**VENTRICULAR SEPTAL DEFECT AFTER ACUTE ST-ELEVATION MYOCARDIAL INFARCTION: STILL A COMPLICATION OF THE MILLENNIAL ERA**

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**Introduction:** Post-infarction Ventricular septal defect (PIVSD) is a rare complication. It is seen in patients with single-vessel disease, extensive myocardial damage, and/or poor septal collateral circulation. We present a patient with a late presentation ST-segment elevation myocardial infarction (STEMI) that developed a ventricular septal defect (VSD).

**Case:** A 79-year-old male with hypertension, peptic ulcer disease, dyslipidemia, and chronic kidney disease, presented to the hospital after 12 hours of chest pain. He was found to have anterolateral leads ST-segment elevation and elevated Troponin I levels. A transthoracic echocardiogram showed a left ventricular ejection fraction of 50% and anterior wall hypokinesis. Coronary angiogram showed mid left anterior descending coronary artery 100% occlusion and calcification, and balloon angioplasty was done with suboptimal distal flow due to microvascular occlusion from the late presentation STEMI. On his 2nd hospital day he developed acute heart failure with pulmonary edema and a new grade 4 systolic ejection murmur heard in the left upper sternal border. A transesophageal echocardiogram showed a new VSD. He was treated with diuretics. His course was complicated with gastrointestinal bleed and the patient and family agreed on comfort care approach.

**Discussion:** PIVSDs are rare complications in the percutaneous coronary intervention (PCI) era with a grim prognosis of 6% survival at 1 month without intervention. The highest incidence of PIVSDs is on the 1st day or 3-5 days after STEMI. There is increased frequency of VSD in single-vessel disease with total occlusion of the infarct-related artery. Poor outcomes are linked to late MI presentations (> 24 hours). Early surgical repair has been associated with adverse outcomes compared with patients who undergo late surgery. Prompt surgical repair is recommended if the patient develops cardiogenic shock. Percutaneous closure of PIVSDs has also been described.

**Conclusion:** In the PCI era, PIVSDs are rare but risk factors can predispose to this condition despite prompt revascularization and guideline directed approach. The management remains challenging.