Post myocardial infarction VSD closure: Surgical techniques

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Introduction: Modified double patch technique creates a new septum by using the Dacron patch on right ventricle and bovine pericardium on the left ventricle side thus effectively excluding the infarcted segment without opening the right ventricle.

Methods: This is a single center study involving 11 patients with post MI VSR (2014-2017). All patients were supported pre operatively with an IABP and inotropic support. This technique especially was used for antero-apical septum rupture. The posterior and basal VSD were difficult to treat. After identifying the ventricle septal rupture a Dacron patch 2 cm larger than the defect is pushed to the right side through the VSD along with 4 prolene 5-0 interrupted pledgeted sutures at 12, 3, 6, 9 'O' clock positions and needles retrieved on the LV side away from the infarcted margin. Rest of the interrupted sutures were taken in between the 4 sutures passing through Dacron patch on RV side and piercing the septum and coming out on the LV side. The bovine pericardial patch fashioned and fixed with these sutures. Two Teflon strips were used onto the ventricular wall on the side of incision to close the defects. First layer is of full thickness horizontal mattress sutures of 3-0 prolene and second layer as a continuous suture. TEE was used to assess the repair.

Results: The 30 days mortality was 23.6%. The analysis showed low mean blood pressure with intra-aortic balloon pump, higher EUROSCORE II and shortened intervals between MI and VSR to be strong predictors of mortality. One patient is having small residual VSD.

Conclusion: This technique using two patches on each side of septum creates a new septum with sutures away from necrosed area and incidence of residual VSD is negligible.

Biography
Rajiv Kumar Gupta is the Professor and Head of the Department of Cardiovascular-Thoracic Surgery in Unit Hero DMC Heart Institute, Dayanand Medical College and Hospital, Ludhiana, Punjab, India. He has completed his MBBS from Dayanand Medical College & Hospital, Ludhiana in 1987. He also did MS (General Surgery) from Dayanand Medical College & Hospital, Ludhiana in 1991. His areas of interest include total arterial revascularization, management of patients with cardiac failure and ECMO Program.

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