Case Report

POST MI VSD Repair infarct exclusion patch Closure - A Case Report from Universal Cardiac Hospital Dhaka

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Abstract:

VSR is a rare but one of the most serious and life threatening complication of acute myocardial infarction. Patients may present with cardiogenic shock and die whenever this event occur. Survival is strongly dependent on the presence of collateral blood flow to the Coronary artery and emergency management for preserving the LV function. Here we present a case of a 58 yrs old man with VSR accompanying cardiogenic shock. After optimization, he was successfully treated, CABG ´ 3 grafts with PTFE patch closure of VSR through posterior LV-tomy approach on CPB.

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Introduction:

The incidence of post MI VSD is <1% of all infarcts . It is potentially a lethal complication .Post infarct VSR,a surgical emergency,is usually located in the anterior or apical position of ventricular septum (about 60%) due to acute transmural anterior myocardial infarction. About 20-40% of patients have VSR in posterior portion of IVS or in the basal segments,as in echo,due to inferior myocardial infarction.A well developed collateral coronary circulation is uncommon in those with post infarct VSR.Defect is usually associated with complete obstruction of a coronary artery.

Posterior VSR, in particular is accompanied by mitral regurgitation secondary to papillary muscle ischaemia/ infarction. The importance of concomitant right ventricular infarction,in patients with post infarct VSR resulting in RV dysfunction is due to acute inferior wall RV infarction.

Two dimensional trans-thoracic echo-cardiography with Doppler color flow imaging is performed to define the site of VSR,quantify the magnitude of L-R shunt,ascertain the presence or absence of mitral regurgitation.Echo is highly sensitive and specific;provides safe and rapid diagnosis of post-infarct VSR .

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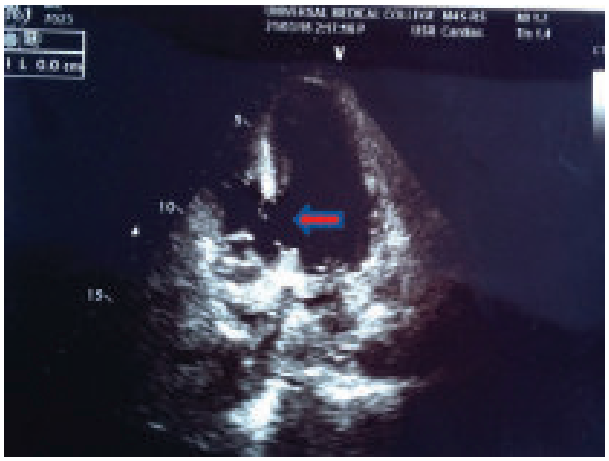
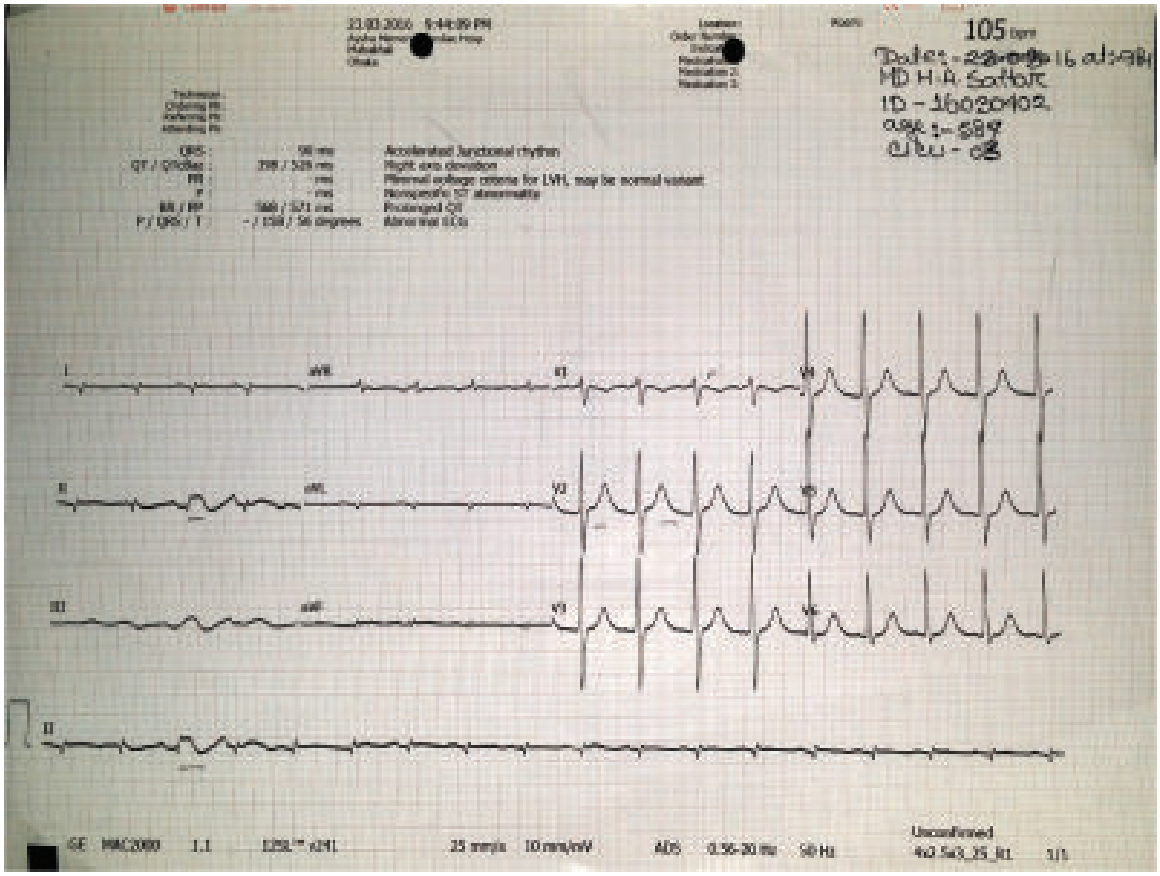
Case report :

