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Case Report

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TRIPLE VESSEL CORONARY ARTERY DISEASE WITH VENTRICULAR SEPTAL RUPTURE

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INTRODUCTION

Ventricular septal rupture (VSR) is a rare but devastating complication after acute myocardial infarction that generally produces progressive circulatory failure and rapid deterioration. The differential diagnosis of postinfarction cardiogenic shock should exclude free ventricular wall rupture and rupture of the papillary muscles. Prompt diagnosis followed by surgical repair with perioperative circulatory support is often life-saving.

CASE REPORT

A 58 year old man was admitted on 17th Nov 2016 with 5 days history of chest pain. He was smoker, diabetic, hypertensive. ECG was suggestive of left anterior wall myocardial infarction which was late for streptokinase. He was admitted in critical care unit. His 2D Echo showed EF 30%, apical LV akinesia and VSR of 10 mm size with left to right shunt. Angiography showed critical disease of proximal to mid LAD and RCA with moderate disease in left circumflex system. He was optimized on vasodilators, diuretics and anti coagulated with heparin infusion for a weak before surgical intervention. On 30th Nov, patient underwent coronary artery bypass grafting and closure of VSR. Before anaesthesia induction intra aortic balloon pump was inserted for myocardial protection (fig-).

MATERIAL AND METHODS

After sternotomy and pericardectomy hemopericardium found suggestive of leakage of blood subacute free wall rupture near apex which was sealed by it and apical clot was still present in cavity. Left long saphenous vein harvested for grafting. After aortic and bicaval cannulation cardiopulmonary bypass was established. Myocardial protection by cold antegrade cardioplegia for Grafting (SVG to LAD & PDA of RCA). Left ventricle (infarctectomy) opened lateral to LAD (aneurysm). Multiple VSR from mid to distal septum found (1 moderate sized and 2 small sized) repaired with Gortex patch

Figure: coronary artery bypass grafting and closure of ventricular septal rupture.

and Left ventricle closed with 4/0 20 mm prolene plegeted interrupted sutures with bilateral gortex patch. Raw surfaces from the lysis of adhesions were profusely bleeding, pericardial cavity washed with warm saline and cell saver machine was on standby for use in case of uncontrolled bleeding. Haemostasis secured. Drains and pacing wires placed. Chest closed and patient shifted to ICU with circulatory support of nor adrenaline and Adrenaline at 0.2 mcg/kg/min. Gradually the supports were tapered off patient was weaned off from IABP and ventilator. Patient had smooth recovery and was discharged after 1 weak of his surgery.

DISCUSSION

The septal blood supply comes from branches of the left anterior descending coronary artery, the posterior descending branch of the right coronary artery[1]. After successful repair, survival and quality of life are excellent, even in

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patients older than 70 years. Operative mortality is directly related to the interval between myocardial infarction (MI) and surgical repair[2]. With the use of an early operative approach, most studies show an overall mortality of less than 25%. Sudden death is rare, and intractable heart failure can also occur[3]. Other causes of death include cerebral embolism. Most patients who survive the hospital period have good functional status.

To avoid the high morbidity and mortality associated with this disorder, patients should undergo emergency surgical treatment. Post infarction VSR is recognized as a surgical emergency[4]. The addition of CABG has helped improve long-term survival[5]. Developments in myocardial protection, improved surgical techniques, better perioperative mechanical and pharmacologic support helped lower mortality.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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