods and Results: This was a retrospective study carried out in the Department of Cardiology in a tertiary care teaching hospital in Southern India. All patients admitted with ventricular septal rupture from January 2010 to June 2020 were included. 52 patients were enrolled in the study, with a mean age of 64.8 years. Half were older than 65 years of age, and a slight male preponderance was seen (M:F 1.2:1). Anterior wall STEMI was associated with 63.5% of cases while inferior wall STEMI was seen in one-third of cases. 13.5% underwent fibrinolysis, out of which streptokinase was the commonest modality used, while 29% underwent percutaneous coronary intervention. Hypertension and diabetes mellitus were the commonest co-morbidity, seen in half of the patients each. 6 patients had past history of coronary artery disease. Average size of ventricular septal defect was 11.6±5.7mm, while significant mitral and tricuspid regurgitation were seen in 32% and 42% of cases. More than half had anemia, while

leucocytosis was seen in 75% of patients. Nearly all had elevated cardiac biomarkers and hepatic enzymes along with deranged renal function test seen in more than half. Multivessel CAD was seen in more than 70% and left anterior descending (LAD) being the commonest diseased vessel (90%). 22 patients underwent surgical repair, out of which 60% were operated after 14th day of admission. Teflon and Dacron were the commonest materials used for repair. 5 patients underwent device closure using Amplatzer device occlude. There was no significant difference in mortality between device closure and surgical repair (60% vs 45.5%, p=0.74). Mortality rate was 61.5%, with major predictors of death being older age, shorter duration of symptoms, ST elevation on ECG, elevated NT pro BNP, leucocytosis, alanine and aspartate transaminases, deranged renal function test, cardiogenic shock, acute kidney injury and need for IABP. 16 patients died within 7 days of hospitalisation, whereas 27 died within 30 days (7-day mortality: 30.7%, 30-day mortality 51.9%)

Conclusion: Ventricular septal rupture, although uncommon in the early reperfusion era, is associated with significant mortality, which has reduced over the past decade. Older age, shorter duration of symptoms, leucocytosis, elevated hepatic transaminases, acute kidney injury, elevated NT-pro BNP, presence of cardiogenic shock and use of intra-aortic balloon pump were associated with increased mortality. Those who underwent surgical repair had a distinct survival advantage.

ABCSI21235**RECURRENT THROMBOSIS IN A LADY: IS THERE A MISSED CONNECTION?**

Deepanjan Bhattacharya, Kurup K.N. Harikrishnan, Bijulal Sasidharan, V.K. Ajitkumar. *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India*

Background: COVID19 infection is a recognized risk factor for systemic thrombosis. There have been few case reports about thrombosis following COVID19 vaccination.

Methods and Results: A middle aged lady presented with acute pulmonary thromboembolism with right ventricular dysfunction and heart failure, with history of cerebral sinovenous thrombosis 3 weeks back. Thrombophilia workup and DVT screen was negative, but on reviewing history she had received CoviShield vaccine 1 week prior to the CSVT. She was thrombolysed which was unsuccessful, and then planned for mechanical thrombectomy but died prior to the procedure.

Conclusion: COVID19 vaccine, especially those containing adenoviral particles, have an inherent predisposition to cause thrombosis by immune-mediated reactions. Although the risk is very less as compared to the benefit derived, it should be taken into account in patients who present with unexplained thrombosis post vaccination.

ABCSI21236**INFLAMMATORY MARKERS IN COVID19, ARE THEY REALLY SPECIFIC? / INFLAMMATORY MARKERS IN COVID19**

Deepanjan Bhattacharya, Vishwanatha Kartik Sambaturu, Kurup K.N. Harikrishnan, V.K. Ajitkumar. *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India*

Background: The novel coronavirus (COVID 19) has now progressed to cause a major pandemic infecting over 10 million people worldwide and resulting in over five hundred thousand deaths. Patients with co-morbidities like diabetes mellitus, coronary artery disease and hypertension are at increased risk with higher mortality rates. Various studies have found that elevated C-reactive protein, ferritin, d-dimer and procalcitonin levels associated with COVID19 infected patients. We analysed 100 patients admitted in our Department of Cardiology, for these inflammatory markers, all of whom were tested negative RT-PCR for COVID19.

Methods and Results: We selected 100 consecutive patients who were admitted in our Cardiology Department either for management of acute cardiovascular ailment or for a elective or diagnostic procedure. All of them underwent reverse-transcriptase polymerase chain reaction (RT-PCR) for COVID19. Demographic details were noted, and blood sample of these patients were sent for estimation of serum ferritin, d-dimer, C-reactive