A 58 yrs old pleasant male hypertensive ,diabetic having a Chest pain ç H/O OMI(Inferior) got admitted in CCU-NICVD on 7th march ,2016.He was managed accordingly in CCU .On 11.03.16 he was shifted to ward.On next morning he developed severe SOB associated diaphoresis and palpitation and again shifted to CCU,Optimized ç ionotropes. His physical examination revealed regular heart rhythm of 96 b/min,arterial pressure of 85/60 mm of Hg,sign of lung congestion and new appearance of pan systolic murmur .

Echo reveals VSR at masculars septum(8-9^0 clock position,14X 12 mm),inf-wall grossly hypokinetic ç moderate MR.Managed ç inotropes and aggressive diuretics.He was shifted from NICVD to UMCH for better management. Lab examinations demonostrated anemia ç Hb of 8.6 g/dl,serum creatinine 1.5 mg/dl,RBS-18.8mmol/ L, HbA1c-10.1%,Negative viral markers,CAG revealed –TVD. On 23.03.16 ,under G/A Patient underwent CABG X 3 grafts done ç PTFE patch closure of VSR though posterior





LV- tomy approach on CPB uneventfully.He was extubated on the next morning and discharged home on 10th POD.Before discharge check colours Doppler was done showing no residual VSD.After 2 month check Echo shows good LV function ç no residual VSD.

Discussion:

Post infarct VSD develops secondary to a massive myocardial infarction.Medical management though necessary,it requires early surgical intervention to salvage the patient.Use of

inotropic support and IABP are complimentary to the surgery.LV reduction (infacrtectomy) helps to restore the LV geometry and improve the contractility. Associated mitral regurgitation and coronary artery disease needs to be addressed as per the individual case basis.

Conclusion:

Postinfarct VSD is a devastating complication. Deferring operation,if possible, until one week after infarction is better option.Cardiac support with intraaortic balloon pump insertion to allow preoperative hemodynamic stabilization till surgery is done.Many different techniques are used for closure of VSD,but infarct exclusion patch closure appears to be a viable alternative for avoiding recurrent VSD.Delay in intervention and elderly patients have poor surgical outcome.